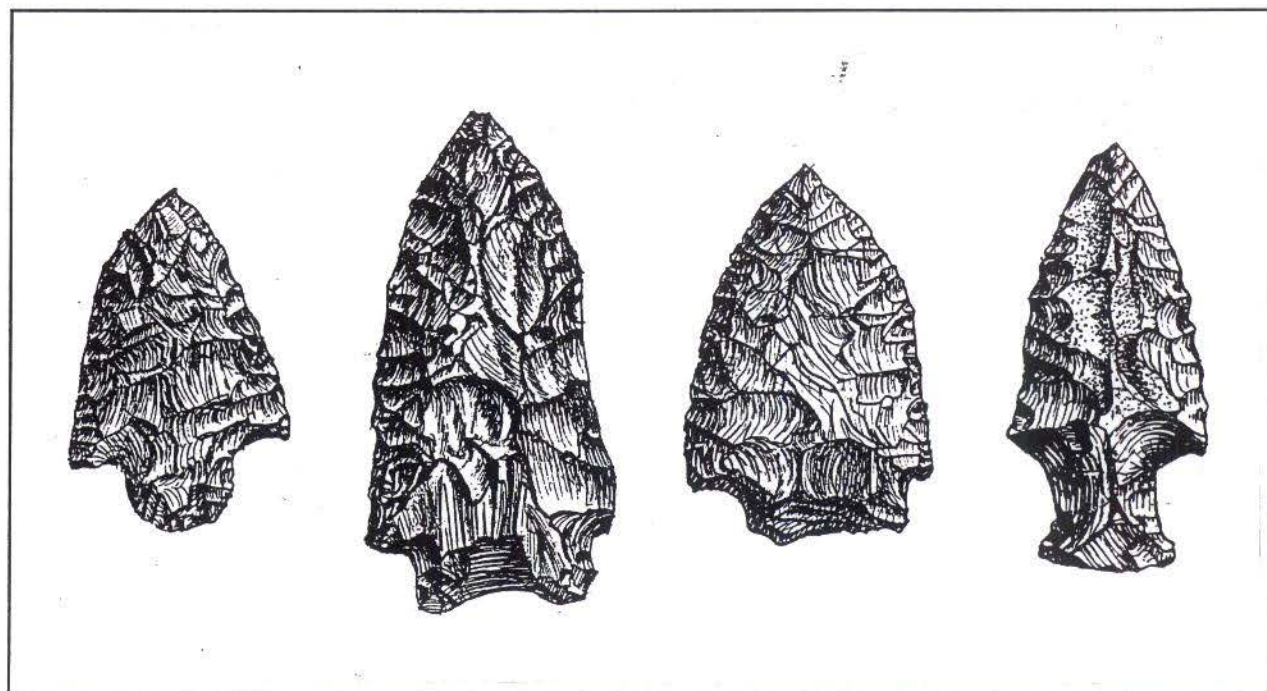


ARCHAEOLOGICAL INVESTIGATIONS OF
SITE 40WY87,
WAYNE COUNTY, TENNESSEE



by

Gerald P. Smith, Principal Investigator

with contributions by

Nancy Carney-Smith
Patricia Evans
John Matthews



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



TENNESSEE DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PLANNING AND PERMITTING OFFICE
PUBLICATIONS IN ARCHAEOLOGY NO. 5

1999

**ARCHAEOLOGICAL INVESTIGATIONS OF SITE 40WY87,
WAYNE COUNTY, TENNESSEE**

PREPARED FOR

The Tennessee Department of Transportation
Environmental Planning and Permitting Office
J.K. Polk Building, Suite 900
Nashville, TN 37243

and

DeLeuw, Cather & Co.
Memphis, Tennessee

IN COORDINATION WITH

The U.S. Department of Transportation
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BY

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ARCHAEOLOGICAL INVESTIGATIONS OF SITE 40WY87, WAYNE COUNTY, TENNESSEE

I. INTRODUCTION

This project was carried out for the Tennessee Department of Transportation (TDOT) and DeLeuw, Cather & Company, with TDOT as the lead agency. Investigations at site 40WY87 were carried out in conjunction with the construction of the State Route 15 (US 64) Bypass around Waynesboro, Tennessee (**Figure 1**).

Preliminary survey work by DuVall & Associates in 1994 (Taylor 1995) indicated that site 40WY87 (**Figure 2**) had a significant depth of midden and that additional excavations would be necessary. Phase II testing and Phase III data recovery excavations were conducted at the site by the University of Memphis in 1995. This work indicated the presence of several major occupations ranging from Middle Archaic through Late Gulf Formational, accompanied by several minor episodes of other occupations.

It was found that while relatively extensive, the midden deposits were rather shallow and severely limited in vertical separation of the components. There was no bone preservation and limited charred plant remains. Features consisted primarily of several rock hearths in the western portion of the excavated area and three apparent Late Gulf Formational lowered floor structure basins. The excavation work was particularly important in providing data on activity near a frontier between regional cultural traditions and on apparent structures for a cultural period otherwise lacking such information.

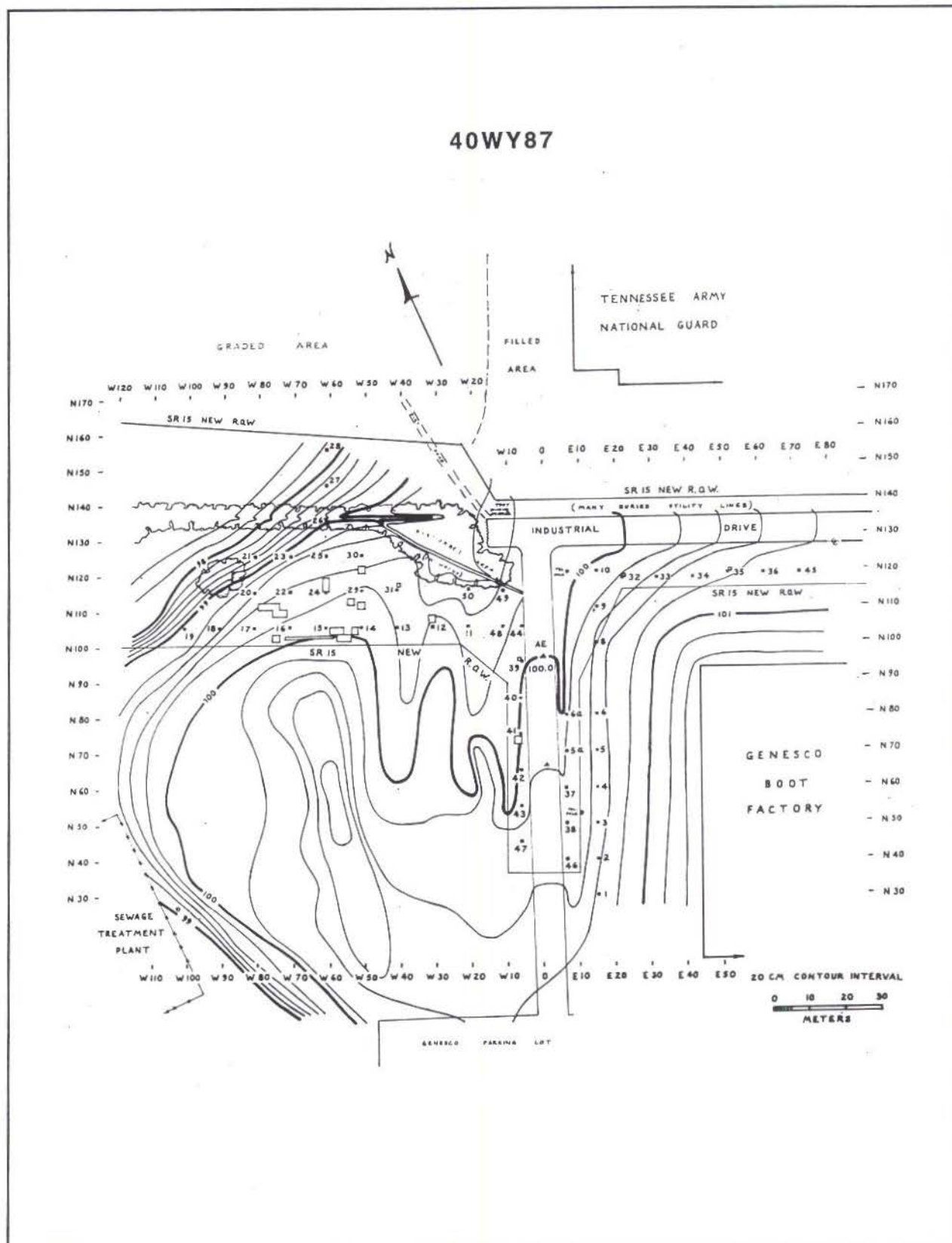


Figure 2. Site Map of 40WY87.

II. PROJECT AREA ENVIRONMENT

The Tennessee project area is in Waynesboro in central Wayne County, in the southwestern portion of the Western Highland Rim. Site 40WY87 is located on a terrace of the Green River, a small tributary of the Buffalo River (**Figure 3**). Hurricane Creek enters Green River just below the site; this confluence area is near the upstream end of floodplain development in the Green River valley. While the Green River drainage is entirely within the Highland Rim, the inner margin of Coastal Plain deposits is only a short distance to the southwest. Biotic conditions in the area can be expected to reflect primarily those of the Highland Rim, both upland and bottomland, but potentially to include some species more characteristic of the Coastal Plain as well.

GEOLOGY AND PHYSIOGRAPHY

The project area (**Figure 4**) is topographically characterized by steeply dissected terrain with narrow valleys separating ridges whose top elevations are generally between 900 and 1000 feet above sea level. This terrain is formed in deeply weathered Fort Payne Formation deposits now composed of bedded chert weathered to a chalky consistency, with the beds separated by zones of rubbly loam soil, and shale. Silurian and Ordovician formations are exposed in streambeds and bluffs to the north (Miller *et al.* 1966; Wilson 1949), including the lower Green River, the Buffalo, and the larger streams draining directly into the Tennessee River. Tuscaloosa Gravel deposits remain on many of the nearby ridgetops and become almost continuous at higher elevations southward toward the Alabama border (Miller *et al.* 1966). Both Green River and Buffalo River have multiple terraces, but they remain undefined and undated. All the stream beds are choked with gravel, primarily severely weathered Fort Payne chert but with occasional pebbles of Camden chert probably derived from Tuscaloosa Gravel deposits and occasional fragments of shale and limestone.

Lithic resources in the local area are confined to cherts and shales. Fort Payne chert is the primary source, but nearly all is weathered beyond usability. Silurian and Ordovician cherts are available from an exposure south of Linden, and undoubtedly others, but available samples have proven virtually unworkable due to fracture planes and toughness of the stone itself. Large quantities of workable Fort Payne chert are available in tabular form from exposures along the Buffalo River at and north of Lobelville, normally dark to medium grey-brown with little streaking or inclusions. Another locality with similar chert in quantity is tabular material weathering out of silty matrix in the bluffline of Hurricane Creek just north of the site. This locality also includes material with fine magenta streaks and speckles in unheated condition. A local resident engaged in the mining and treatment of chert for modern flintknappers has found that some of the less weathered chert from this area can be rendered usable by heat treatment, turning deep red and almost waxy in texture upon heating to about 700 degrees.

A second significant local source appears to be the Chattanooga Shale Formation from just south of Waynesboro to the Buffalo River. The chert from this source is very dark grey to black and generally of good quality, with the distinctive oil odor on fresh breaks which is characteristic of the Chattanooga Shale, but not other formations in the area. The local resident engaged in the chert trade has located numerous sources of nodules, apparently in outcrops of this formation, within an approximate five mile radius of the confluence of the Green River with

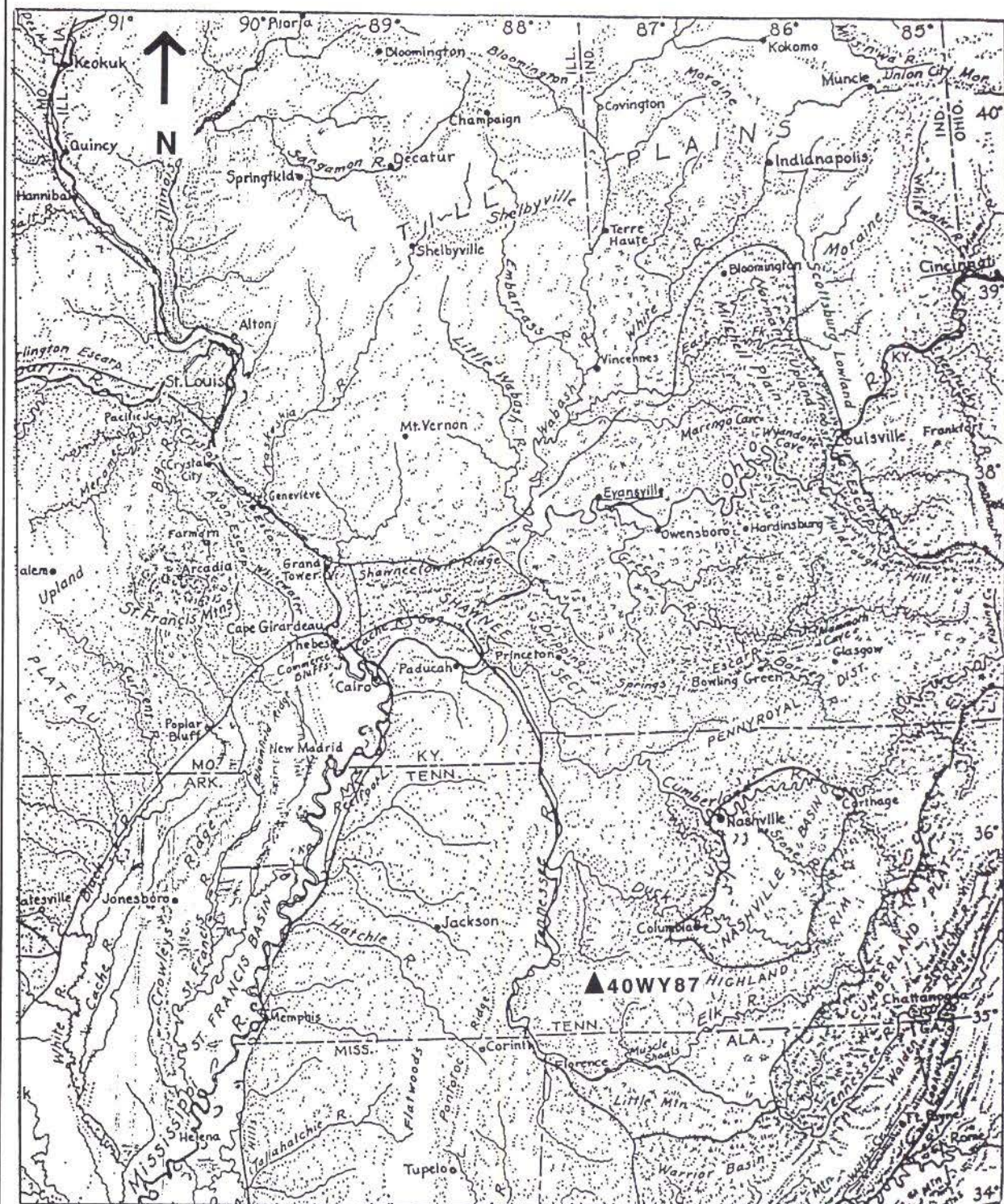


Figure 3. Regional Physiography.

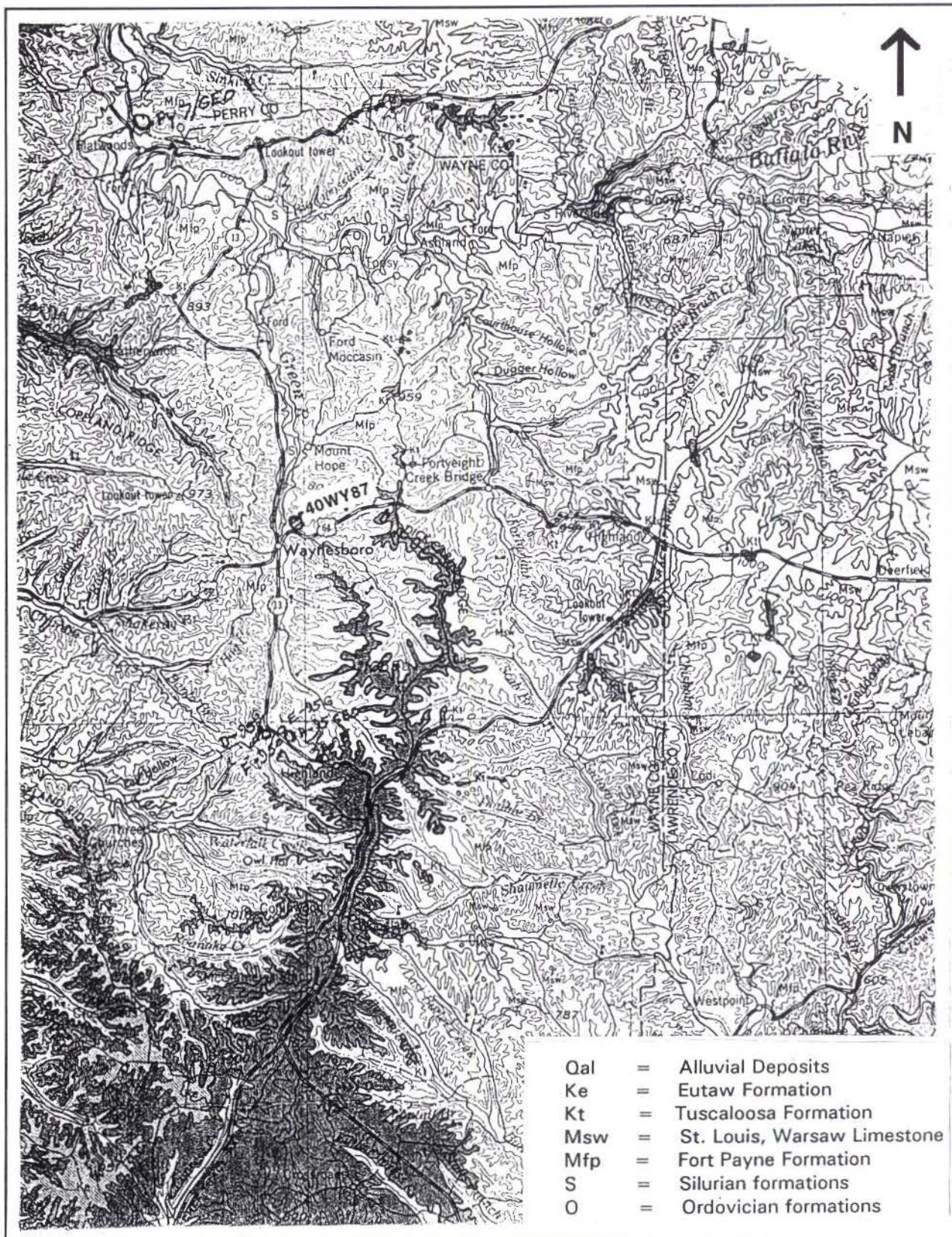


Figure 4. Project Area Geological Formations.

the Buffalo. He says that this is the only source of nodular chert in the county, and is the primary source of usable material in the vicinity. Sources to the south include limited areas of workable chert in the vicinity of Iron City in the southeast corner of Wayne County, where some was even mined for furnace lining (Miser 1921), and further south in the vicinity of Florence, Alabama. The Alabama sources are noted as being in the form of "bands, lenses, and nodules of gray to black hard chert" in the Tuscumbia Formation (USGS 1962) and "bands, lenses, and nodules of bluish-gray to black hard chert" in the Fort Payne Formation (USGS 1962). Harris, Peace, and Harris (1963:26) note that in most parts of Lauderdale County (Alabama) the Tuscumbia Formation is almost completely weathered to clay and silt, with only a few feet of the formation remaining as such. Most of the cited preserved exposures of these formations are in the immediate vicinity of Florence and many have since vanished under urban development. Hand specimens of Fort Payne chert and other cherts from along Highway 13 between Kentucky and Alabama, and at other locations in the area, are available from surveys conducted by University personnel under the principal investigator's direction over the past 25 years.

Soils in the project area are typical of those found elsewhere in the Western Highland Rim thus rendering discussions for those types in published surveys of adjacent counties useful in conjunction with the available map data for Wayne County. Those of particular relevance here include the upland soils derived from weathering of the Fort Payne Formation and bottomland/terrace soils formed from outwash of the upland soils and chert rubble. The primary upland soils are Bodine cherty silt loam and Brandon silt loam. Such soils as Armour silt loam, Humphreys silt loam, and Lax silt loam are on the higher terraces and bluffline toe slopes along Green River and its major tributaries. Lax silt loam has a fragipan at 20 to 30 inches below the surface (USDA 1993:7-8), rendering it similar in many respects to Grenada and Calloway soils of western Tennessee which are uniquely suited to the formation of shagbark and scalybark hickory groves (Flowers 1964). The lower terraces are characterized by Ennis cherty silt loam and Pruitton silt loam, and the floodplain by Riverby gravelly sandy loam. Effective correlation of soils with specific terraces was foiled by the inadequate resolution of the topographic sheets for the area, which provide only 20-foot contour intervals.

BIOTIC ENVIRONMENTS

Biotic environments vary with such factors as climate, soils, slope, elevation, topography, and hydrology. While most of these are relatively stable, especially on the order of time spanned by human occupation of the area, significant changes in climate have occurred which in turn have significantly altered the biology of the area through time. While local data remains to be collected over a significant time span, studies done in adjacent areas provide some insights into the expectable nature of changes in the study area. Studies covering much of the Holocene include, to the east, H. Delcourt (1979); to the south, Delcourt and Delcourt (1977); to the west, Delcourt *et al.* (1980); and to the north, King (1981). Supplemental data are available from archaeological reports such as Dowd (1989), Goldman-Finn and Driskell (1994), and Smith (1995) from various sites in nearby areas. While there are no local pollen studies to provide detailed data, Delcourt and Delcourt (1985) provides a useful general summary including the study area. A brief synopsis of their paper is presented below as a context for more detailed modern information on the study area, organized by climatic subdivisions.

Late Wisconsin Full-Glacial Interval (23,000 - 16,500 B.P.)

During this period, the eastern United States north of approximately 34 North Latitude (roughly along an Atlanta-Gadsden-Grenada line in the midsouth) northward to tundra and the ice front in the vicinity of the modern Great Lakes, was covered with boreal forest composed

largely of jack pine, red pine, and spruce. Population centers of the northern *Diploxylon* pines were located on the Interior Low Plateaus west of the Appalachian Mountains and along the central Atlantic seaboard. Local populations of white spruce occurred southward along the Mississippi River braided stream channels. The southern limit of full-glacial boreal forest at about 34 North latitude represents a steep vegetational ecotone between boreal and temperate ecosystems and is thought to correspond roughly with a relatively stable boundary between arctic and warmer air masses and storm systems. While there is no direct evidence of human occupation in the area during this interval, it provides a beginning point for subsequent changes which do affect human activity.

Late Wisconsin Late-Glacial Interval (16,500 - 12,500 B.P.)

Climatic warming took place throughout this interval, which is marked by a transition from a fully boreal forest toward those characteristic of more southerly zones. There is a major decline in population of the northern *Diploxylon* pines and increases in the populations of more mesic boreal and cool-temperate deciduous species. Spruce, fir, oak, and hickory are the primary taxa during this interval.

Early Holocene Interval (12,500 - 8,500 B.P.; 10,500 - 6,500 B.C.)

Mesic deciduous forest became the dominant vegetation during this period, composed primarily of beech with a strong representation of hornbeam, oak, hickory, elm, and ash. Some other now more northerly species such as white pine, hemlock, and some northern/upland maples were present in the Ridge and Valley province as far south as central Alabama, and may have been represented in the study area as well.

Middle Holocene Interval (8,500 - 4,000 B.P.; 6,500 - 2,000 B.C.)

During this period the climate became warmer and drier than at present over most of North America, with wet conditions in the east apparently only in the Gulf Coastal Plain. There was a marked eastward expansion of prairies, with forest communities in central Tennessee restricted to species-poor xeric forest. Warm and wet conditions developed in the Gulf Coastal Plain, and in the southern Ridge and Valley, extending into the Smoky Mountains. The southern pine forest developed in this area by 5,000 B.P., replacing an earlier xeric oak-hickory forest. This development is suspected to include the effects of a strengthened Maritime Tropical Air mass, increased hurricane frequency, and/or human forest-burning activity.

Late Holocene Interval (4,000 B.P./ 2,000 B.C. to present)

Essentially modern forest ranges became established with climatic moderation to essentially current conditions. Human effects on the vegetation are apparent in many areas by 2,000 to 1,500 B.P., especially in bottomland and terrace settings (Delcourt *et al.* 1986). The extensive iron industry operations in the western Highland Rim during the mid-nineteenth century were conducted almost entirely with charcoal for fuel and thus can be expected to have resulted in severe deforestation of the study area during the 1830-1860 period, as noted by Miser (1921: 168). Generalized data on the area can be used to provide an approximation of the major biotic communities of the study area.

The upland soils of the area are generally classified as unfit to poorly suited for cultivation due to infertility, slope, and erodibility (Bowen 1994; Profitt *et al.* 1963; True *et al.* 1968). These are all steep, cherty, silty to clay soils derived from weathering of the Fort Payne Formation. Much of the area has been cut over multiple times and much has been planted in pines for pulpwood usage, but the most likely original forest seems to have been composed of upland oaks, hickories, red cedar, and chestnut. In Colbert County, Alabama, Bowen (1994:33) notes that the understory is mainly dogwood, poison oak, muscadine, panicums, longleaf uniola, sumac, and greenbrier. Steepness of the slopes and stream gradients renders all but the largest drainageways ephemeral at best.

Lowland areas are restricted to the narrow major stream valley floors, which appear to have multiple terraces in the largest, such as Green River and Hurricane Creek as well as Buffalo River to the north. The higher terraces, generally with Humphreys, Armour, or Lax soils tend to be underlain by extensive gravel deposits and appear likely to have had forest communities quite similar to those of the uplands. The lower terraces are roughly definable by the Ennis cherty silt loam, occasionally flooded, and the Pruitton silt loam, occasionally flooded soils as defined by USDA (1993). These soils are supplied with sufficient moisture to support a bottomland forest in which bottomland oaks, bottomland hickories, walnut, green ash, cherry, sweetgum, cottonwood, beech, sycamore, and red maple are major constituents. The floodplain proper is characterized by Riverby gravelly sandy loam soil with willow and birch as its main forest cover.

III. CULTURAL BACKGROUND

Human occupation of the general area of the project is indicated by at least 10,000 B.C., although the earliest activity appears to have been only in the form of sporadic entries from more intensively utilized areas in the major stream valleys, particularly the central and western Tennessee River Valley. Subsequent regional population growth and adaptations to more fully exploit regional and local resources led to long-term fluctuations in the nature and intensity of activity in the local area, both in prehistoric and in more recent times. Until quite recently virtually all archaeological work in the area was concentrated in the major river valleys, with extensive studies in the Tennessee River Valley and a growing list of studies done in the central Cumberland and the Duck River valleys (Figure 5). The regional prehistoric cultural sequence falls within that of the rest of the eastern part of the nation, with the Paleoindian, Archaic, Woodland, and Mississippian cultural periods as the primary elements. Each of these is in turn subdivided into numerous subdivisions based on content and tempero-spatial considerations.

PALEOINDIAN PERIOD (CA. 10,000 - 8,500 B.C.)

The Paleoindian period represents the first well-documented human activity in the area, although discoveries in other parts of the New World indicate that much earlier human presence could have occurred. This period is marked primarily by its distinctive series of fluted point types, which are accompanied by a series of tools such as scrapers, burins, and perforators made on blades from specially prepared cores. More generalized items in use, such as grinding tools and informal bifaces, are often indistinguishable from much later specimens. While the classic concept of Paleoindian subsistence emphasizes the hunting of Pleistocene megafauna such as mammoth and mastodon, no humans are yet implicated in the deaths of those found in eastern North America. There is, in fact, so little subsistence information from the period that we are left with little recourse other than to postulate a generalized hunting and gathering economy carried out by groups organized as bands of kin, as suggested by the known tool assemblage and settlement patterns. Point types such as Clovis appear to be early in the sequence, followed by Cumberland, Redstone, and Beaver Lake with Quad and Hardaway at the end. Scattered isolated finds of points of this period are recorded for the western Highland Rim, but no concentrations are known and there are no recorded finds in the vicinity of this project.

ARCHAIC PERIOD (CA. 8,500 - 1,500 B.C.)

Incipient Archaic: Dalton (ca. 8,500 - 7,800 B.C.)

Dalton and its associated tool complex represents a transition from Paleoindian to Archaic and is variously treated as the terminal portion of the Paleoindian cultural period, a separate transitional phenomenon, or the initiation of the Archaic. The Dalton point and big game processing tool complex maintain great continuity of form and technology with the Paleoindian lithic tradition, but are now joined by items indicative of a much more diversified set of activities. Increased use of plant foods is implied by the much more common incidence of grindstones, while the introduction of the adz indicates an increase in the importance of woodworking. Dalton occupations are not recorded in the vicinity of the project area, but are well known in the Tennessee River valley to the south and west.

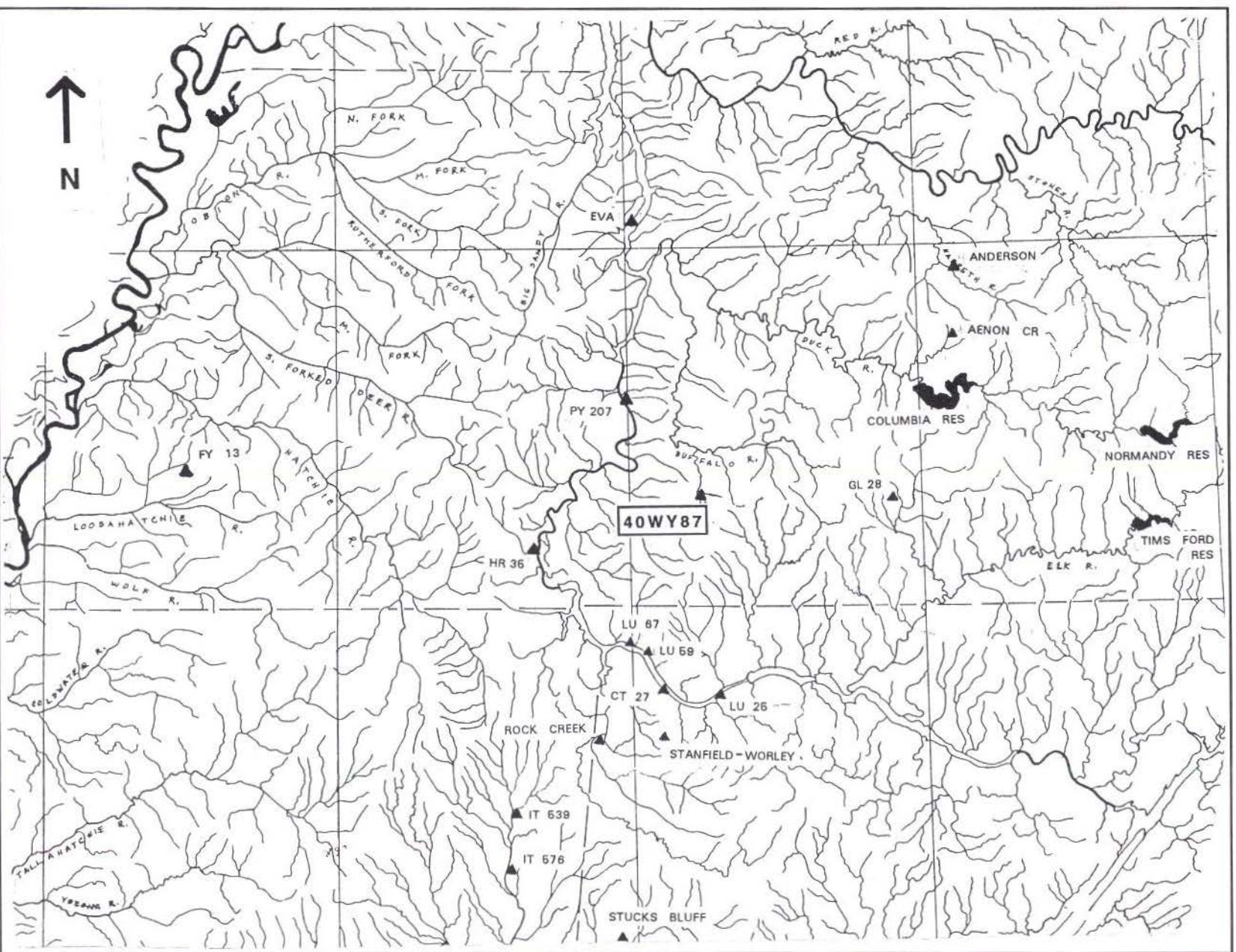


Figure 5. Regional Archaeological Sites.

Early Archaic (ca. 7,800 - 6,000 B.C.)

The Early Archaic continues the shift in subsistence patterns first evident in the Dalton complex, with the changes now extending into the hunting tool and weapons area as the development of new designs to cope with smaller, swifter game continued and the need to utilize lower-quality but more readily available chert sources became more critical. Points such as the Kirk/Palmer/Lost Lake corner-notched group, some of the side-notched Big Sandy varieties, and the LeCroy all appear intended to deal with relatively swift game at which the hunter could expect to get only one throw of a dart rather than multiple jabs of a spear. Most of the more specialized Paleoindian tool forms requiring high-quality raw materials had dropped out of use by the end of the period, their functions presumably replaced by other materials. A few Early Archaic points have been recovered from the site. Sites of the period are generally small and suggest short-term occupations by small groups utilizing a generalized hunting and gathering subsistence pattern. Population increase through time is probable, and the beginnings of cultural regionalization within the once relatively homogeneous eastern woodlands are apparent by the end of the Early Archaic.

Middle Archaic (ca. 6,000 - 3,500 B.C.)

The Middle Archaic is marked in part by the appearance of ground stone items, most notably spear-thrower weights, and early forms of axes, generally of chipped stone with little or no grinding. Changes in point styles continue and distinct regional sequences become apparent. In the Virginias, Carolinas, and much of Georgia the sequence of Stanly/Kanawha, Morrow Mountain, and Guilford is characteristic and extends into the upper Tennessee River drainage of the eastern Tennessee mountains and ridge-and-valley areas. In the middle Tennessee River drainage and adjacent southern central Tennessee, northern Alabama, and northeastern Mississippi, the Stanly/Kanawha group is absent and Morrow Mountain is frequently accompanied by Eva, then followed by the Sykes/White Springs stemmed group instead of Guilford. A large area centered in the Prairie Peninsula of the Midwest, particularly central Illinois and adjacent portions of Missouri, Indiana, and Kentucky also extends through the Cumberland drainage of Tennessee and Kentucky and is characterized by a variable series of side-notched points particularly including Helton, Matanzas, Godar, and several Big Sandy varieties. Each of these areas, not surprisingly, roughly coincides with major contrasting biotic zones developed during or at least exaggerated during the Hypsithermal. Thus the eastern area corresponds to a mixed deciduous/southern pine forest, the central Tennessee valley area corresponds to a xeric oak-hickory forest area with narrow but rich floodplain zones, and the northern area corresponds to a mosaic of upland tall grass prairie with oak-hickory gallery forest along the streams. The project area lies within the southern area, adjacent to the central Tennessee River valley.

Relatively recent work in the area such as reported by Futato (1983) and in a series of reports edited by Bense (1983), has established the sequence of Crawford Creek, Eva/Morrow Mountain, Sykes/White Springs for the Middle Archaic sequence, with some indication that Eva may be somewhat earlier than Morrow Mountain. Kirk Stemmed and Stanly variants appear to occur at the beginning of the sequence in unknown relation to each other and to Crawford Creek. Eva, 40BN52 (Lewis and Lewis 1961); Mulberry Creek, 1CT27 (Webb and DeJarnette 1942), and Walnut, 22IT539 (Ensor and Studer 1983) have provided particularly important data on the Eva/Morrow Mountain complex. Eva and Mulberry Creek served primarily to permit recognition of the complex as distinct from earlier and later units, while the more recent work at the Walnut site on the upper Tombigbee provides more detail on subsistence, seasonality, and activity surfaces. The Walnut site is in a floodplain environment and appears to have been occupied during summer and fall as indicated by the inclusion of

turtles and large amounts of hickory nuts in the biotic remains. A full range of tools and lithic reduction sequence is present, including cores, bifaces, scrapers, drills, choppers, adzes, hammerstones, abraders, mortars, and mullers. Most of the early stage bifaces and choppers are unheated, while most of the late stage bifaces and finished chipped stone tools are of heated Camden chert. Two small cemetery areas and at least one "prepared area" appear to be associated with this component on the site. The "prepared area" is an area of introduced clay which was repeatedly subjected to firing and patching. It was intensively used, but left relatively clean with large amounts of debris and charred material around it. No associated postmolds were discerned around this or those present in subsequent occupations. There were no large pits potentially usable for below ground storage were present, suggesting that such items as winter nut supplies were either removed to another site occupied during winter or stored above ground.

The Eva/Morrow Mountain component at Walnut was followed by an intensive Sykes/White Springs occupation of similar nature and season of occupation, but without indication of burials. Radiocarbon dating at Walnut suggests part of a time span on the order of 4,200-3,800 B.C. for the Sykes/White Springs occupation.

Late Archaic (ca. 3,800 - 2,000/1,000 B.C.)

The Late Archaic is marked primarily by increasing populations and sedentism, much more intensive use of seasonally concentrated food resources, and the beginnings of plant domestication involving primarily native species. Large shell middens accumulated along some major streams, notably the middle and lower reaches of the Tennessee River, the Cumberland River, and central Kentucky's Green River. Axes, now pecked and ground to shape from igneous or metamorphic rocks, become much more important in the overall tool assemblage. Projectile points are generally large, stemmed forms in a variety of types, accompanied by drills and hafted scrapers often apparently made from broken points. A wide variety of generalized tool functions is filled by opportunistic use of debitage for cutting and scraping tasks and by a variety of grinding and abrading tools. Ground and polished stone spearthrower weights and pendants, engraved bone pins, and items made from copper, shell, and exotic lithic materials indicate expanded horizons in trade and the arts; the possible role of such items in religious and political activities remains unclear.

Regional traditions as indicated by regionalized sequences of point types appear to continue with some shifting of apparent boundary zones from the Middle Archaic. The Benton complex develops out of Sykes/White Springs as the beginning of Late Archaic in the central and lower Tennessee River drainage and adjacent portions of northern Alabama, northeastern Mississippi, and central and western Tennessee including portions of the central Cumberland Valley and the Mississippi River drainage in western Tennessee. Benton components appear to be rare to absent through most of the eastern Nashville Basin, where the otherwise antecedent Sykes/White Springs complex appears to continue. Numerous site excavations throughout the area have established the basic chronological position of the Benton complex. The general settlement pattern appears to consist primarily of floodplain base camps established in major stream valleys for occupation during the summer, possibly beginning in late spring and extending into fall, followed by dispersal to small winter camps in the uplands. Prepared areas of clay on the order of 2.6-4.0 meters in diameter with localized intensively heated areas are recorded at Walnut, 22IT539 (Ensor and Studer 1983), and Poplar, 22IT576 (Bense 1983), in the upper Tombigbee River floodplain. Postmolds at Poplar suggest the association of some form of pole-framed structure with a prepared area there. Increased usage of Fort Payne chert as the material for projectile point/knives is apparent, and correlates well with such other

developments as the Benton workshop area at Mulberry Creek, 1CT27 (Webb and DeJarnette 1942), and the sharp reduction in early stage bifaces relative to late stage or finished bifaces noted at the upper Tombigbee sites. Benton components are frequently at or near the base of the large shell middens along the Tennessee River in northwestern Alabama and western Tennessee.

The Benton complex is followed by one characterized by Ledbetter/Pickwick stemmed points, often referred to, with or without inclusion of other complexes, as the Lauderdale Culture (Walthall 1980). The area of representation extends from western Tennessee eastward across central Tennessee and northern Alabama into the eastern Highland Rim. Base camps of the complex are a major component of most of the large Tennessee River shell middens in northern Alabama and western Tennessee. The previous settlement pattern appears to continue in use, with the addition of a definable pole-framed structure in at least one site, 40GL26, in the upland drainage of the lower Elk River (Bentz 1996). Trade in exotic items such as copper, marine shell, and possibly jasper beads appears during this portion of the sequence. Severe problems in converting the WPA point typology into modern equivalents, along with a singular shortage of dates has rendered temporal definition of the complex somewhat nebulous; the beginning is generally considered to occur on the order of 3,000 to 2,500 B.C., with an end on the order of 2,000 to 1,000 B.C., depending on the definition and age of the locally subsequent cultural unit. The complex is replaced in northwestern Alabama and western Tennessee by one closely related to the Gulf Formational tradition perhaps as early as 2,000 B.C. (Futato 1983), but continues in central Tennessee until the appearance of the Wade complex shortly before 1,000 B.C.

The terminal Archaic Wade-McIntire groups of types are found in the Nashville Basin and up the Cumberland River at least as far as the Tennessee-Kentucky border, well into the Eastern Highland Rim. Wade Phase occupations in the Basin are dated on the order of 1,200-600 B.C. Excavations at Nowlin II, 40CF35 (Keel 1978), Jernigan II, 40CF37 (Faulkner and McCollough 1982), and Wiser-Stephens I, 40CF81 (Davis 1978) have provided a broad range of data on this complex. The phase is particularly characterized by the use of Wade and McIntire points and steatite bowls, accompanied by a variety of chipped stone items including limestone and shale hoes. Wade base camp occupations include large cylindrical storage pits and large quantities of nuts, primarily hickory, and at Jernigan II remains of squash and gourd as well. A wide range of faunal food sources including deer and other mammals, turtles, turkey, Canada goose, and sandhill crane were exploited. The multicomponent nature of the excavated sites in Normandy Reservoir with both structures and Wade Phase occupations has precluded effective identification of Wade structures distinguishable from later Woodland structures. Wade burials include such items as points, various tools, and steatite pots.

To the north and east of the western Kentucky-central Tennessee area the early part of the Late Archaic is poorly known but seems to be characterized by a series of large straight-stemmed points such as McWhinney and Saratoga. The Riverton Culture appears to have been established on the lower Wabash River by about 1,600 B.C. (Winters 1969:104-105). More recent data suggest that Riverton represents only the northwestern limit of a cultural area also including most of the eastern half of Kentucky and extending southeastward into eastern Tennessee and far western North Carolina where it supplanted the Virginia-Carolina tradition. Savannah River/Appalachian Stemmed points are occasionally found as far west as the eastern Highland Rim of Tennessee and are a major element of the Late Archaic in the upper Tennessee River valley until about 1,800 B.C., when the tradition is supplanted by the Iddins complex (Chapman 1981) which appears closely related to Riverton.

GULF FORMATIONAL PERIOD (CA. 2,000 - 200 B.C.)

The southwestern portion of the central Tennessee area comes under the influence of cultural traditions originating in the Gulf of Mexico coastal plain by the terminal portion of the Late Archaic and is included in the Gulf Formational cultural sequence for a long time span. In this sector the Benton complex is followed by Pickwick, then by the Middle Gulf Formational tradition Little Bear Creek/Pontchartrain points often in association with fiber-tempered Wheeler series ceramics and the derivative Late Gulf Formational Flint Creek points with sand-tempered Alexander ceramics. The rather scant dating information suggests that the first of the Gulf Formational complexes is roughly contemporary with such adjacent complexes as Poverty Point, Riverton, and the late portion of the Ledbetter/Pickwick sequence, and the second with Adena, Tchula, and other Early Woodland complexes to the north, east, and southeast.

What could well be considered the initial Gulf Formational tradition complex in the area is defined as the latest unit of the Late Archaic sequence by Oakley and Futato (1975) as the Perry Phase, characterized by the Little Bear Creek point type, accompanied by a wide variety of tool types and a microlith assemblage. Jasper beads are considered associated with this complex (Futato 1983:421), along with trade materials including steatite, marine shell, Tallahatta quartzite, and several varieties of exotic chert. This complex is generally considered to be preceramic, but at Spring Creek, 40PY207, Peterson (1973) recovered a small number of fiber-tempered plain sherds in context with this assemblage, along with actual microblade cores and Motley points, in what he refers to as the Kirby Zone in the site sequence. This zone also included a 1m by 3m corner of a rectilinear structure set into a shallow basin averaging about 20cm deep with individually set posts along the lower inside margins of the basin (Peterson 1973:16-18). A radiocarbon date of 3,320 +/- 160 B.P.; 1,370 +/- 160 B.C. uncorrected was obtained from charcoal in the structure pit. The virtual identity of the lithic assemblage representing this complex at Spring Creek with that of the Poverty Point complex of the lower Mississippi valley suggests that it might better be included with the Gulf Formational tradition than its usual inclusion in the local Archaic tradition. Generally accepted dating for this complex is on the order of 2,000-1,000 B.C.

The clearly Middle Gulf Formational unit in the area, the Bluff Creek phase (Walthall and Jenkins 1976), is characterized by the fiber-tempered Wheeler ceramic series of about 1,000-500 B.C. Major sites of the period include apparent base camps at Perry (1LU25) and Bluff Creek (1LU59), both excavated by WPA crews as part of the Pickwick Reservoir salvage work. Review of the Bluff Creek site report (Webb and DeJarnette 1942: 93-132) indicates that at least in the Pickwick vicinity the associated point types fall within the Wade-Cotaco Creek-McIntire group, with McIntire representing an approximate central portion of the range of variation. To the north and south, however Little Bear Creek points continued as the primary type in use with such others as Flint Creek and the Wade-Cotaco Creek-McIntire group occasionally present. Dye (1977:66) notes that the northern portion of Hardin County, Tennessee appears to be the northern frontier of intensive Bluff Creek-related occupation, although Wheeler ceramics are found in small quantities on sites almost as far north as the mouth of Duck River.

Late Gulf Formational in the area is represented by the shift from fiber to sand as the ceramic tempering agent, resulting in the Alexander Series ceramics which are normally accompanied by Flint Creek and occasional Little Bear Creek points. The time span for the complex approximates 500 - 100 B.C., with the Pickwick basin sector of the Tennessee River valley and the upper Tombigbee valley as the main centers of activity. Perry and Bluff Creek continue as the main known base camps in the Tennessee valley, while several apparently new localities are

occupied in this capacity in the upper Tombigbee drainage. The Aralia site, 22IT563 (Galmet *al.* 1983), represents a virtually single component Henson Springs phase site subjected to major excavation using modern techniques. This site revealed an apparent base camp on the basal slope of the hills marginal to the Tombigbee River floodplain. Alexander ceramics were accompanied primarily by Flint Creek, and secondarily by Little Bear Creek points along with choppers, axes, adzes, scrapers, drills/perforators, mullers, mortars, and pitted stones. The botanical remains include numerous hickory nut and acorn fragments, and large numbers of unidentified nonarboreal seeds. Faunal remains were not preserved except as occasional small unidentifiable calcined fragments. A radiocarbon date of 429 B.C. +/- 50 was obtained for the occupation. No structures or burials were recovered during the excavations there.

WOODLAND PERIOD (CA. 600 B.C. - A.D. 900)

The Woodland Period in the eastern United States is generally considered to begin with the introduction of pottery, although in most sectors other cultural changes were not immediate, and in some areas ceramics are present in what are generally considered Archaic contexts. The Late Archaic trend toward sedentism continued along with increasing emphasis on the use of domesticated plants, leading to the establishment of permanent agricultural villages as the basic residential unit before the end of the period. Long-range trade in luxury goods expanded during the Early and Middle Woodland, with the items acquired apparently used to a large extent as status items in the increasingly complex sociopolitical systems prevalent until late in the Middle Woodland period. The basic inventory of generalized tools and implements developed during the Archaic continued in use, but the spear thrower appears to have been replaced by the bow and arrow as the basic hunting and military weapon. By the end of the period the use of small triangular arrow points of minimal distinctiveness was universal. Spatio-temporal considerations for the Late Woodland and the Mississippian Period thus become based on ceramics rather than point types.

Early Woodland (ca. 600 - 200 B.C.)

Ceramics appeared early in the vicinity of the study area as part of non-Woodland developments along the Gulf and South Atlantic coastal plain, but appear to have come into use much later in other sectors of the Tennessee River drainage. The earliest ceramics in the upper and central Tennessee and the upper Duck river drainages appear to be the Watts Bar series of quartz-tempered fabric impressed ceramics similar to those in use in North Carolina and the Northeast. This ware appears in eastern Tennessee as early as about 900 B.C. and is recorded at Nowlin II, 40CF35 (Keel 1978), in the Normandy area of the upper Duck River by about 600 B.C., where it is associated with Rounded Base cluster stemmed points. A similar component was recorded at the Duncan Tract site, 40TR27, on the middle Cumberland (McNutt and Weaver 1983), where it was dated to approximately 275 B.C. Early Woodland is otherwise so poorly known in the Central Basin, Highland Rim, and Cumberland Plateau areas of the state as to provide little useful information. An apparent Early Woodland component with Adena points and limestone-tempered check stamped and fabric impressed pottery was found at Spring Creek, 40PY207, northwest of the project area on the Tennessee River (Peterson 1973), but remains undated. Early Woodland ceramics and/or point types occur only occasionally in the immediate project area vicinity, suggestive of quite limited interaction between the contemporary Early Woodland and Late Gulf Formational occupants of the general area. Limited survey data suggest that the frontier zone between Late Gulf Formational and Early Woodland occupations in the Buffalo River drainage is in southern Perry County, on the order of 30 to 40 kilometers north of the project area.

Middle Woodland (ca. 200 B.C. - A.D. 700)

The Middle Woodland period is marked in many areas of the Southeast and Midwest by a series of elaborate burial complexes with a wide range of exotic items derived from a large scale trade network as well as distinctive ceramic, lithic, and architectural complexes. Domesticated native plants, squash, and gourds formed the basis of food production, although there is rare evidence for the minor use of maize in some areas. Such spectacular developments, however, do not seem to have occurred in central or eastern Tennessee or in adjacent Kentucky. The best known manifestations in the vicinity are the Neel, McFarland, and the subsequent Owl Hollow phases of the Normandy Reservoir sector of the upper Duck River and adjacent areas (Butler 1979; Davis 1978; DuVall 1982; Faulkner 1977b). McFarland is characterized by limestone-tempered plain and check stamped pottery accompanied by large triangular points and architecture utilizing circular houses with large cylindrical storage pits and earth ovens nearby. During the Owl Hollow phase the ceramics continued to be tempered with limestone and included both plain and simple stamped surface finishes. The earlier triangular points were replaced by types from the Lanceolate Expanding Stemmed and the Lanceolate Spike type clusters. Houses were more substantially constructed and appear to include paired sets of summer and winter-use structures. The McFarland phase is generally dated at about 200 B.C. - A.D. 200, and Owl Hollow from about A.D. 200 to perhaps as late as A.D. 700. Neel is still a rather poorly defined phase similar to McFarland in many respects, differing primarily in its additional inclusion of cordmarked and complicated stamped limestone-tempered ceramics and a wide variety of nonlocal ceramics and lithic materials from a wide range of sources suggestive of participation in the Middle Woodland exchange network for exotic goods. Approximate dating for the phase is 450 B.C. - A.D. 150 (Bentz 1995:144). The relationship of this phase to such manifestations as McFarland, Owl Hollow, and Yearwood (Butler 1979) remains undetermined.

Middle Woodland in the central and western Tennessee River valley is represented by Colbert and the subsequent Copena culture, with Copena villages and mounds ultimately along the Tennessee River from Guntersville downstream almost to the Kentucky border, and across the drainage divide into much of northern Alabama. Colbert is characterized by the use of limestone-tempered fabric impressed and plain ware accompanied by both straight stemmed and triangular points, a variety of cutting, scraping, and grinding tools, and occasional steatite and sandstone vessels. Colbert appears in northwestern Alabama in the Guntersville basin by about 300 B.C., then spread downstream. It is replaced by Copena by about A.D. 100 (Walthall 1980). Copena is characterized by its distinctive lanceolate/triangular points and limestone-tempered ceramics with varying frequencies of plain, check stamped, and fabric impressed surface finishes. Burial mounds for the elite cover individual graves sealed with puddled clay and containing such items as reel-shaped copper gorgets, lumps of galena, and occasionally a variety of these items. Occasional Middle Woodland point finds are the only indication of Middle Woodland activity in the project area.

Late Woodland (ca. A.D. 700 - 900)

There is virtually no data on Late Woodland occupation anywhere in the vicinity of the project area, although extensive occupations exist along the Tennessee River near and below Mussel Shoals, Alabama at least into Hardin County, Tennessee, as the McKelvey complex. These occupations are characterized by grog tempered plain, cordmarked, and check stamped pottery corresponding to that found in the Mississippi River valley from southern Illinois southward almost to the mouth of the Yazoo. Late Woodland in the east-central part of the Tennessee River valley is characterized by the limestone-tempered Flint Creek ceramic series which includes a wide range of surface finishes. As in the western part of the valley, large, apparently

agricultural, villages are present on the main valley floor, with smaller camps on upland terraces and along streams in the uplands. Burial ceremonialism is virtually unknown for either group, and evidence of trade is also minimal (Walthall 1980). The Mason phase is a central Tennessee complex distinguished particularly by its crushed chert tempered Elk River series ceramics, with plain, cordmarked, and knot roughened surface finishes (Davis 1978; Faulkner 1968). Small triangular points, probably used on arrows rather than spearthrower darts, are the ubiquitous point type by this period.

MISSISSIPPIAN PERIOD (CA. A.D. 900 - 1700)

Mississippian culture was well established in the main valleys of the Tennessee and Cumberland rivers by A.D. 900 to 1000. Mississippian culture was a fully agricultural system with a stratified society based in permanent towns in or adjacent to riverine floodplains which were extensively cleared for fields of maize and a variety of other native and tropical cultigens. Towns with platform mounds surrounding or facing central plazas formed the centers of chiefdoms or served as local administrative centers under higher-ranking centers. Structures were normally rectilinear wattle and daub buildings with thatched roofs and included residences of various sizes, public and sacred buildings, and storage structures. Characteristic items of daily use include the bow and arrow with small triangular points, and grog or shell tempered ceramic jars, bowls, and bottles which are generally plain but also include a variety of distinctive incised, engraved, and painted types. Mississippian settlements are common in the Cumberland Valley up to the margin of the Eastern Highland Rim and in the Tennessee River valley, including both the main valley and the lower reaches of its larger tributaries where extensive areas of floodplain are available for agriculture. Mississippian sherds are occasionally present in rockshelters in the Highland Rim and probable Mississippian triangular points are frequently found on multicomponent lithic scatters, but there is as yet no indication of usage of the upland area beyond the level of short term extractive camps. Classic Mississippian culture essentially ended with the massive epidemics of Old World diseases brought by the Spanish during the mid-sixteenth century, but the culture survived in attenuated form among such groups as the Cherokee and Creek until their acculturation to Angloamerican culture during the eighteenth and nineteenth centuries.

HISTORIC PERIOD (POST - A.D. 1700)

The period of recorded history in the area begins with the travels of French and English traders and hunters who apparently began to enter the area in the late 1600's and obtained sufficient information to permit at least rudimentary accuracy for maps of the early eighteenth century. Primary activity during this early period focused around the Chickasaw villages in northeastern Mississippi and northwestern Alabama, mostly south of the Tennessee River, and along the river itself as a major travel corridor. The study area proper appears to have had little or no activity beyond occasional hunting expeditions by various European and Native American groups. Euroamerican settlement began about the turn of the nineteenth century, mainly on the Tennessee River and adjacent to the Natchez Trace in the southeastern corner of the county. Mixed agriculture and timbering has been the primary economic base of Wayne County since its beginning, with river transportation-related activities important in the Clifton area through the nineteenth and early twentieth centuries and iron industrial development in the southeastern and central parts of the county from the 1820's through 1880's.

IV. RESEARCH DESIGNS AND METHODS

RESEARCH DESIGNS

The Phase I work on the site consisted only of one shovel test within the right of way and another south of it. Phase II investigations focused on determination of the extent and nature of the deposits before test units could be placed and excavated. Since the Phase I shovel tests indicated the possible presence of 30 to 60 cm of deposits, it was decided to proceed with a shovel test pattern to provide basic information about the deposits rather than relying on surface collection data. The shovel test data and visual inspection indicated that virtually all the site in the study area north of the extended centerline of Industrial Drive had been destroyed by its use for fill for construction of the National Guard armory. Little or no depth of deposit appeared to have survived the construction of the Genesco boot factory in the early 1960's. Midden of variable depth was present south of the centerline of the project and west of the access drive to the Genesco factory parking lot, including one area of apparent stratigraphy. Test units were then placed in this sector and in two locations where it was thought that pits might have survived in the margins of the Genesco plant grounds. A metric grid based on the south right of way line of the study area was used during all investigations.

Results of the Phase II work suggested that the site had multiple components at least partly separable spatially and that multiple strata existed in the central area of the western sector where there appeared to be maximum spatial overlap of components. Recovery of points and bifaces was far beyond normal expectations of shovel tests, as was overall recovery from the test units. There was no bone preservation and sporadic charcoal occurrence in the deposits. The Phase III research was therefore oriented toward recovery of samples from each of the relatively discrete occupation areas and stratigraphic data from the zone of multiple stratigraphy.

Primary research goals for the Phase III research included definition of the nature and extent of the various components present within the surviving portion of the site; determination of site usage, including such factors as structures, features, activities, and activity areas; and refinement of information about the archaeobotany of the site and its vicinity during its occupations. It was anticipated that sufficient charcoal would be recovered to provide a series of radiocarbon dates from at least some of the components, but this expectation was not fulfilled. Determination of site activities as indicated by the debitage and lithic artifact classes represented, lithic resource procurement, and seasonality of occupation as indicated by biotic remains, were also to be addressed within the broader scope of subsistence and cultural ecology. The location of the site near a frontier between areas occupied at various times by populations following different regional cultural traditions raised the additional consideration of the nature of interrelationships between those traditions through time.

FIELD METHODS

The site grid system was established with the south edge of the right of way in the western sector as the east-west base line, designated as N 100 meters and a grid north-south reference line designated E 0 approximately along the centerline of the access road to the Genesco employee parking lot. A surveyor's point marked "100' REF" on the E 0 line was used as the

vertical reference point and designated as Assumed Elevation 100 meters. A ten meter grid was marked with crop flags within the right of way for use in the shovel testing and test excavation stages of the work. A plane table map to 20-cm contours was made of the site area within the right of way and extending southward and eastward to the Genesco factory building and parking area, and westward to the terrace margin and city sewage treatment plant.

Shovel tests were dug at 10-meter intervals, by 10-cm levels, in the site area south of the project centerline and along the W60 line across the bulldozed area to the north edge of the right of way. Two meter by two meter and one meter by one meter excavation units, designated by their southeast corner grid coordinates, were excavated during the Phase II work so as to provide sampling of the various areas with depth anomalies which might indicate pits, and in areas of apparent deep midden. The very high rate of recovery of diagnostics during this stage, averaging at least one such item per five shovel tests without ceramics present, made possible the provisional mapping of the extent of the various components for Phase III planning purposes (Figure 6).

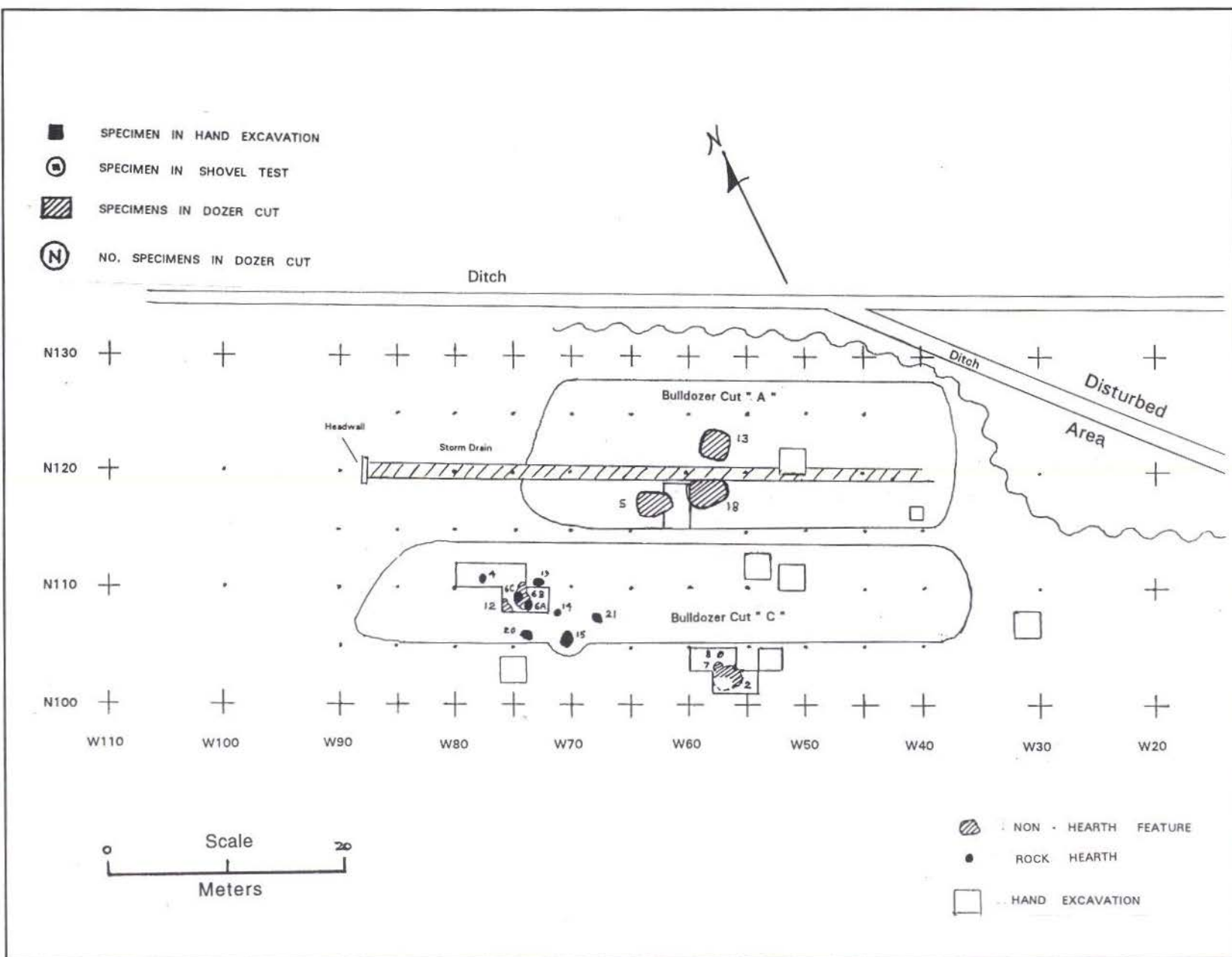
The Phase III work was planned so as to provide sampling of each of the discrete occupation areas and of the apparent deeply stratified overlap zone, to include further investigation of the rather anomalous stratigraphy in that area, and finally to use mechanical stripping of selected areas of the site for pits and postmolds. The hand-excavated units were two by two meter squares, normally grouped to provide areas of contiguous coverage. They were excavated by 5-cm levels within visible strata below the plow zone, with separation of multiple plow zones where they were apparent. Profile balks were left between units to assure continuing stratigraphic control and reference during excavation. All soil except for soil samples was screened through 1/4-inch mesh hardware cloth, with piece plotting of artifacts done when items were found in place. Soil samples for flotation recovery of botanic remains were taken from all midden and feature contexts. Basic data recording was conducted by the use of standardized excavation level and feature data forms, photography, and detailed vertical and horizontal scale drawings of profiles and excavation areas. Horizontal plotting was done by tape triangulation from appropriate grid points, and vertical plotting by combined use of tape and transit along the profiles.

Large scale mechanical stripping of site areas with thin or missing midden deposits was to be conducted to check for surviving pits and possible postmolds. Due to scheduling and weather problems the first machine stripping was done in early December, using a bulldozer to minimize compaction and rutting. The areas initially stripped were an east-west zone between N115 and N127 (Bulldozer Cut A) and a north-south zone bounded by N80-N110 and W6-W10 (Bulldozer Cut B). No postmolds appeared in either area, but three large subsquare features which appeared to be structure basins were found in Bulldozer Cut A. This discovery led to the relocation of planned Bulldozer Cut C from the eastern sector of the site to the western area between N105 and N114, extending across the site from its western margin eastward to W35. No more pits appeared, but several more fire-cracked rock features were found in the sector west of W60.

LABORATORY METHODS

A variety of laboratory methods were employed to recover, clean, catalogue, and analyze the various classes of data recovered in the field. Lithic, ceramic, and historic artifacts were washed, then catalogued by basic artifact classes within excavation units. Piece-plotted items

Figure 6. Distribution of Features and Excavation Units in Western Sector of 40WY87.



and non-debitage lithics each received their own specimen number within the series. Artifact analysis was done within standard categories by use of reference specimens and published references as appropriate. Lithic source analysis was done macroscopically with reference to the extensive sample collections on hand for the region, supplemented by special local collections for better identification of locally available materials. A liter of soil was drawn from the sample from each feature and midden level, its pH determined with an O. S. K. Co. E. W. System pH meter, then run through an in-lab soil flotation unit of standard design for use with water only. Phytolith and pollen extraction were done in the Civil Engineering soils and water quality laboratory at the University, followed by identification and analysis using standard methods for such materials.

V. STRATIGRAPHY

The natural stratigraphy of the site area consists of limestone bedrock at a depth of six to ten feet below the surface of a gravel terrace cut by a lattice of alluviated stream channels. Borings for the bridge footings indicated the existence of solution channels within the limestone, now mostly filled by silt and gravel (TDOT boring crew, personal communications). Gravel terrace composition as indicated by a backhoe cut across part of the site, approximates 80 percent weathered and waterworn chert gravel, two to ten cm in diameter, and 20 percent sand/sandy silt. The channel fills and the thin soil veneer of the terrace surface consist of sandy silt loam.

Cultural stratigraphy on the site is relatively shallow, but locally complex. Most of the site has either plow zone and subsoil or plow zone, dark midden, and subsoil. The central part, however has a modern plow zone which appears to have developed in midden redeposited from further south on the site, then unplowed redeposited midden over a very soft, humic plow zone which apparently represents the initial cultivation of the site immediately after clearing of the nineteenth century forest cover. This plow zone is then underlain by normal dark brown midden and subsoil.

Mr. Elvin Martin, superintendent of maintenance and Genesco plant employee since 1963, reported that he recalled the high point on the site (near N60-W60) as the best area on the site for finding points. A shovel test in this vicinity revealed only modern plow zone and subsoil, without the anticipated midden. Further review of the artifact recovery from the zone of suspected redeposition indicates that while the flake recovery from this area is by far the highest on the site, there are no lithic diagnostics and very few large items, in sharp contrast to the surrounding areas with only modern plow zone above the midden.

The suspected plow zone superimpositions were field checked in Square N103-W58, in which the suspect strata were excavated in detail with all evidence of cultivation, such as plow furrows and equipment tracks, targeted for investigation. This work confirmed the multiple plow zone identity of the suspect strata, while the skewed artifact recovery and lack of midden south (upstream) of this area indicate the probable source of the upper deposits. Flood scour from early to mid- nineteenth century flash flooding, as a partial result of deforestation of the watershed to produce charcoal for the local iron industry, seems the most likely agent of redeposition (Figures 7-11).

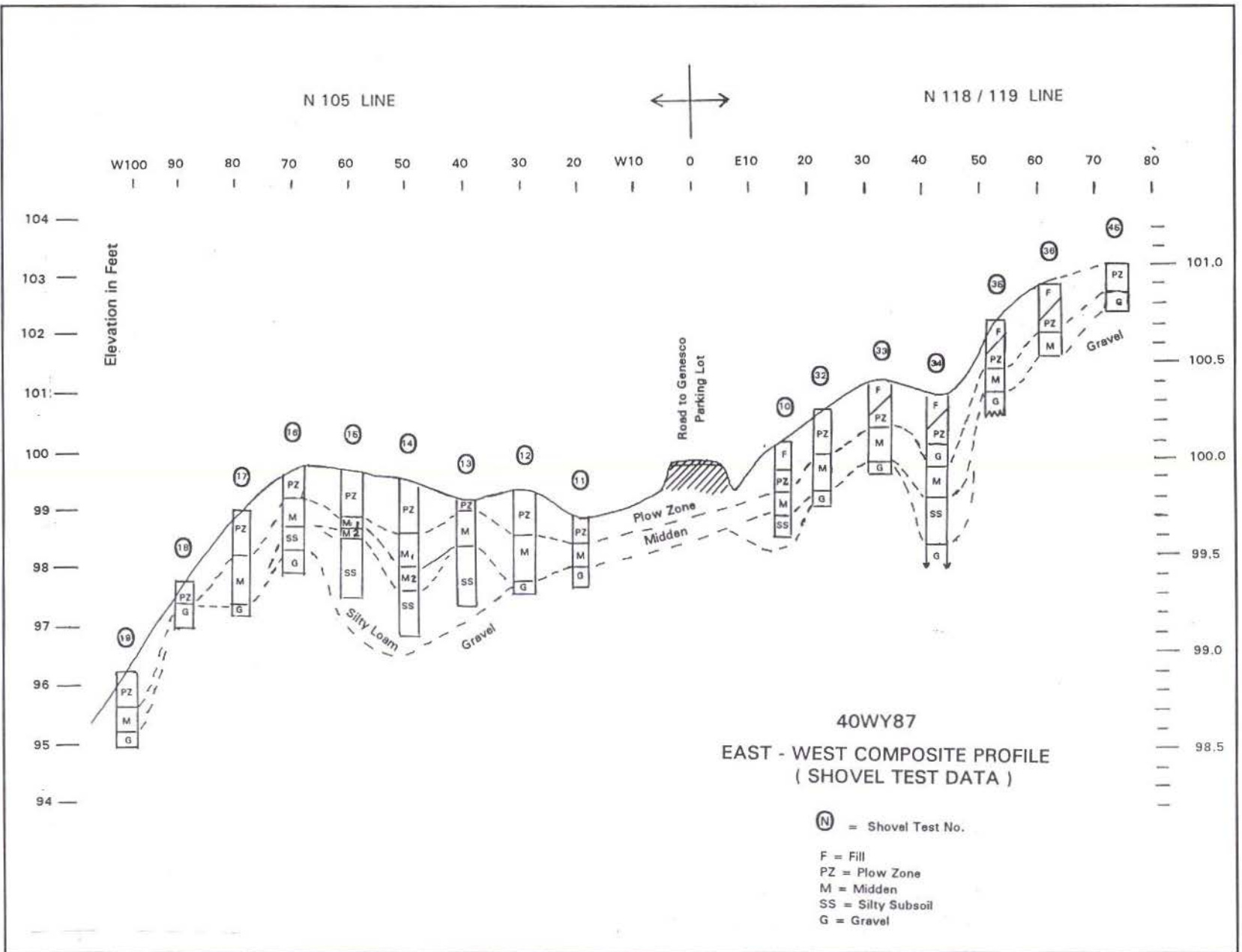


Figure 7. East-West Composite Profile (from Shovel Tests): N105 Line of 0 and N118 East of 0 Line

Figure 8. East-West Composite Profile: West-Central Sector, N103 Line from W52 to W60.

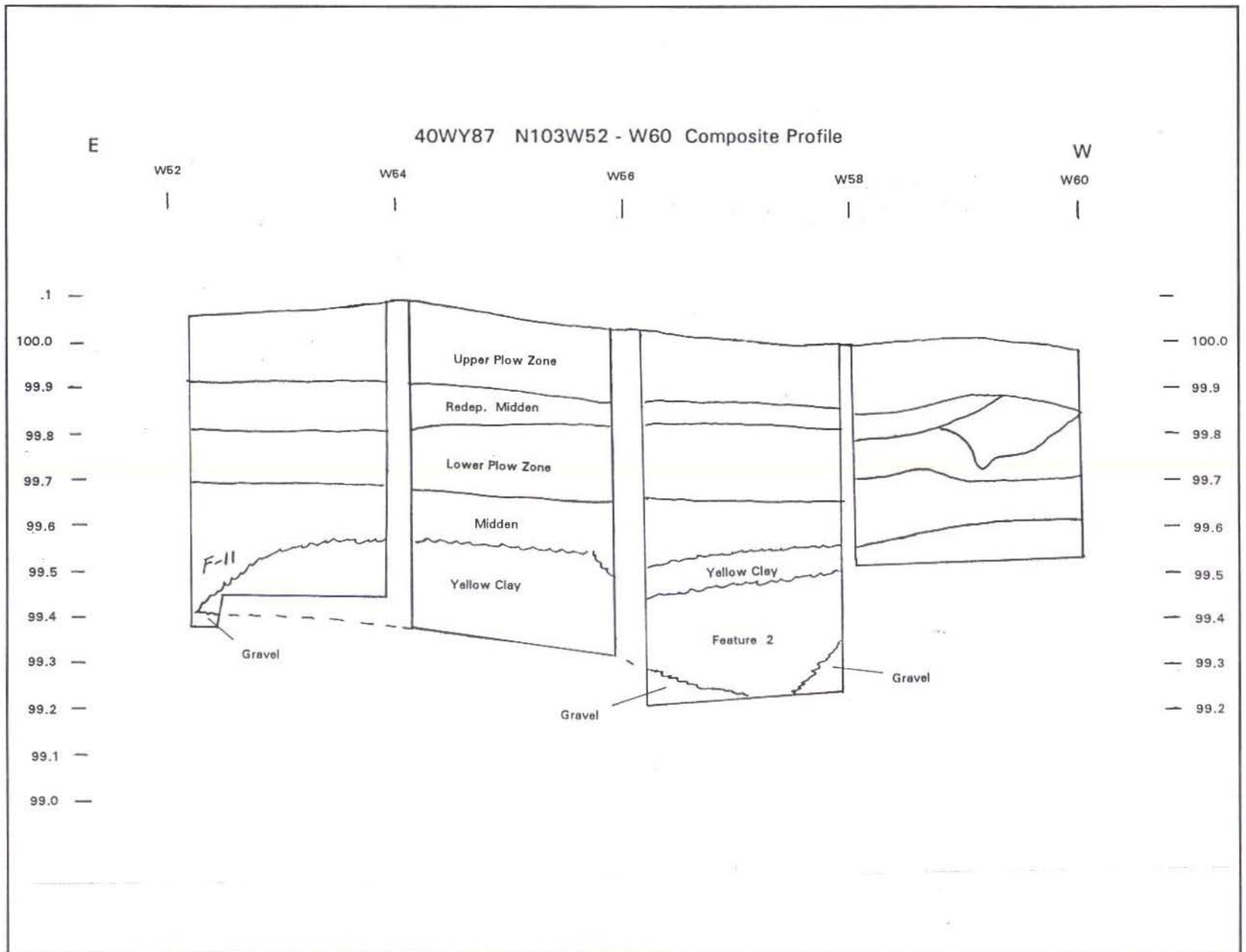


Figure 9. East-West Composite Profile: Western Sector, N102 Line from W60 to W75.

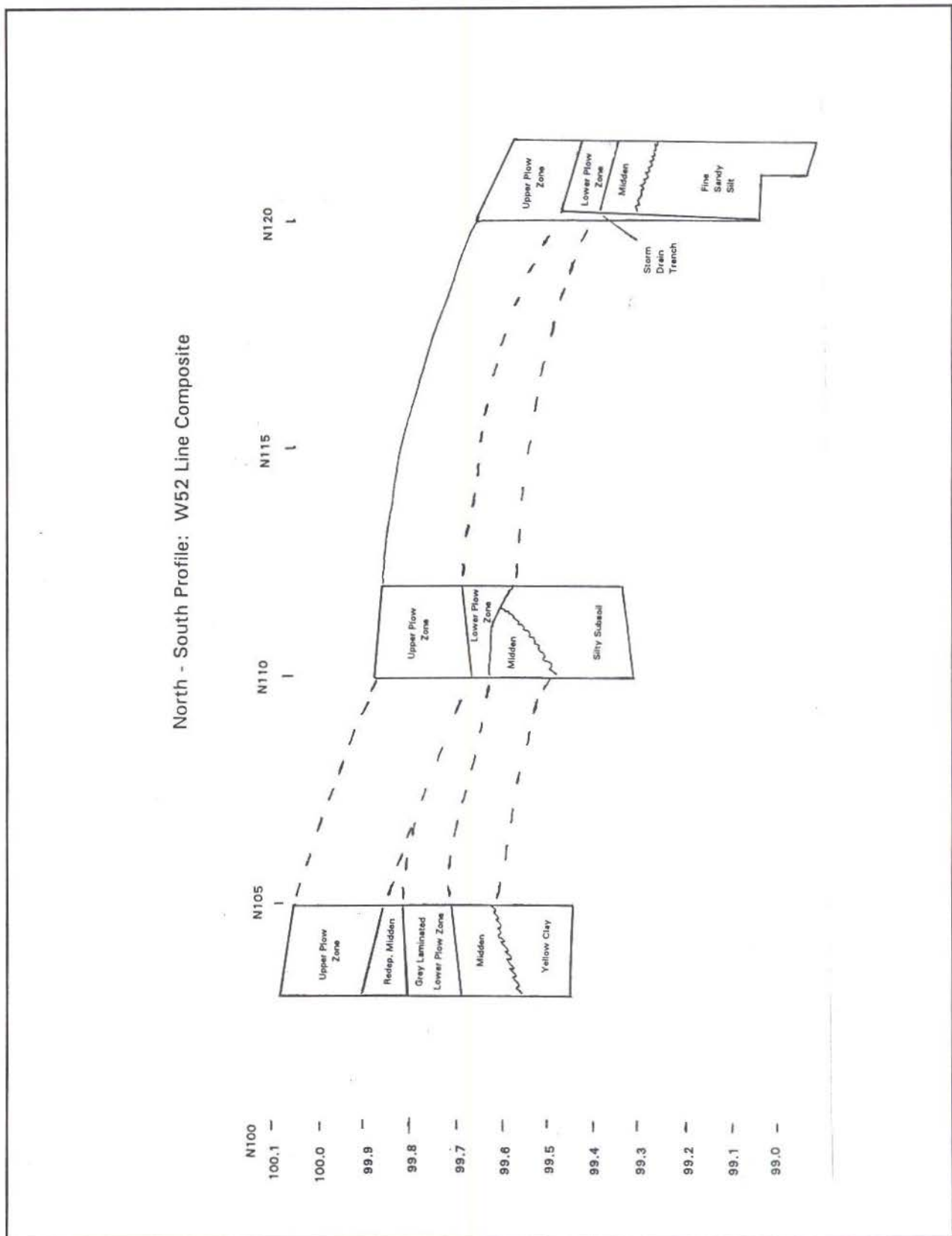


Figure 10. North-South Composite Profile: Western Sector, W52 Line Segments Between N103 and N112.

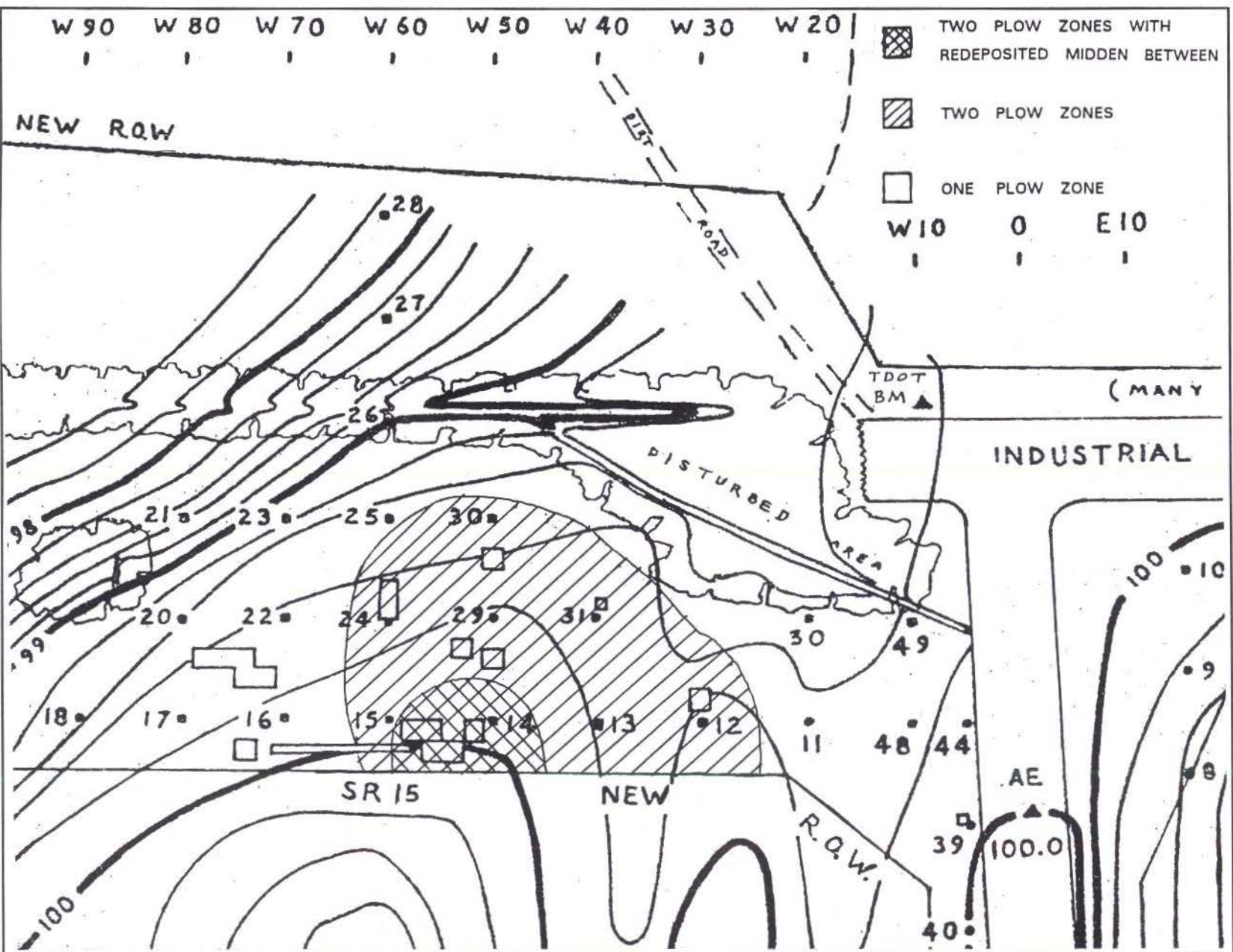


Figure 11. Areas of Midden Redeposition and Multiple Plow Zones.

VI. FEATURES

ROCK HEARTHES

A cluster of eight rock hearths was found in the western sector of the site, but only one had clearly associated diagnostics or surviving charcoal and thus most could not be attributed to any particular component(s). Several appeared to have been reutilized several times, presumably over a short time span. The features included are Features 4, 6A, 6C, 14, 15, 19, 20, and 21.

Feature 4

Feature 4 is a small hearth, 50 cm in diameter and 16 cm deep, of fire-cracked sandstone lining a small basin in Square N110-W76. The fill included a large quantity of unheated black chert flakes typical of the black chert from the Chattanooga Shale formation, but no diagnostic artifacts or charcoal. The artifactual inventory consists of 2 biface fragments, 699 flakes, 1 core, 12 pieces of chipping shatter, and 6 pieces of fire-shattered chert.

Feature 6A

Feature 6A is another small hearth on the order of 50 cm in diameter at N108-W74. It had no discernible depth other than that of the layer of fire-cracked sandstone itself, but was at the base of the plow zone under the corner stake. It was superimposed over the large, irregular shallow pit designated Feature 6B. There were no associated diagnostic artifacts or charcoal.

Feature 6C

This hearth was in a shallow basin, 11 cm deep and approximating 50 cm across, in Square N108-W74, intruded by irregular pit Feature 6B. It contained only dark soil and fire-cracked sandstone.

Feature 14

This rock hearth (**Figure 12**) was exposed in Bulldozer Cut C near stake N108-W72 and consisted of fire-cracked sandstone, a core, and a few flakes in a shallow basin about 50 cm across. The top layer of sandstone was primarily from a single slab, broken in place, which gave the appearance of having been placed over the hearth as a cooking surface and left in place after use. Additional artifacts consist of 2 flakes, 2 possible cores, and 7 fragments of chipping shatter. No charcoal was found in the feature.

Feature 15

Feature 15 is a large irregular feature found at the base of plow zone in Bulldozer Cut C, mostly in Square N105-W70. It approximates 170 cm North-South by 150 cm East-West and 18.5 cm deep, with irregularly placed depressions in the base of the apparent main basin. The nature of the fill gave the impression of a large mass formed of multiple rock hearths superimposed in the

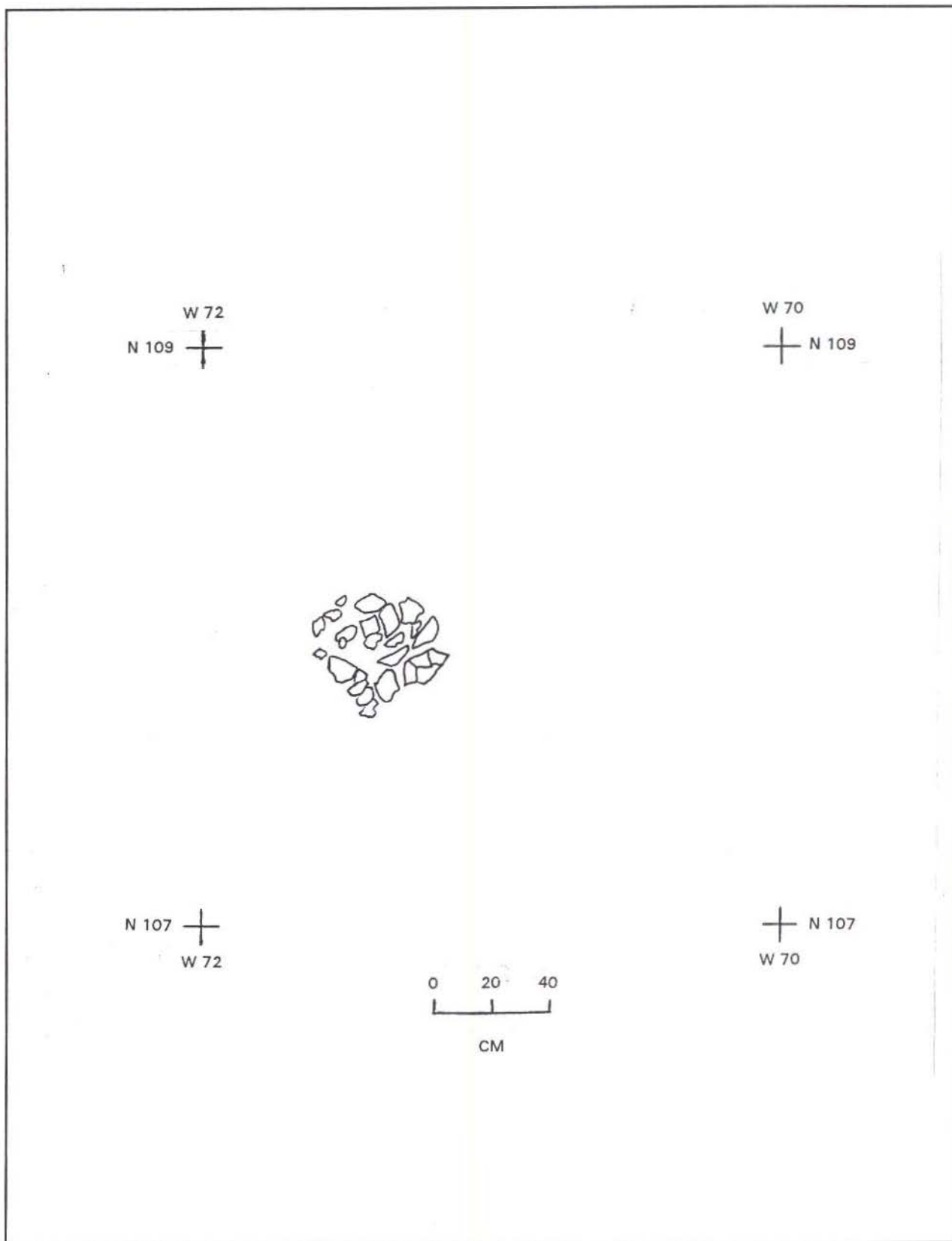


Figure 12. Feature 14, a Typical Rock Hearth.

same area, but individual hearths could not be defined with reasonable reliability. Artifacts included in the feature include the base of a Motley point, a distal end of a point, 7 cores, a biface, 213 flakes, 26 pieces of chipping shatter, a pitted grindstone, and 4 sandstone slab sections.

Feature 19

Feature 19 was found in Bulldozer Cut C adjacent to stake N110-W73, at the base of plow zone. It approximates 80 cm by 85 cm and 20 cm in depth, a shallow basin filled with dark soil and fire-shattered sandstone along with a biface, 147 flakes, 14 pieces of chipping shatter, and 13 pieces of fire-shattered chert.

Feature 20

Feature 20 was found in Bulldozer Cut C just south of stake N107-W74, at the base of plow zone. It approximates 60 cm North-South by 96 cm East-West and 18 cm in depth. Fill consisted of dark soil with 2 biface fragments, 28 flakes, 27 pieces of chipping shatter, and fire-shattered sandstone.

Feature 21

Feature 21 was found in Bulldozer Cut C adjacent to N108-W68. It was about 60 cm by 80 cm horizontally and 8 cm in depth of the shallow basin. The fill included 102 flakes, 3 biface fragments, a possible grindstone, a possible cooking slab section, and fire-cracked sandstone. Part of the fill was removed prior to excavation by an after-hours visitor.

PROBABLE STRUCTURE BASINS

Three features, Features 5, 13, and 18, were rectilinear depressions filled with midden, primarily around the inner margins. They are localized in the northwestern part of the investigation area, clearly defined, and lacking in root molds exiting their central areas. Extensive discussion of such Archaic features in northeastern Mississippi is provided by Ottinger, Hoffman, and Lafferty (1982), and of apparently structurally similar Mississippian houses by Price and Griffin (1979). While each has a variety of diagnostics from various cultural periods represented on the site, all have Flint Creek points as the latest item present and thus all are assigned to the Late Gulf Formational Flint Creek/Alexander component on the site.

Feature 5

Feature 5 (Figures 13 and 15) is an irregularly rectanguloid feature approximating 3.2 meters long by 2.6 meters wide, and 0.32 meters in maximum surviving depth below the base of plow zone. The eastern end of the feature was excavated as part of hand-excavated Squares N115-W60 and N117-W60, with the rest exposed in Bulldozer Cut A. The southeastern quadrant of the feature is restricted by apparent avoidance of a preexisting elevated gravel deposit dipping from there southward into the underlying gravel terrace deposits. An insloping marginal belt of dark brown soil lining the feature interior walls contained virtually all the cultural material recovered from it. The central portion was filled with nearly sterile, gravelly yellow-brown sandy silt which overlay the dark marginal deposits and extended completely to the silty gravel

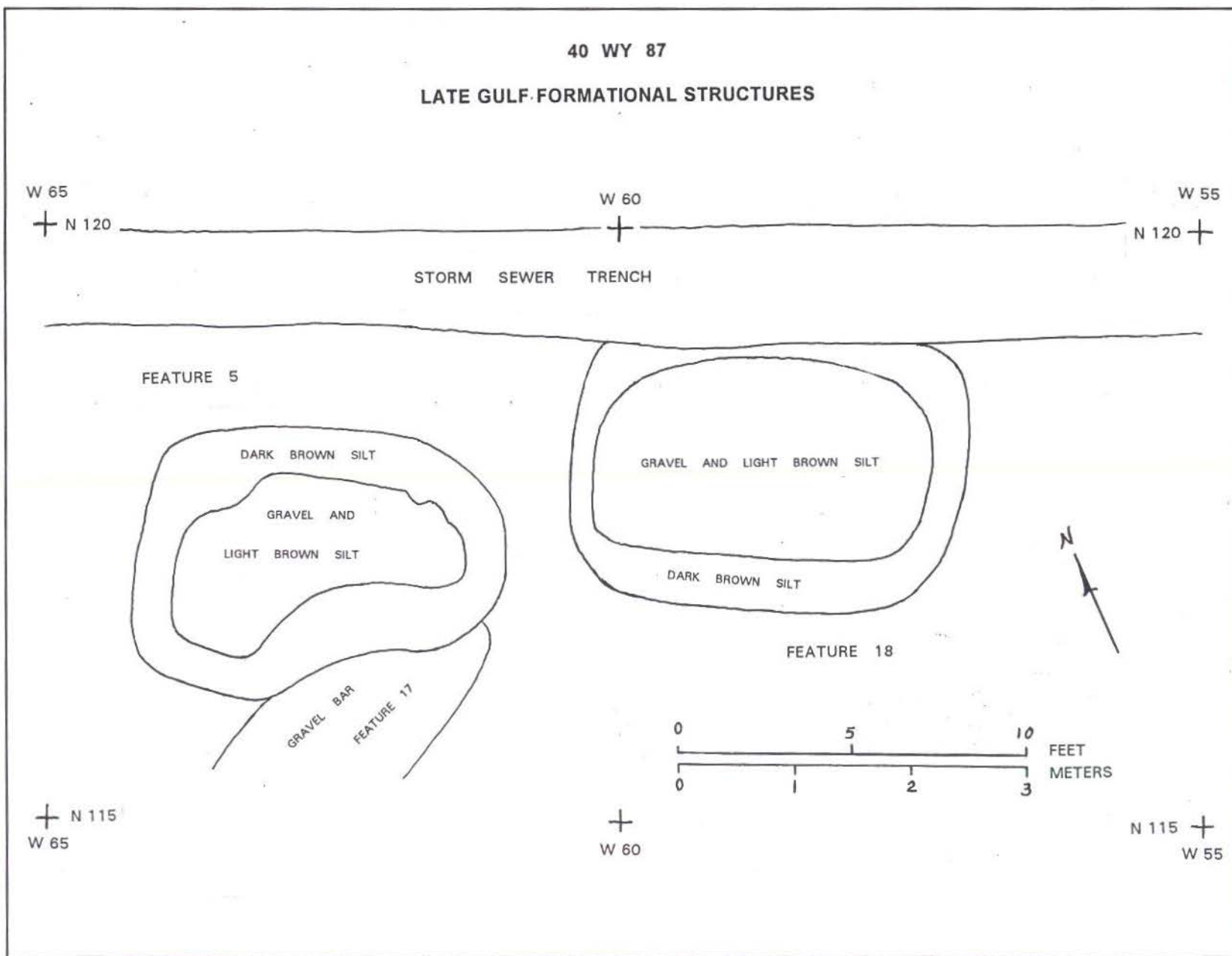


Figure 13. Plan view of Features 5 and 18.

deposit underlying the site area with only a thin intervening mottled zone. There were no indications of a prepared floor, postmolds, or roots more than about 2 cm in diameter in the feature base or sides.

After excavation of a 40-cm-wide slot trench across the feature along W62.9 for profile purposes, the central yellow-brown fill was removed as a stratigraphic unit and the dark fill lining the feature margin was removed as a stratigraphic unit subdivided by side and corner sectors of the feature. All fill was passed through 1/4-inch mesh hardware cloth except that retained as soil samples for later processing. Greatest artifact recovery was from the northwestern portion of the feature in the dark marginal deposits. Artifact recovery was as indicated in Table 1.

Feature 13

Feature 13 (Figures 14 and 15) is almost square with rounded corners, measuring 2.3 meters by 2.4 meters and 50 cm in surviving maximum depth below the base of plow zone and Bulldozer Cut A. It shares with Features 5 and 18 the pattern of a central core of nearly sterile yellow-brown fill surrounded by dark midden, but has a much more restricted core zone. A slot trench cut across the feature through the light fill zone, near the south edge of the feature, revealed that part of the light fill only extends 30 cm into the midden fill, but was intruded by a gravel plug extending entirely through the feature into subsoil. The central light fill was removed as a stratigraphic unit, followed by excavation of the dark fill north of the slot trench in east and west sectors divided approximately at W57.7, and that south of the slot trench as a third sector. There was no indication of a prepared floor, postmolds, or roots larger than about 2 cm diameter in the basin bottom or sides. All fill was passed through 1/4-inch mesh hardware cloth except that retained as soil samples for future processing. Most recovery was from the northeastern sector, as indicated in Table 2.

Feature 18

Feature 18 (Figures 13 and 15) is a subrectangular feature with rounded corners, approximating 3.5 m East-West by 2.4 m North-South and with only about 17 cm in maximum surviving depth at the south side and reduced by machine scraping to only two to four centimeters along much of the north side where it was intruded by a modern storm sewer trench. The central area has a large yellow-brown fill zone, gravelly in its central portion, with an outer margin of dark brown soil containing most of the artifactual materials. While the southwestern quadrant of the dark soil zone contained by far the majority of the items recovered, the shallowness of the surviving northern portion of the feature renders this inconclusive with regard to overall patterning within the feature. Excavation was initiated with a 25-cm-wide slot trench across the approximate center of the feature, providing a reference profile at W58.55, followed by stratigraphic excavation of the fill by quadrants. All fill was passed through 1/4-inch mesh hardware cloth except that retained as soil samples for later processing. There were no indications of a prepared floor, postmolds, or roots more than 2 cm in diameter in the feature base or sides. Artifact recovery was as indicated in Table 3.

PITS

Three pits were excavated, both relatively small and irregular. These pits were Features 6B, 11, and 12; two were in the vicinity of the rock hearths in the western sector of the site, and the third was situated in the west central area of deep deposits.

Table 1. Feature 5 Artifact Recovery by Sectors.

SECTOR	CATEGORY	COUNT
Central Yellow-brown fill	Flakes	37
	Chipping shatter	2
	Fire shatter	2
	Subtotal	41
Floor, East 1/2	Flakes	11
	Chipping shatter	1
	Fire-cracked rock	1
	Subtotal	13
Floor, West 1/2	PP/K base, Pickwick <i>var.</i> D	1
	Biface fragment	1
	Flakes	97
	Chipping shatter	14
	Fire-shattered chert	1
	Fire-cracked rock	6
	Subtotal	120
South side, Central, dark soil	Biface fragment	1
	Flakes	178
	Core	1
	Chipping shatter	10
	Fire-shattered chert	1
	Fire-cracked rock	8
	Subtotal	199
West end, dark soil	PP/K Morrow Mountain Rounded Stem	1
	Biface fragment	1
	Flakes	281
	Chipping shatter	30
	Fire-shattered chert	3
	Fire-cracked rock	28
	Subtotal	344
North side, Central Sector, dark soil	PP/K, Flint Creek Straight Stem	1
	PP/K, Pickwick, <i>var.</i> D	1
	PP/K fragment	1
	Biface	1
	Flakes	226
	Core	1
	Chipping shatter	16
	Fire-shattered chert	5
	Fire-cracked rock	7
	Subtotal	259
North side, West end, dark soil	PP/K, Flint Creek Expanding Stem	1
	PP/K, Benton, <i>var.</i> S	1
	PP/K fragment, Cypress Creek	1
	Thin Biface, triangular	1
	Thick Bifaces	6
	Flakes	878
	Core	1
	Chipping shatter	56
	Fire-shattered chert	18
	Fire-cracked rock	66
	Subtotal	1029
South side, West end, dark soil	PP/K midsection	1
	PP/K, Morrow Mountain Contracting Stem	1
	Flakes	147
	Chipping shatter	18
	Fire-shattered chert	1
	Fire-cracked rock	10
	Subtotal	178
East end, dark soil	Pitted Grindstone	1
	Hammerstone	1
	Flakes	52
	Chipping shatter	5
	Fire-cracked rock	1
	Subtotal	60
TOTAL		2243

40 WY 87

LATE GULF FORMATIONAL STRUCTURE

W 60
N 125 +

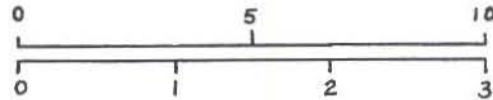


W 55
+ N 125

FEATURE 13



N 120 +
W 60



+ N 120
W 55
FEET
METERS

Figure 14. Plan view of Feature 13.

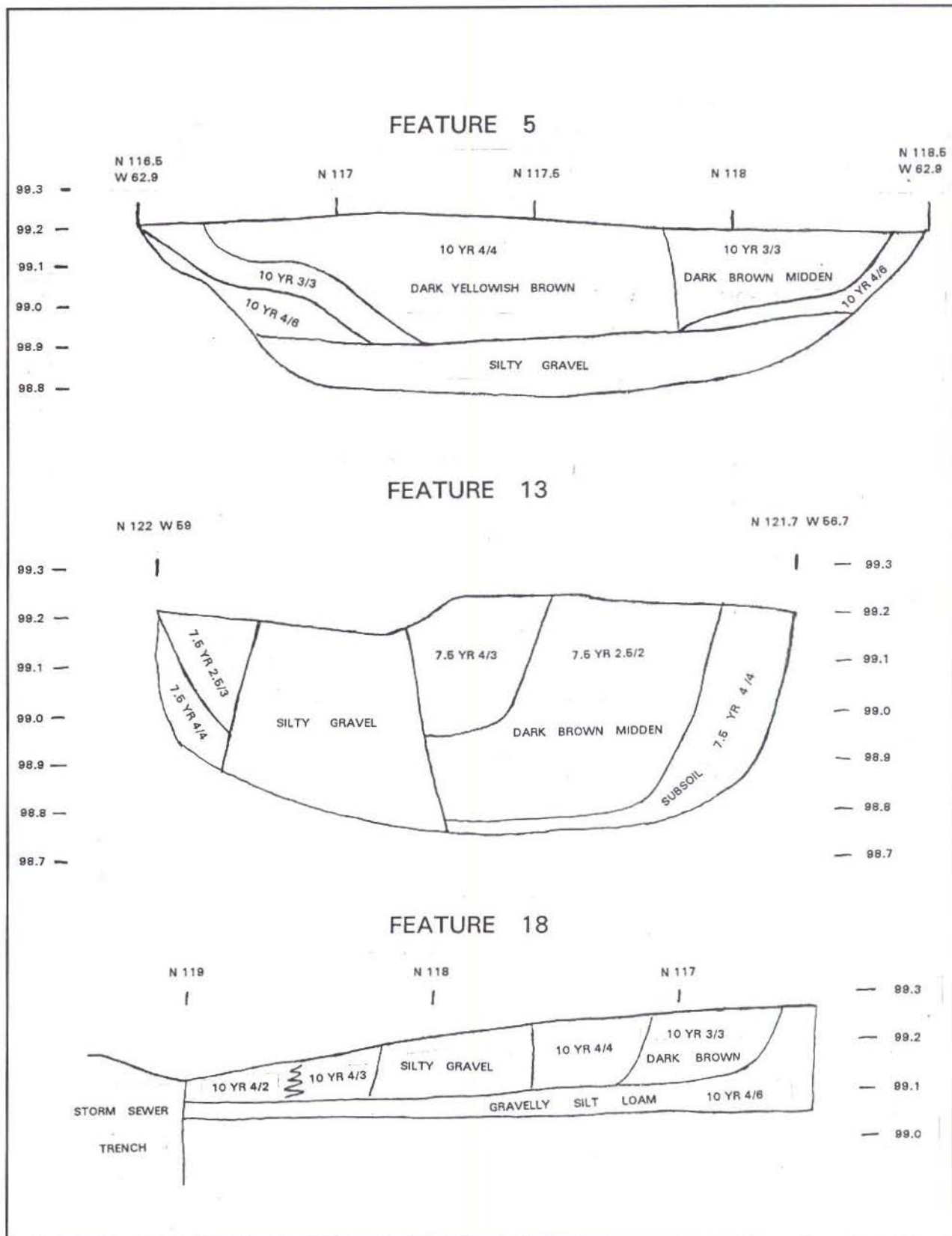


Figure 15. Profiles of Features 5, 13, and 18.

Table 2. Feature 13 Artifact Recovery by Sectors.

<i>SECTOR</i>	<i>CATEGORY</i>	<i>COUNT</i>
Central Yellow-brown fill	Flakes	55
	Chipping shatter	7
	Fire-shattered chert	1
	Fire-cracked rock	2
	<i>Subtotal</i>	<i>65</i>
Northeastern, dark fill	PP/K, Flint Creek Bulbous Stem	1
	Biface fragments	7
	Flakes	1316
	Chipping shatter	113
	Fire-shattered chert	14
	Fire-cracked rock	102
	<i>Subtotal</i>	<i>1554</i>
Northwestern, dark fill	Biface fragment	1
	Flakes	25
	Core	1
	Chipping shatter	8
	Fire-shattered rock	11
	<i>Subtotal</i>	<i>46</i>
South margin, dark fill	(no recovery)	0
	<i>Subtotal</i>	<i>0</i>
	<i>TOTAL</i>	<i>1165</i>

Table 3. Feature 18 Artifact Recovery by Sectors.

SECTOR	CATEGORY	COUNT
Central Yellow-brown fill, SE 1/4	Flakes	47
	Chipping shatter	1
	Fire-shattered chert	2
	<i>Subtotal</i>	<i>50</i>
Central Yellow-brown fill, SW 1/4	Biface fragment	1
	Flakes	19
	Chipping shatter	2
	Fire-shattered chert	2
	<i>Subtotal</i>	<i>24</i>
Central Yellow-brown fill, NW 1/4	Flakes	9
	<i>Subtotal</i>	<i>9</i>
Central Yellow-brown fill, NE 1/4	PP/K, Flint Creek Expanding Stem	1
	Flakes	14
	Chipping shatter	3
	Fire-cracked rock	1
	<i>Subtotal</i>	<i>19</i>
Southeastern 1/4 margin, dark fill	Biface fragments	2
	Flakes	605
	Core	1
	Chipping shatter	42
	Fire-shattered chert	9
	Fire-cracked rock	9
	<i>Subtotal</i>	<i>668</i>
Slot trench, south end, dark fill	PP/K, Flint Creek Bulbous Stem	1
	PP/K, Benton, <i>var.</i> Buzzard Roost Creek	1
	Biface fragments	2
	Flakes	255
	Chipping shatter	5
	Fire-shattered chert	3
	Fire-cracked rock	1
	<i>Subtotal</i>	<i>267</i>
Southwestern 1/4 margin, dark fill	Biface fragment	1
	Flakes	182
	Chipping shatter	3
	Fire-shattered chert	2
	Fire-cracked rock	5
	<i>Subtotal</i>	<i>193</i>
Northwestern 1/4 margin, dark fill	Biface fragments	2
	Flakes	82
	Chipping shatter	5
	Fire-cracked rock	1
	<i>Subtotal</i>	<i>90</i>
Northeastern 1/4 margin, dark fill	Biface fragment	1
	Flakes	72
	Chipping shatter	4
	Fire-shattered chert	2
	Fire-cracked rock	1
	<i>Subtotal</i>	<i>80</i>
	<i>TOTAL</i>	<i>1400</i>

Feature 6B

Feature 6B was an irregular shallow pit primarily in the eastern part of Square N108-W74. It appears to have intruded Feature 6C and been intruded by Feature 6A, both rock hearths. The pit exceeds 180 cm in length and 50 cm in width, in both cases extending into unexcavated areas. While material from Feature 6B and Feature 6C was not effectively separated in the field, most of the inventory is from Feature 6B. Materials from the pit fill include a tiny sand-tempered sherd, probably Alexander; 3 biface fragments; 570 flakes; 146 fragments of chipping shatter; 3 cores; 15 fragments of fire-shattered chert; and at least 354 fragments of fire-shattered rock, most apparently from Feature 6C.

Feature 11

Feature 11 is an apparent quadrant of a small pit definable at the base of the midden in the southeastern corner of Square N103-W52. The exposed radii each approximate 40 cm, and depth is 14 cm, terminating at the terrace gravel underlying the site. Materials recovered from the pit fill include a sand-tempered microsherd, probably Alexander; 16 flakes; 3 fragments of chipping shatter; and 7 fragments of fire-cracked rock.

Feature 12

Feature 12 was partially exposed in the southwest corner of Square N108-W74 as a quadrant of a roughly circular shallow pit measuring at least 80 cm East-West and 65 cm North-South, and 15 cm deep below the base of midden in the square. Materials recovered from the pit include 54 flakes, 4 fragments of chipping shatter, 3 fragments of fire-shattered chert, and 9 fragments of fire-cracked rock.

ACTIVITY AREAS

Two areas of lithic debris concentration were encountered in Square N103-W56 at the base of the midden. There was no indication of a pit or a prepared floor surface in either area, but artifact recovery from the affected levels was restricted to these concentrations. They include both debitage and fire-shattered sandstone and may represent scattered hearths. The items in each were piece-plotted and bagged individually.

Feature 7

Feature 7 (Figure 16) was an approximate quadrant of an area about 80-cm radius in the southwestern corner of the unit at AE 99.59 to AE 99.64. Materials recovered include a Motley PP/K with the tip missing, an apparent point tip (not from the Motley), a biface, 14 flakes, 4 pieces of chipping shatter, 3 worked pebbles, and 17 fragments of fire-shattered sandstone.

Feature 8

Feature 8 was a small, irregular concentration measuring about 40 cm in diameter, at AE 99.605 to AE 99.625. Materials recovered include a core, 2 flakes, a piece of chipping shatter, and 6 fragments of fire-shattered sandstone.

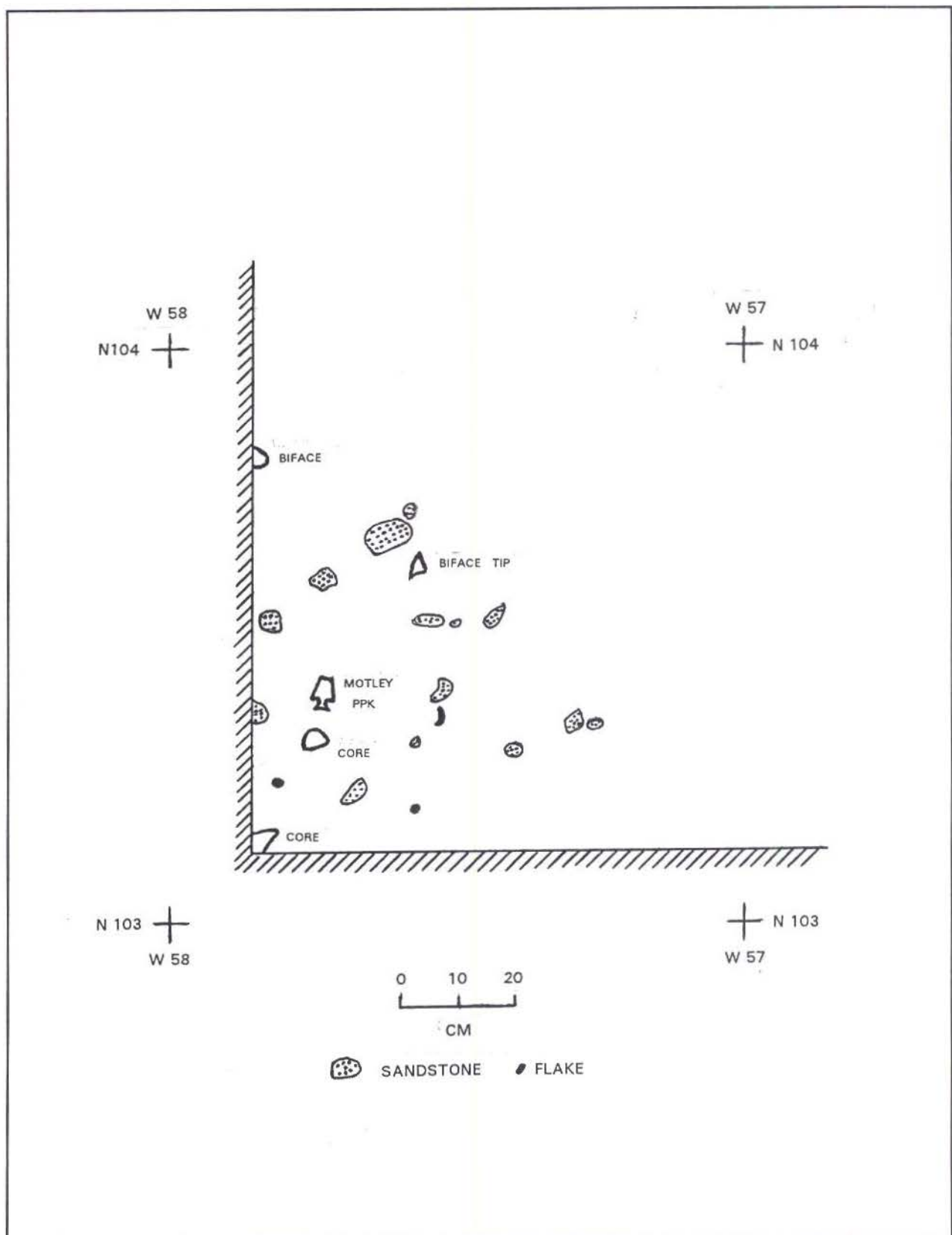


Figure 16. Feature 7 Activity Area.

VII. ARTIFACTS RECOVERED

Most of the artifacts recovered are of stone, with a relatively narrow range of tool classes represented. These include points (projectile point-knives), drills, scrapers, generalized bifaces, debitage from various stages of flaked stone tool manufacture, and generalized grinding/pounding tools. The primary raw materials represented appear to be from Highland Rim Mississippian geological formations, primarily the Fort Payne, and the more recent Camden and Tuscaloosa Gravel formations, all of which occur locally or within easy travelling distance. Heat treatment of weathered raw material appears to have been an important part of the range of manufacturing processes for the production of lithic cutting tools. Brief summary description of the lithic raw material categories represented will provide part of the basis for discussion of the chert edged/pointed tools and the chipping debitage recovered from the site. Most of the hafted bifaces fall within relatively well known types in the area, so their discussion will proceed by those types/type clusters as appropriate to the particular specimens involved.

LITHIC RAW MATERIALS

Cherts

The chert categories are based upon attributes of color, inclusions, and texture as visible macroscopically or under low magnification. Identification of sources, where discussed, is based on previous source area survey work along State Route 13 from Alabama to Kentucky with supplemental work in the project area. "Sources" as discussed here will refer to geographic portions of the relevant formations, or simply to the formations in some cases, without further attempt to locate specific quarries for the materials in question. Most of the categories are evenly distributed over the site, as indicated by review of the excavation unit analyses; the Category 5 and Category 6 cherts are relatively concentrated in specific areas. A frequency/distribution sample composed of the largest sample from each square, approximating one third of the total sample from the site was used to calculate ratios of the various chert categories. Heat-treated chert, Category 1 Grey-brown Fort Payne chert, and Category 2 Pale Yellow-brown Fort Payne chert approximate nearly 80 percent of total chert usage on the site. There is no indication of Nashville Basin cherts such as discussed in the Normandy Reservoir work (McCollough and Faulkner 1976).

Category 1: Grey-brown

The grey-brown chert is a dense chert with a grainy to silky texture and lacking in mottles, flecks, and inclusions. Color ranges through 7.5YR4/1-6/1, 7.5YR5/2, 7.5YR6/2, 10YR4/1-6/1, 10YR5/2, and 10YR6/2. Virtually all samples retaining pre-flaking exterior surfaces are from water-worn cobbles rather than nodules. This material closely resembles available hand specimens of Fort Payne chert from central Perry County, Tennessee. Frequency of this material generally approximates the overall 26 percent rate found in the frequency/distribution sample.

Category 2: Pale Yellow-brown

The pale yellow-brown chert is a somewhat porous to dense chert with a grainy to silky texture and lacking in mottles, flecks, or inclusions. Color ranges through 7.5YR6/3-6/4; 10YR5/3, 10YR6/3-6/4, and 10YR7/3-7/6. This is probably a further weathering stage of the grey-brown and similar Fort Payne cherts. Such material is included in the weathered chert which a local

knapper's supplier routinely heat treats to a waxy luster with a pink to deep red color, and is widely available in the Highland Rim area. Frequency of occurrence is normally on the order of 13.5 percent.

Category 3: Grey to Brown with White to Light Blue Inclusions

This chert has a grainy to silky matrix with waxy inclusions. Both angular and rounded amorphous inclusions are represented, often in the same fragment. The angular inclusions may be fossil fragments incorporated in the stone and/or calcite-filled pyrite voids, while the rounded amorphous forms are of more uncertain origin. No hand specimens are available from known localities other than the Dover area of Stewart County, Tennessee, although an origin somewhere in the Fort Payne or St. Louis formation seems most likely, particularly given its similarity to some of the Fort Payne chert from Stewart County, Tennessee. Some specimens have only light blue inclusions, some have only white inclusions, and others have both; the presence of both angular and amorphous inclusions in the same specimen is usual. Unheated frequencies of this material are generally slightly over 7 percent.

Category 4: Light Brown with Magenta Streaks/Speckles

This is a silky to waxy textured chert with fine magenta streaks and/or speckles irregularly scattered lightly through it. The streaks often widen to narrow bands near apparent cortex or weathered surfaces. Base color ranges 10YR6/2, 10YR6/3; and 7.5YR4/1 through 7.5YR4/3, with the streaks and speckles generally in the 10R3/2 through 10R3/4 to 5YR5/3 range. This chert is apparently often moderately heat treated, resulting in a color shift of the base color toward magenta. The discovery of unheated hand specimens of this material in the Fort Payne formation in the bluff face adjacent to 40WY87 along the north side of Hurricane Creek just above its junction with Green River indicates that this is a naturally occurring variety rather than a product of heat treatment. Even though it is locally available, frequencies of this material average slightly less than one percent.

Category 5: Grey-brown with Darker Brown Streaks/Mottles

This is a grainy to silky textured chert with darker streaks and mottles scattered through it in moderate to heavy density. Base color generally falls in the 7.5 YR to 10 YR 6/2 to 6/4 range with darker mottles often in the 7.5YR to 10YR2/1 to 3/1 range. Lighter colored specimens are generally more grainy and seem to represent a more advanced stage of weathering. This category corresponds to the heavily streaked and mottled cherts found in the Fort Payne Formation in many locations in northern Perry County and Humphreys County, with the lighter end of the color range expectable as a more advanced weathering stage of such material. The frequency of this material averages less than 0.5 percent overall, but it is restricted in distribution primarily to the samples from Squares N72-W6 and N110-W74 where it represents 2.3 percent and 1.2 percent respectively of those unit samples. This distribution suggests that its presence on the site may simply represent two incidental importations of this material to the site.

Category 6: Dark Grey to Black

This is a silky to waxy textured chert without inclusions, streaks, or mottles. Its color range includes 5YR2.5/1, 5YR3/1, 7.5YR2.5/1-4/1; and 10YR2.5/1-3/1. Occasional specimens retain the distinctive oily odor uniquely characteristic of local chert from the Chattanooga Shale,

an oil shale at the base of the Fort Payne Formation. This shale outcrops all along the Green River valley from above Waynesboro to the Buffalo River and is one of the best local sources for good quality chert. This material is widely spread over the site, with a particular concentration is Square N110-W76, where a concentration of flakes occurred adjacent to Feature 4, a small rock hearth without associated diagnostics. Overall frequency of this chert approximates nearly 5 percent.

Category 7: Light Grey

This is a grainy to silky textured chert without inclusions, streaks, or mottles. The color range includes 6N, 7N, 2.5Y7/1-7/2, 2.5Y6/1, 5YR6/1-7/1, 7.5YR7/1, 10YR6/1, and 10YR7/1-7/2. No local source for this chert has been found. This chert is relatively evenly distributed over the site, but averages just under 1 percent of the overall collections.

Category 8: White to Off-white

This is a grainy to silky textured chert with occasional streaks or mottles of slightly finer grain and darker color than the base matrix. The color range includes 8N, 7.5YR7/1-8/1, 10YR8/1-8/3, and 10YR7/1-7/2. Most of this chert appears to correspond to Camden Chert, which is available in primary context to the west and also from the Tuscaloosa Gravel Formation on the uplands to the south. The various white and off-white cherts comprise 3 percent of the overall collection.

Category 9: Yellow

This is a grainy textured chert which appears to be weathered almost enough to classify as cortex rather than workable chert. Color is generally in the 10YR6/6-7/6 range with 2.5Y8/2 also represented. Chert of this category appears to represent the practical limit of workability for weathering stages of Fort Payne chert, and is ubiquitous throughout the local area. Usage of this material averages slightly over 3 percent overall.

Heated chert

This category includes all cherts discolored into the orange to pink to red color groups. Such specimens are also often characterized by differential surface texture on different faces and by fine rippling of the surface of waxy-textured faces. All these are classic indications of heat treatment or exposure to high temperatures after flaking, in which case these indicators are often also accompanied by potlid fractures and other forms of heat damage. While some specimens, particularly those with apparent inclusions or incompletely discolored specimens, can provisionally be identified to unheated categories, the rest cannot and thus all specimens are grouped as a single category. Heated specimens approximate 39 percent of the total sample and have a quite even frequency distribution over the entire site.

PROJECTILE POINT/KNIVES

An extensive range of projectile point/knife types was recovered from the site, of which most appear to represent sporadic activity from the initial Early Archaic through the Late Woodland cultural periods in addition to those from several more substantial occupations.

Stanfield

A single Stanfield point (**Figure 17**) was found in the fill removed from Bulldozer Cut A, in the western sector of the site. The type was defined from specimens recovered from the Stanfield-Worley rock shelter in northwestern Alabama (DeJarnette, Kurjack, and Cambron 1962), where it was in an Early Archaic zone along with Dalton, Greenbrier, and Big Sandy points. Stanfield points are relatively uncommon and little else is known about their distribution or associated tools. The specimen from 40WY87 is of grey-brown Fort Payne chert and measures 141 mm long, 29 mm wide, with a maximum thickness of 9.5 mm. Alternate unifacial reworking of the blade margins was done by short broad flake removals.

Greenbrier

Two Greenbrier point bases (**Figure 18, upper**) were found in the plow zone in the northwestern part of the investigation area, and at least one more was recovered by a local collector from the northern part of the site used for fill under the National Guard armory. One specimen is made from the locally available even grey-brown chert and the other from grey-brown chert with blue inclusions which is best known from the Stewart County, Tennessee area. Greenbrier points were found at Stanfield-Worley rock shelter in northwestern Alabama in the same stratigraphic zone as Dalton, Stanfield, and Big Sandy points. The remaining portions of these points provide measurements of 26 and 28 mm at the shoulder and also at the base, with minimum hafting area widths of 18 and 19 mm. Primary flaking is collateral and often extends most of the way across the blade, with secondary flaking done by removal of short broad flakes.

Kirk Cluster

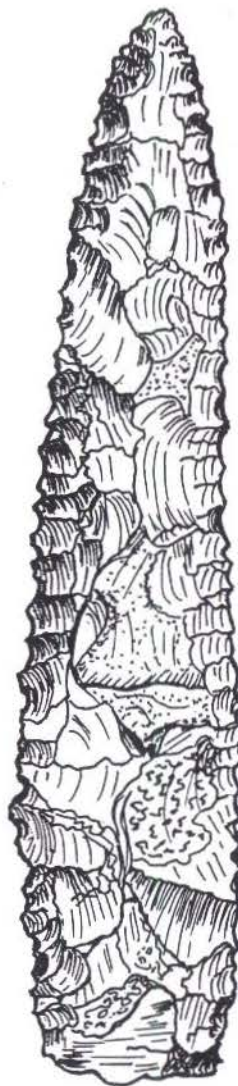
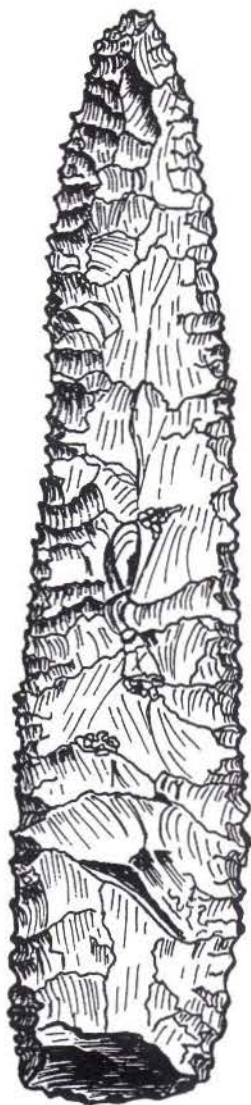
Three Kirk Corner-notched point bases/basal fragments were recovered from the site, one a Kirk *var.* Kirk, another a Kirk, *var.* Pine Tree, and the other a probable Kirk *var.* Lost Lake. They are made from heat-treated chert, probably locally available Fort Payne. All are from disturbed contexts in the western part of the site.

var. Kirk

This specimen (**Figure 18, lower left**) is approximately the basal half of a point with recurvate blade edges and concave base with one end of the base missing in the corner notch. Maximum surviving blade width is 32 mm, minimum blade width just distal of the barbs is 28 mm, shoulder width is 30 mm, minimum hafting width is 19 mm, shoulder to base length is 10 mm, and thickness is 6 mm. Projected basal width approximates 23 mm. Primary flaking is random collateral, with discontinuous random secondary retouch; there is no basal grinding.

var. Pine Tree

This specimen (**Figure 18, lower right**) approximates the basal half or third of a point with straight blade edges and a slightly convex ground base. Both barbs are missing. Maximum surviving width at the shoulder is 32 mm, minimum hafting width is 18 mm, basal width is 21 mm, and thickness is 8 mm. Primary flaking is random collateral with wide shallow flake scars often extending across the face of the point, followed by regular continuous secondary and discontinuous tertiary retouch.



PE

Figure 17. Stanfield Point.



PE

Figure 18. Greenbriar (upper) and Kirk (lower) points.

var. Lost Lake

This specimen is somewhat more than a basal quadrant from a large point with typical Lost Lake morphology in the surviving portion. The corner notch has the recurvate form typical of Lost Lake but rare in other varieties, semilamellar primary flaking extending across the face of the point, and unifacial retouch producing a bevelled blade edge. The base is slightly concave and lightly ground.

Brannon-like

There is only one specimen (**Figure 19, upper right**) to represent the presence of activity involving side-notched points. This is the base of a rather small, thick point with an apparent striking platform base. The use of relatively large flakes and minimal retouch, along with the nature of the base, suggest Middle Archaic rather than an earlier cultural period. It corresponds best among published types with Brannon (Cook 1976:148-149) of the Koster series. The material is a heat-treated chert, probably a local Fort Payne variety. The specimen measures 21 mm wide at the shoulder, 22 mm at the base, and 7mm thick. The notches are 5 mm wide, 3 mm deep, and begin 6 mm distal from the base of the point.

Cypress Creek

Two Cypress Creek points were found in the western sector of the site, between the W60 and W80 lines. One was from the lower midden zone in unit N110-W76 and the other from the fill of Feature 5. Both are of heat-treated chert, probably local Fort Payne. The specimen from Feature 5 is a basal quadrant from an apparent medium sized point. The other is an almost complete very small specimen measuring only 27 mm long, 24 mm across the remaining width, and 6 mm thick; one barb has been removed by resharpening. Basal width is 15 mm.

White Springs

A single White Springs point (**Figure 19, upper left**) was recovered from the backfill of Bulldozer Cut B, well away from the other diagnostics except for Bentons. It is made of heat-treated chert, probably Fort Payne. Measurements are 37 mm long, 23 mm in width at the shoulder, 15 mm in basal width, with a 5 mm long stem, and 7 mm in maximum thickness. The cross section is biconvex through most of the length of the specimen, but the longitudinal section suggests manufacture from a large flake with the striking platform at the point base.

Morrow Mountain

The Morrow Mountain type is represented by 17 diagnostic points, including variants with rounded bases (6), short rounded stems (6), and tapered (contracting) stems (5). Two of the points are from midden contexts; one of which is from the upper midden zone of unit N110-W76 and thus stratigraphically above the Cypress Creek point from that square. There is no apparent horizontal localization of varieties within the study area.

Rounded base

The six rounded base specimens (**Figure 19, lower and Figure 20**) have straight to excurve blade edges and bases with excurve to vestigially stemmed edges, often approaching the near triangular form recovered at the Anderson site in Williamson County (Dowd 1989). Two are of

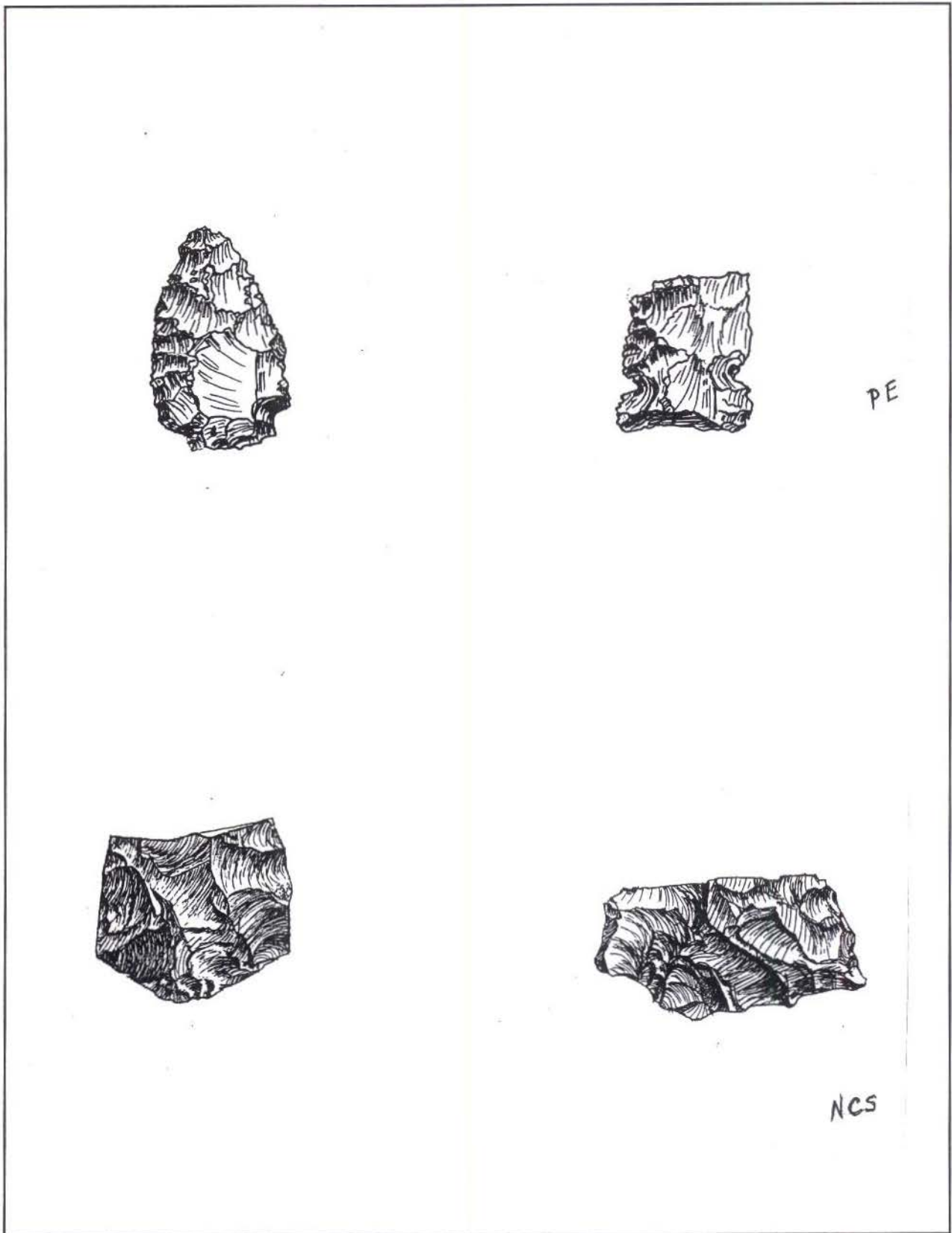


Figure 19. Miscellaneous Middle Archaic Points.

grey-brown Fort Payne chert and the rest of heated probable Fort Payne chert. None were complete enough to provide length measurements, but other measurements include shoulder widths of 33 to 51 mm (av. 41.4, n=5), definable stem widths of 20 to 26 mm (av. 24.5, n=4), and stem lengths of 3 to 8 mm (av. 6 mm, n=4). One specimen has a convex base which extends laterally to the full shoulder width of the point and extends 8 mm proximally beyond the shoulders.

Contracting stem

Five examples of this form (**Figures 21 and 22**) were found at 40WY87, characterized by blades with straight to slightly excurvate margins, tapered to slightly barbed shoulders, and well defined sharply contracting stems which have straight margins ending in a somewhat rounded point at the base of the specimen. One is of the even grey-brown Fort Payne chert, one of light grey chert with white and reddish brown mottling, and three of heated probable Fort Payne chert. Projected lengths are on the order of 40 to 50 mm. Available measurements include shoulder widths of 23 to 31 mm (av. 26.8, n=5), stem widths of 12 to 17 mm (av. 15.1 mm, n=5), and stem lengths of 5 to 12 mm (av. 7.8 mm, n=5).

Rounded stem

Six specimens with straight to slightly excurvate blade margins, occasionally serrated, straight shoulders, and well defined stems with straight to slightly contracting stems ending in a rounded base were classified as the Rounded Stem variety (**Figures 23 and 24**). Two are of even grey-brown Fort Payne chert, one of light brown Fort Payne chert with white inclusions, and the other three of heated probable Fort Payne chert. Lengths are 31.5 to 50 mm (av. 40.1 mm, n=5), shoulder widths of 25.5 mm to 29 mm (av. 27.2 mm, n=5), stem widths of 13 to 20 mm (av. 15.8 mm, n=6) and stem lengths of 5 to 10.5 mm (av. 7.9 mm, n=6).

Benton

There are 40 Benton points, most included within varieties corresponding to Buzzard Roost Creek and to varieties C and D as used in western Tennessee (Smith 1979). All are from plow zone contexts, with varieties C and D present throughout the study area west of the Genesco parking lot road, and *var.* Buzzard Roost Creek concentrated west of the W50 line. Most are either of local Fort Payne chert or of unidentifiable heat-treated chert. Six of the Bentons were identifiable to the type but could not be assigned to a variety due to damage at crucial locations, usually loss of the proximal end of the stem.

var. Buzzard Roost Creek

This variety (**Figures 25 and 26**) is the old type Buzzard Roost Creek (Cambron and Hulse 1965:A-89) drawn into the Benton type cluster. It is distinguished by its short stem with a deeply concave base, with the stem length generally slightly more than one third of the width. Shoulders are generally narrow and tapered to straight. Of the thirteen specimens from 40WY87, six are of heated chert, probably Fort Payne; three of grey-brown Fort Payne chert; one of Category 3 grey-brown Fort Payne chert with blue inclusions; one of Category 5 dark and medium grey-brown mottled Fort Payne chert; one which appears to be of weathered Category 5 chert, much lighter than usual; and one of Camden Chert. The specimens recovered include three with length measurement possible, while the rest are basal portions. Measurable lengths

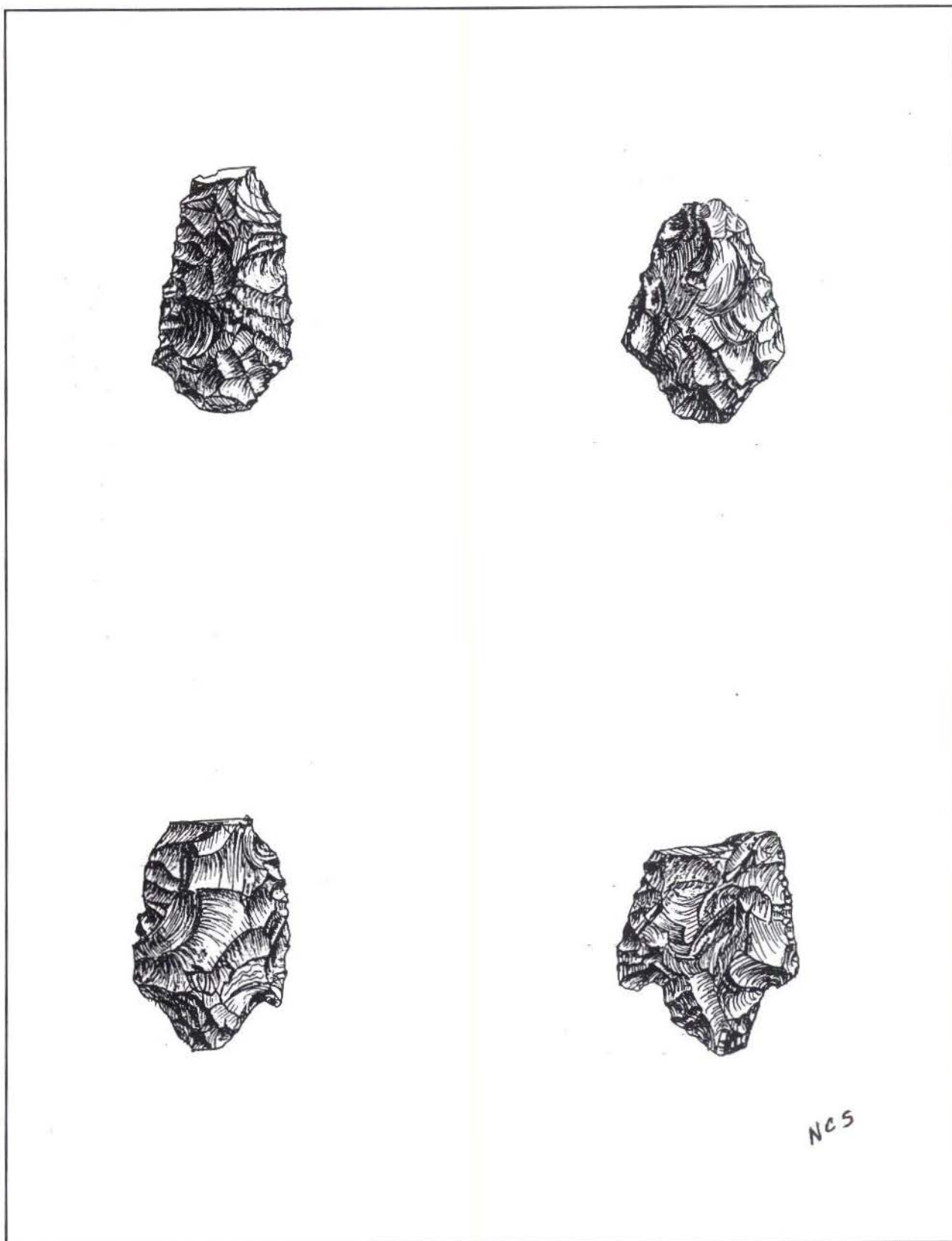


Figure 21. Morrow Mountain Contracting Stem Points.

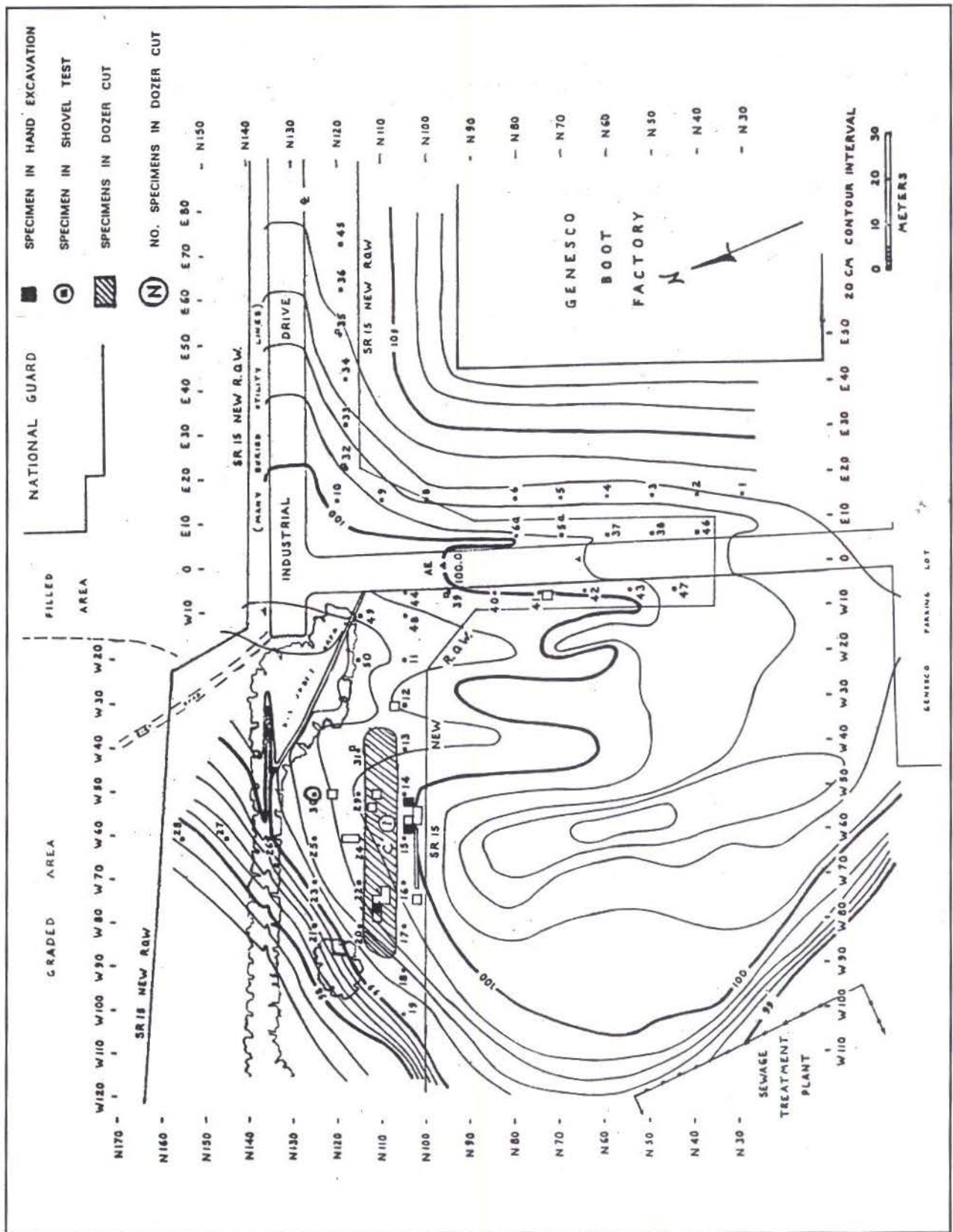


Figure 22. Distribution of Morrow Mountain Contracting Stem Points.

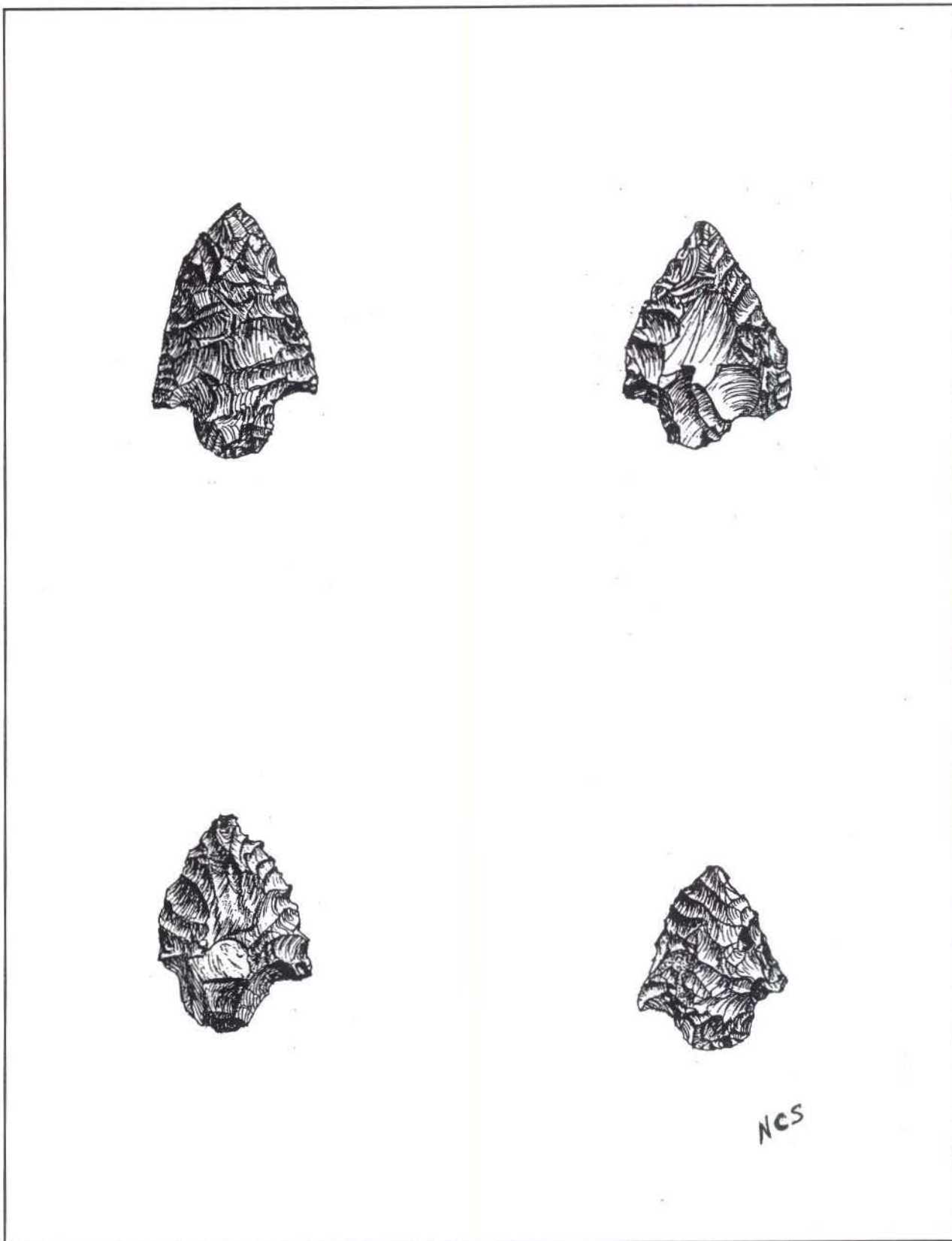


Figure 23. Morrow Mountain Rounded Stem Points.

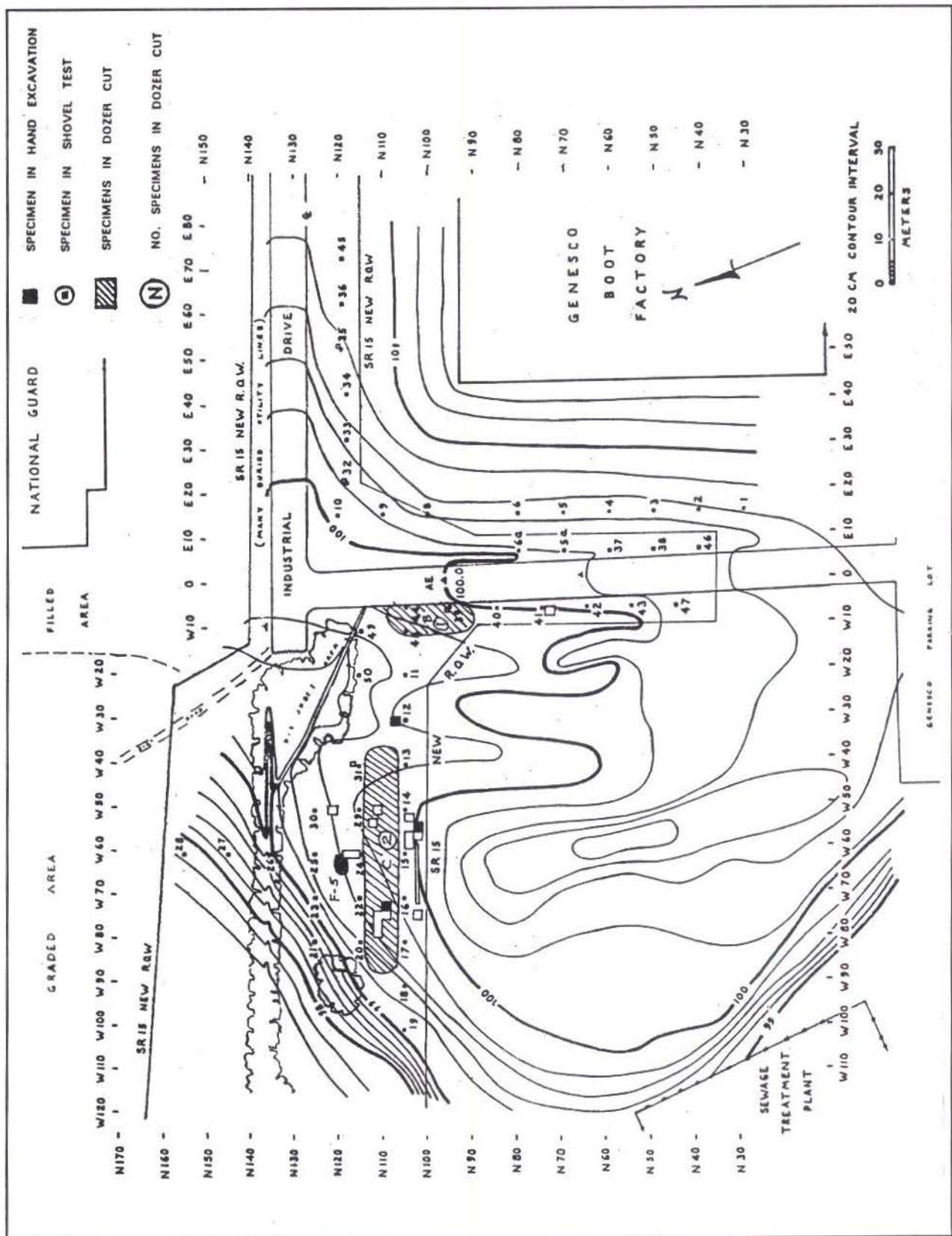


Figure 24. Distribution of Morrow Mountain Rounded Stem Points.

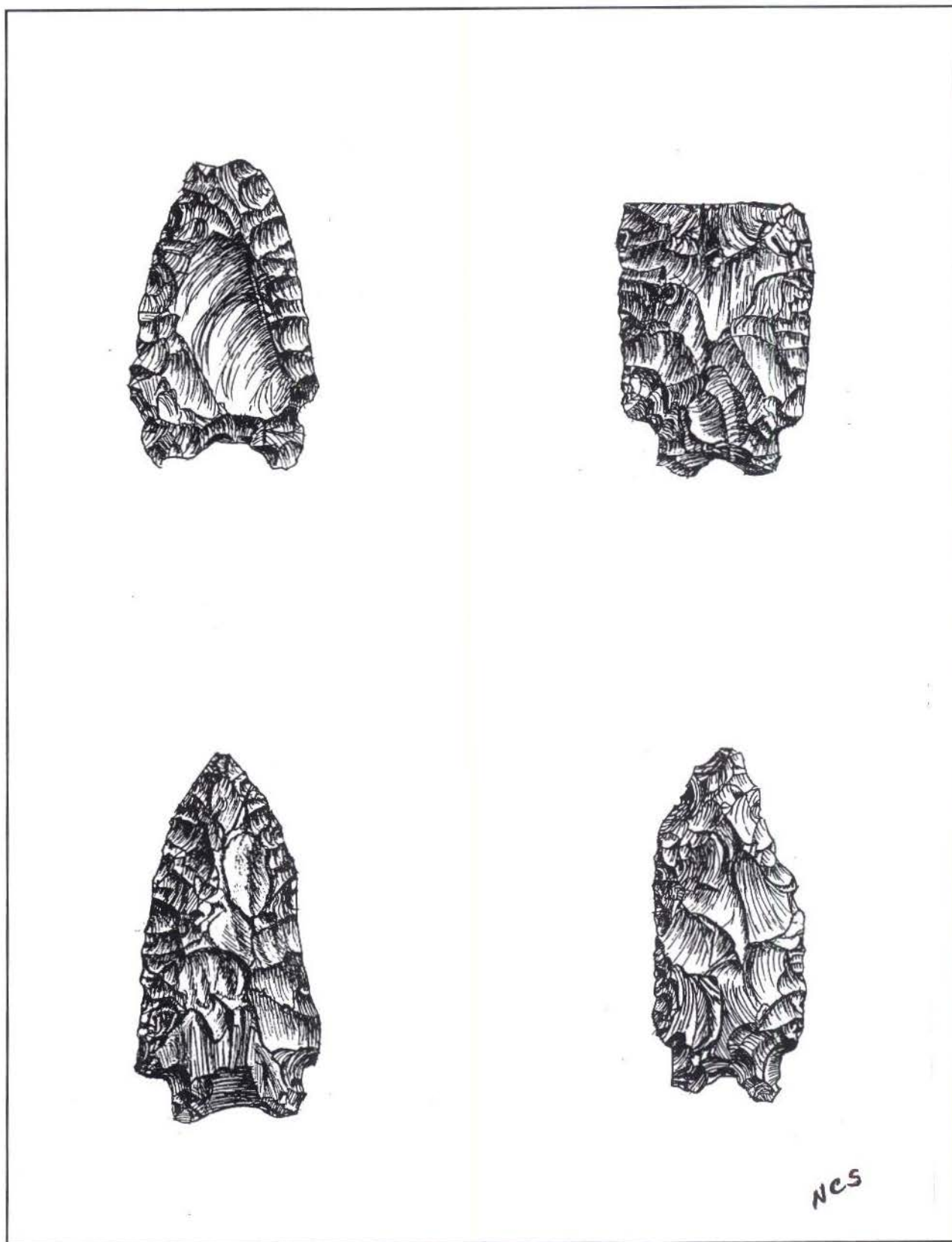
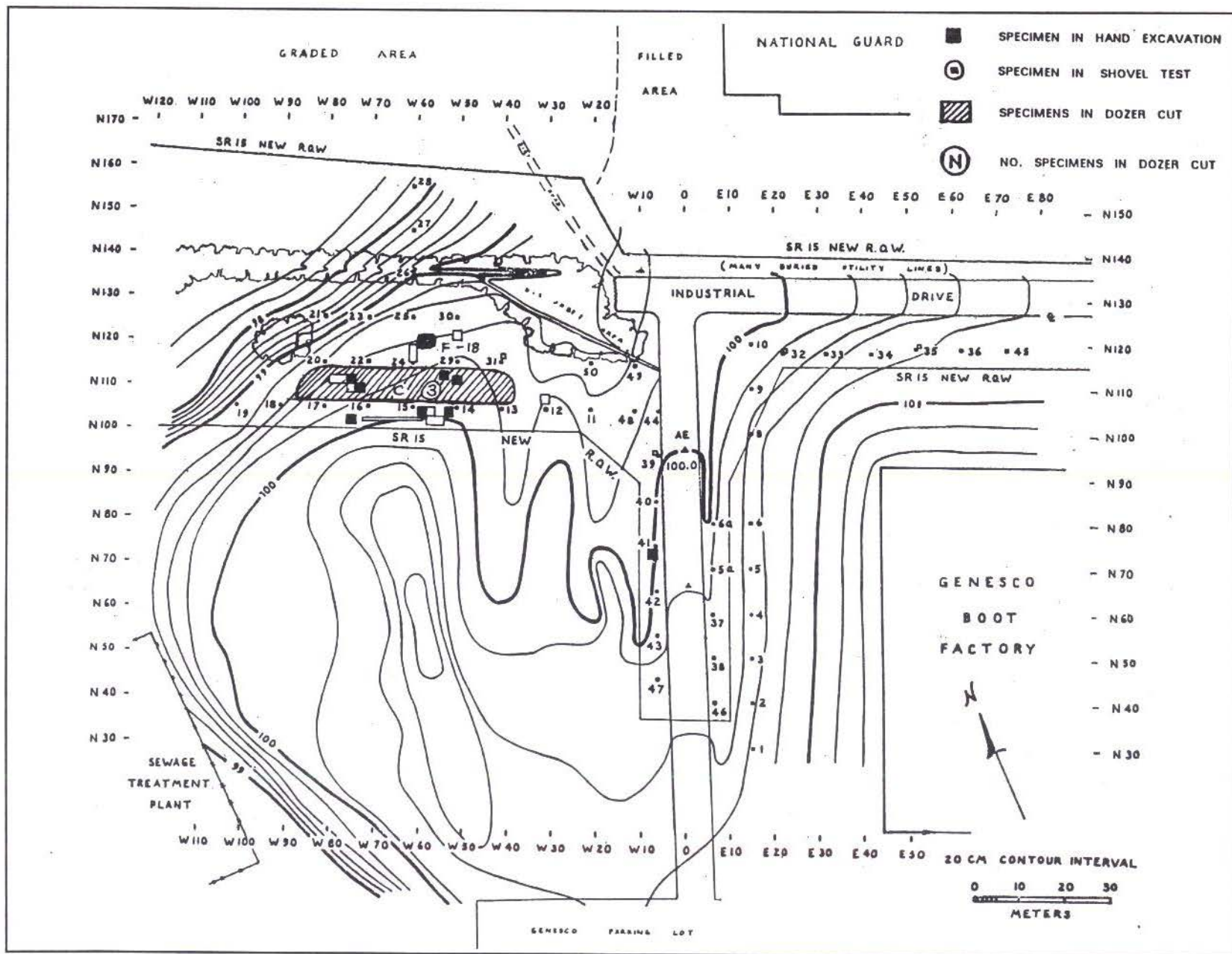


Figure 25. Benton, *var.* Buzzard Roost Creek.

Figure 26. Distribution of Benton, *war*. Buzzard Roost Creek Points.



are 55 mm, 59 mm, and 62 mm. Shoulder widths range from 28 to 35 mm (av. 30.9, n=11), stem widths are 8 to 12 mm (av. 9.3, n=13); and stem widths 18 to 27 mm (av. 22.2, n=9).

var. A

Variety A is characterized by a relatively long, broad stem with straight sides and base, neatly finished at the basal corners and shoulders. Stem length is generally equal to or slightly greater than the width. Shoulders are straight to tapered. One of the two specimens from 40WY87 is of partially heat-discolored grey-brown Fort Payne chert and the other is of grey-brown Fort Payne chert with light blue inclusions. One has only its tip missing, leaving 62 mm of length with an estimated original length on the order of 75 mm. It is 23 mm in maximum width, with a stem length of 20 mm and a stem width of 18 mm. The other specimen is a base with a blade width of 34 mm, stem length of 15 mm, and stem width of 20 mm.

var. C

Variety C (**Figures 27 and 28**) is very similar to *var. Buzzard Roost Creek*, being distinguished by having a shorter stem, generally straight to slightly expanding, and a straight to only slightly concave base. Stem length is generally about one third the width, ranging from one fourth to nearly half the width on occasional specimens. Shoulders are very narrow and range from tapered to slightly barbed. There are twelve of this variety represented at 40WY87; one is complete and two others have only the tips missing. The range of variation in source material is much greater for this variety than for any of the others. There are four made from the Category 1 grey-brown Fort Payne chert; one from the local Category 4 grey-brown Fort Payne chert with fine magenta streaks; one from the Category 3 grey-brown Fort Payne chert with light blue inclusions; one from the Category 5 medium and light grey-brown mottled Fort Payne Chert; two from heated probable Fort Payne chert; one from heated probable Camden chert; and two from a white waxy chert of unknown identity. The complete specimen is 48 mm in length; one with the tip missing has 93 mm remaining, with a projected length of approximately 100 mm; and the other has 55 mm remaining with a projected length of approximately 60 mm. Widths range from 26 to 37 mm (av. 32 mm, n=12), stem lengths from 5 to 13 mm (av. 8.5, n=12), and stem widths from 20 to 27 mm (av. 24.7, n=7).

var. D

Variety D (**Figures 29 and 30**) has a somewhat smaller stem than the other varieties; it is generally straight to slightly expanding with a slightly concave base, and is generally about half as long as it is wide. Shoulders are well defined and relatively wide, ranging in form from tapered to slightly barbed. There are seven of this variety from 40WY87, three with only the tips missing. Six of these are made of grey-brown Fort Payne chert and the other of heated probable Fort Payne chert. The specimens with the tips missing include one with 50 mm remaining and a projected length of approximately 57 mm; one with 57 mm remaining and a projected length of 67 mm; and one with 80 mm remaining and a projected length of 90 mm. Maximum widths range from 27 to 32 mm (av. 29.2, n=5), stem lengths from 9 to 12 mm (av. 10.4, n=7), and stem widths from 16 to 23 mm (av. 19.4, n=6).

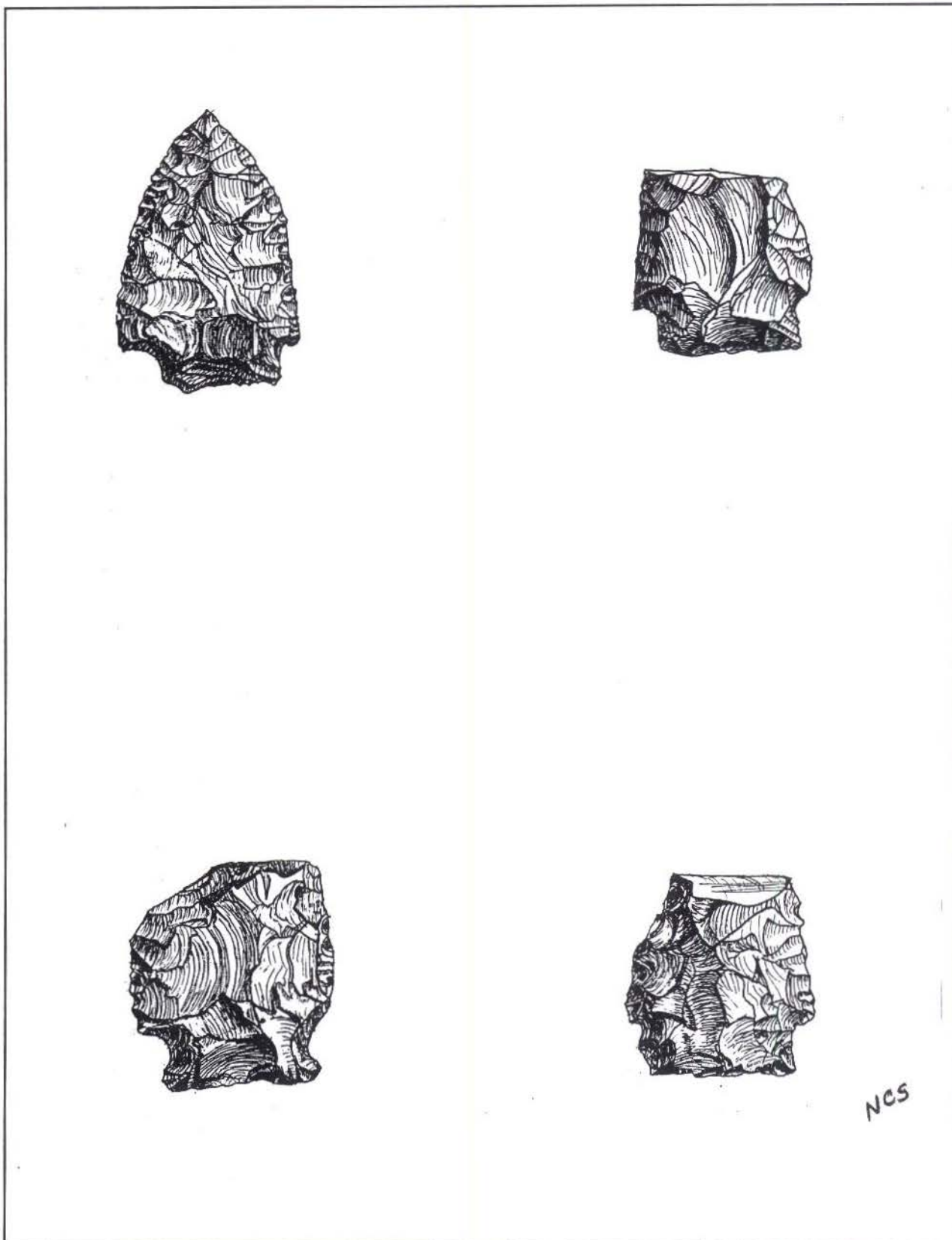


Figure 27. Benton, *var. C.*

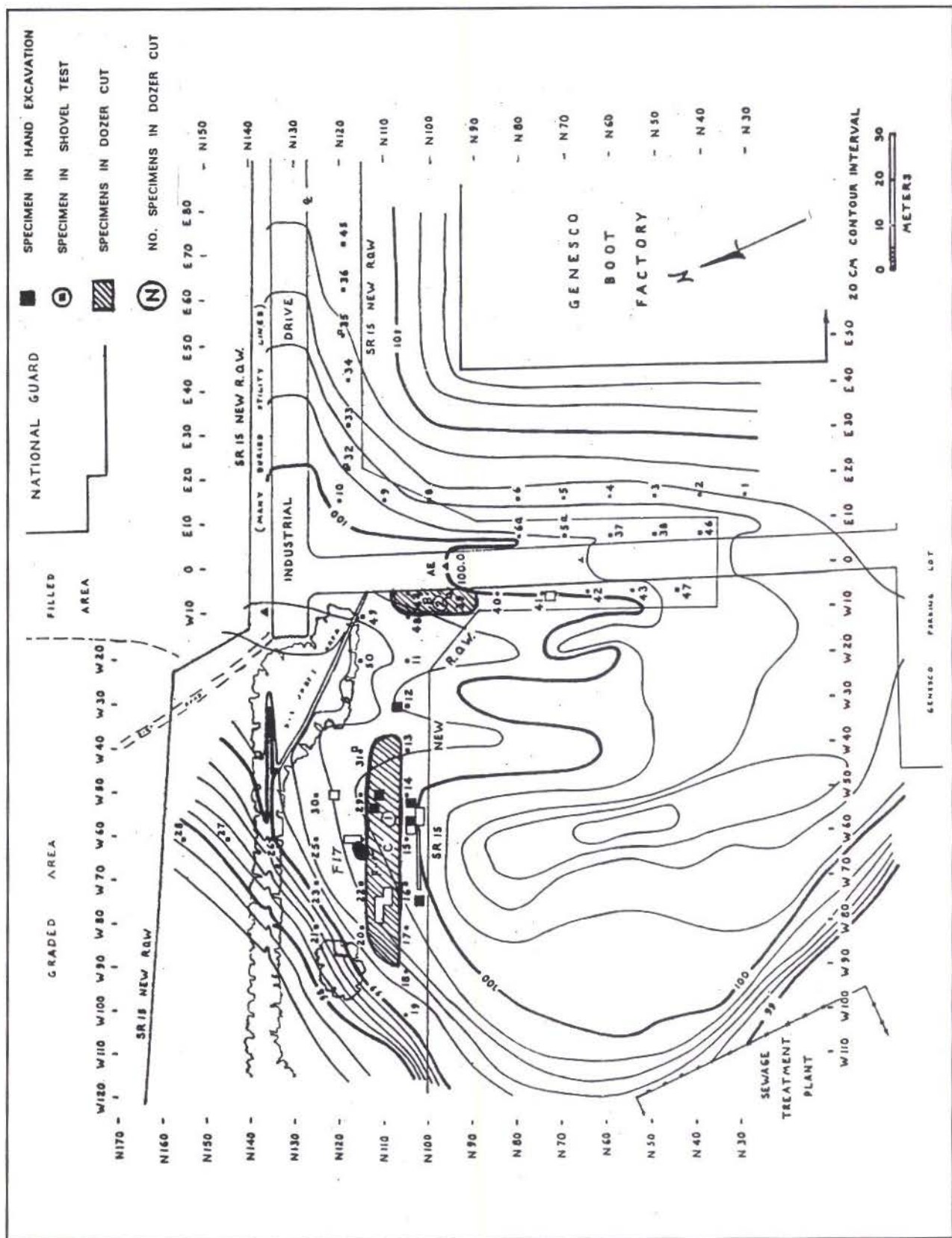


Figure 28. Distribution of Benton, var. C Points.

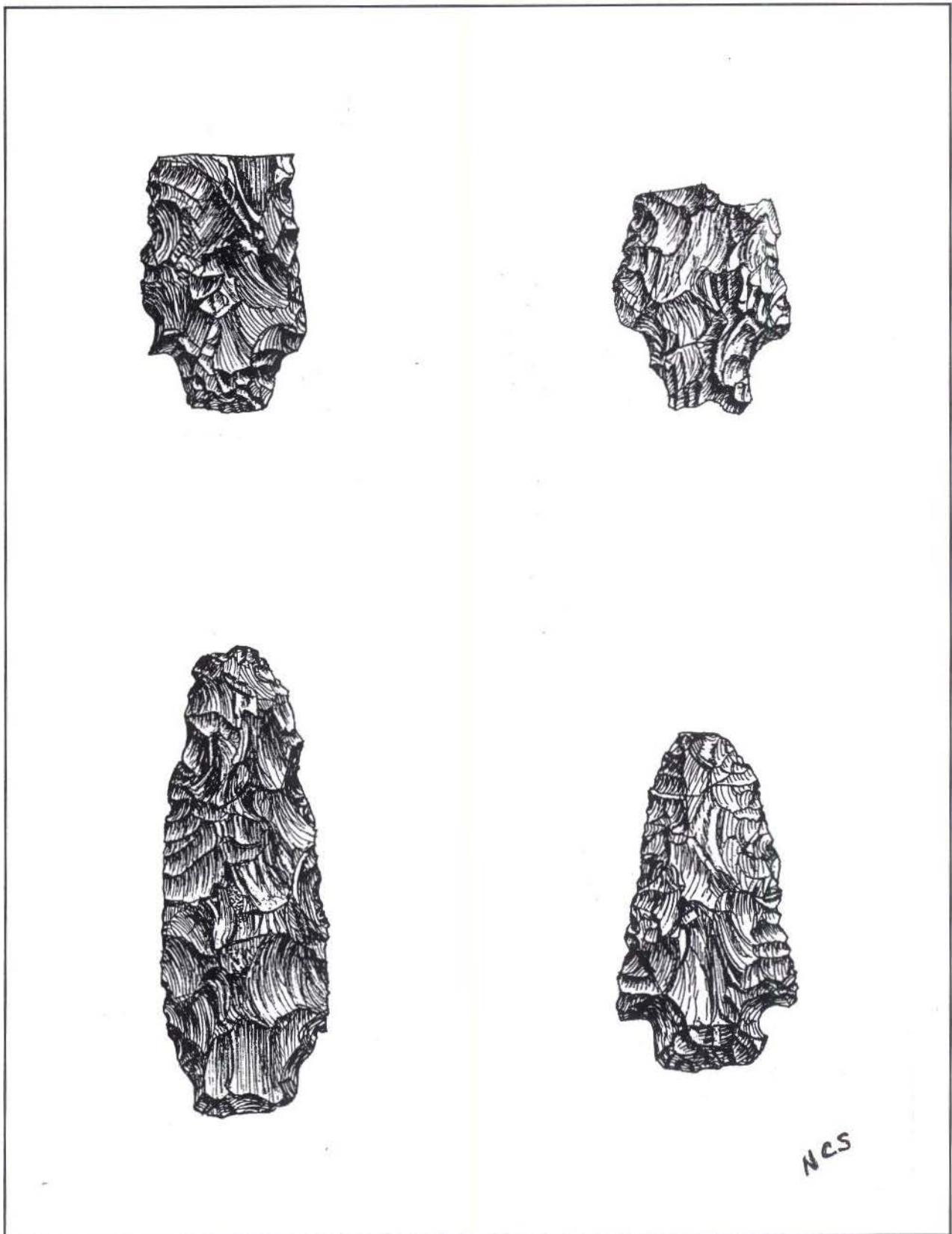


Figure 29. Benton, *var.* D.

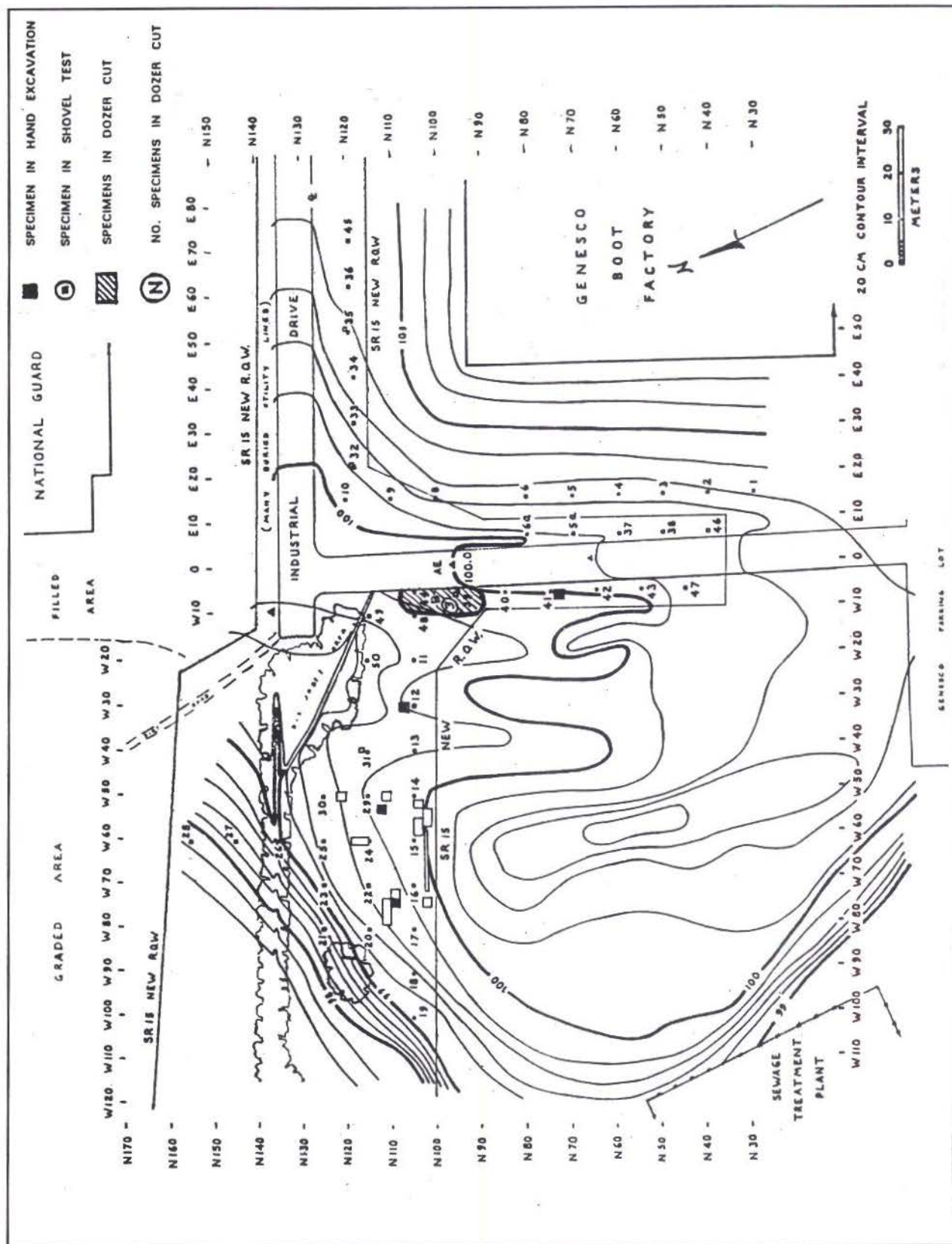


Figure 30. Distribution of Benton, *var. D* Points.

Pickwick

The Pickwick type is the only representative of the Ledbetter type cluster recognized at 40WY87 upon application of the distinguishing criteria for the types in the cluster as suggested by Entorf (1996:142). A component characterized by Pickwick points includes the entire study area of the site west of the road to the Genesco parking lot. There are 17 Pickwick points, most either of local Fort Payne chert or unidentifiable heat-treated chert. These are here grouped into four lettered varieties (A-D) based on various attributes of form.

var. A

Variety A (Figures 31 and 32) has an expanded tapered shoulder and recurvate blade edges along with a straight stem which is generally almost twice as wide as it is long, with an approximately straight base. Most are biconvex in cross section. Two of the six specimens from 40WY87 are of local Fort Payne chert and the rest are of heat-treated chert, probably also Fort Payne. Four were measurable at the shoulder and had width range of 26 to 30 mm, with an average of 27.6 mm. All have measurable stems, which range from 15 to 21 mm (av. 16.5 mm) wide and 7 to 12 mm (av. 9.25 mm) long. They occur throughout the western part of the study area.

var. B

Variety B (Figures 33 and 35) has straight to slightly convex or incurvate blade edges with tapered shoulders and incurvate stem edges with an approximately straight base. There are four specimens from 40WY87, one complete, one with its tip missing, and two basal halves. All are of Fort Payne chert, one apparently local grey-brown Fort Payne, one of Category 5 dark grey-brown Fort Payne with dark streaks, and two of Category 3 grey-brown Fort Payne chert with white to light blue inclusions. Length appears to range from 55 mm to over 65 mm, with shoulder widths of 25 to 38 mm (av. 31.3 mm), stem width of 12 to 21 mm (av. 17.3 mm), and stem length of 10 to 13 mm (av. 11.3 mm).

var. C

Variety C (Figures 34 and 35) has straight to slightly incurvate blade edges with straight shoulders, a short contracting stem and a straight base. Three of the four specimens from 40WY87 are of dark grey-brown Fort Payne chert with light blue to grey streaks/mottles and the fourth is of coarse yellow-brown chert with heating discoloration in one area. All are basal portions representing approximate basal halves of the original points. Obtainable measurements include two widths at the shoulder of 30 and 31 mm; stem widths of 14 to 20 mm; and stem lengths of 7 and 10 mm.

var. D

Variety D (Figure 35) is characterized by straight to slightly convex blade edges, tapered shoulders, and a contracting stem with a rounded base. One of the three specimens from 40WY87 is of the local Category 4 grey-brown Fort Payne chert with fine magenta streaks, and the other two of heated probable Fort Payne chert. All have sufficient damage to prevent multiple measurements of many dimensions. One specimen is 62 mm long; the largest is 40 mm wide at the shoulders; stem widths on two specimens are 18 mm and 20 mm; and the three

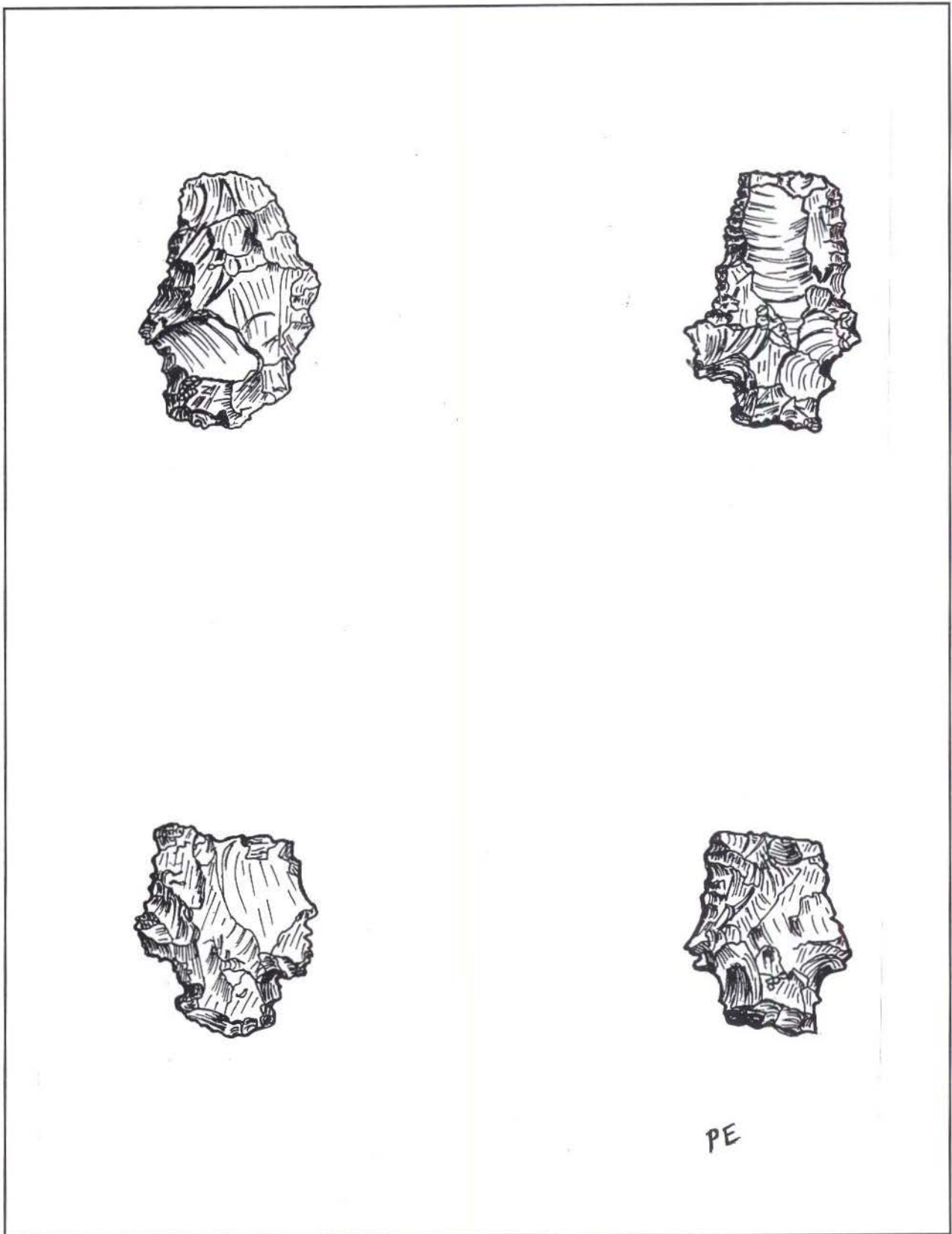


Figure 31. Pickwick, *var.* A.

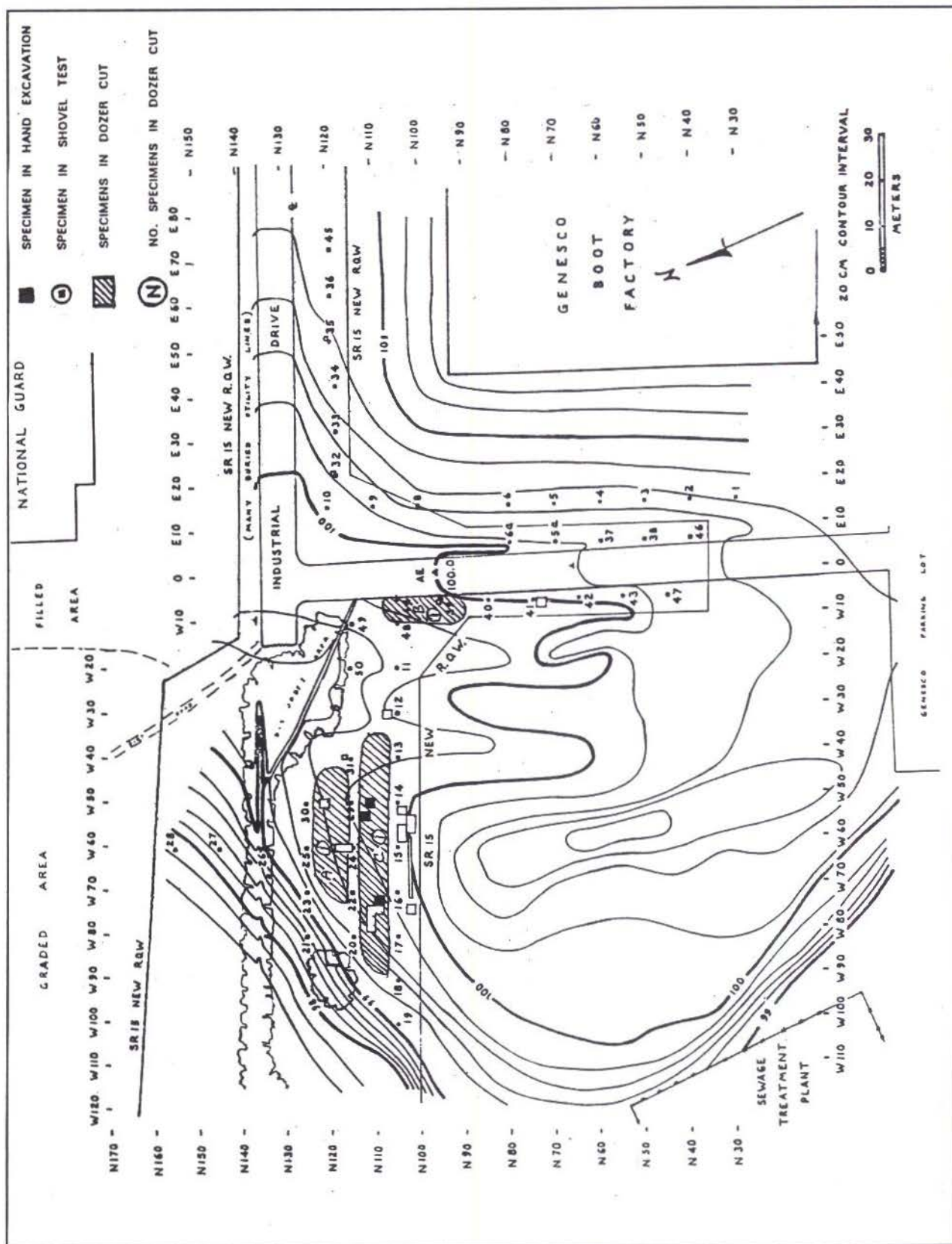
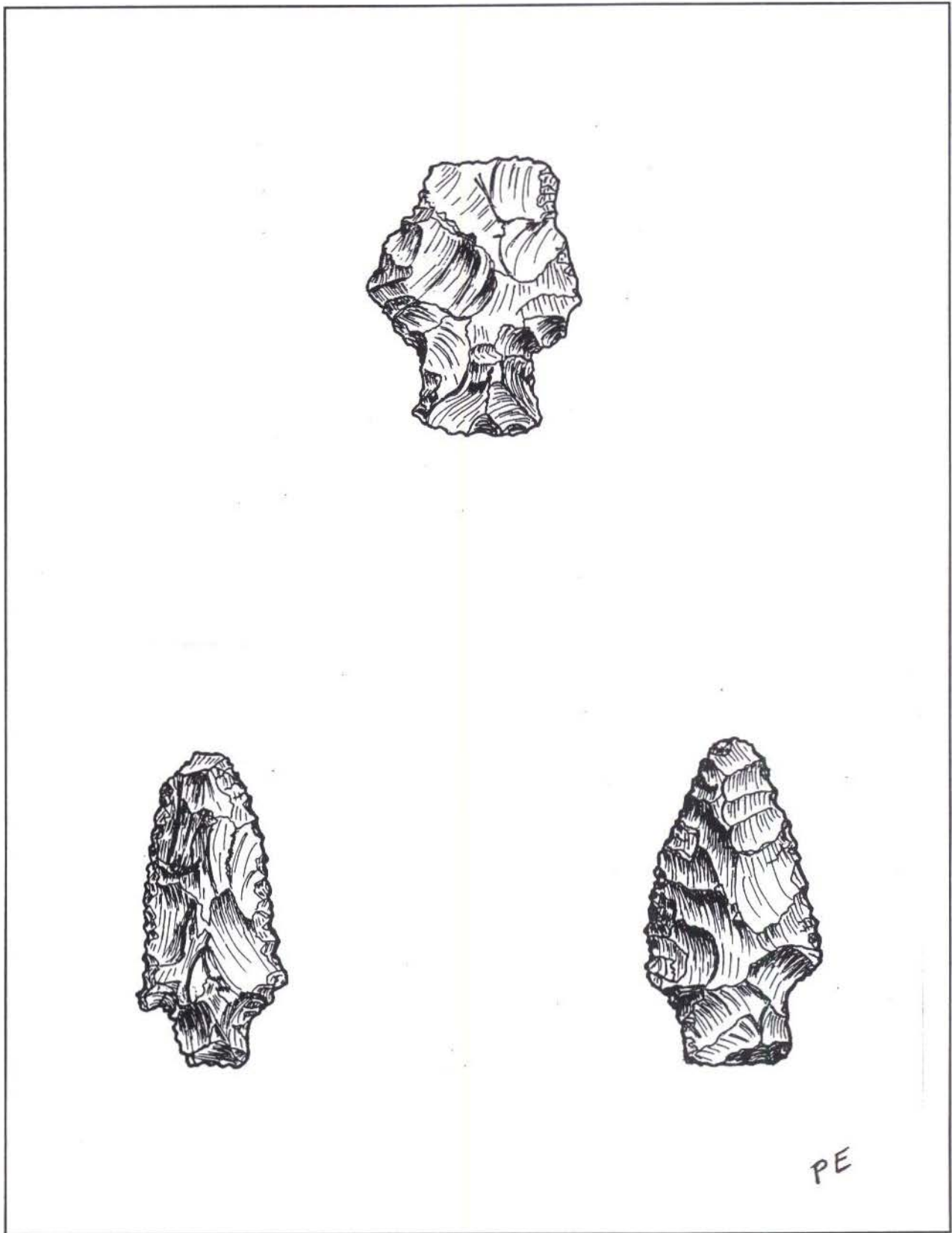


Figure 32. Distribution of Pickwick, var. A Points.



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Figure 33. Pickwick *var.* B Points.

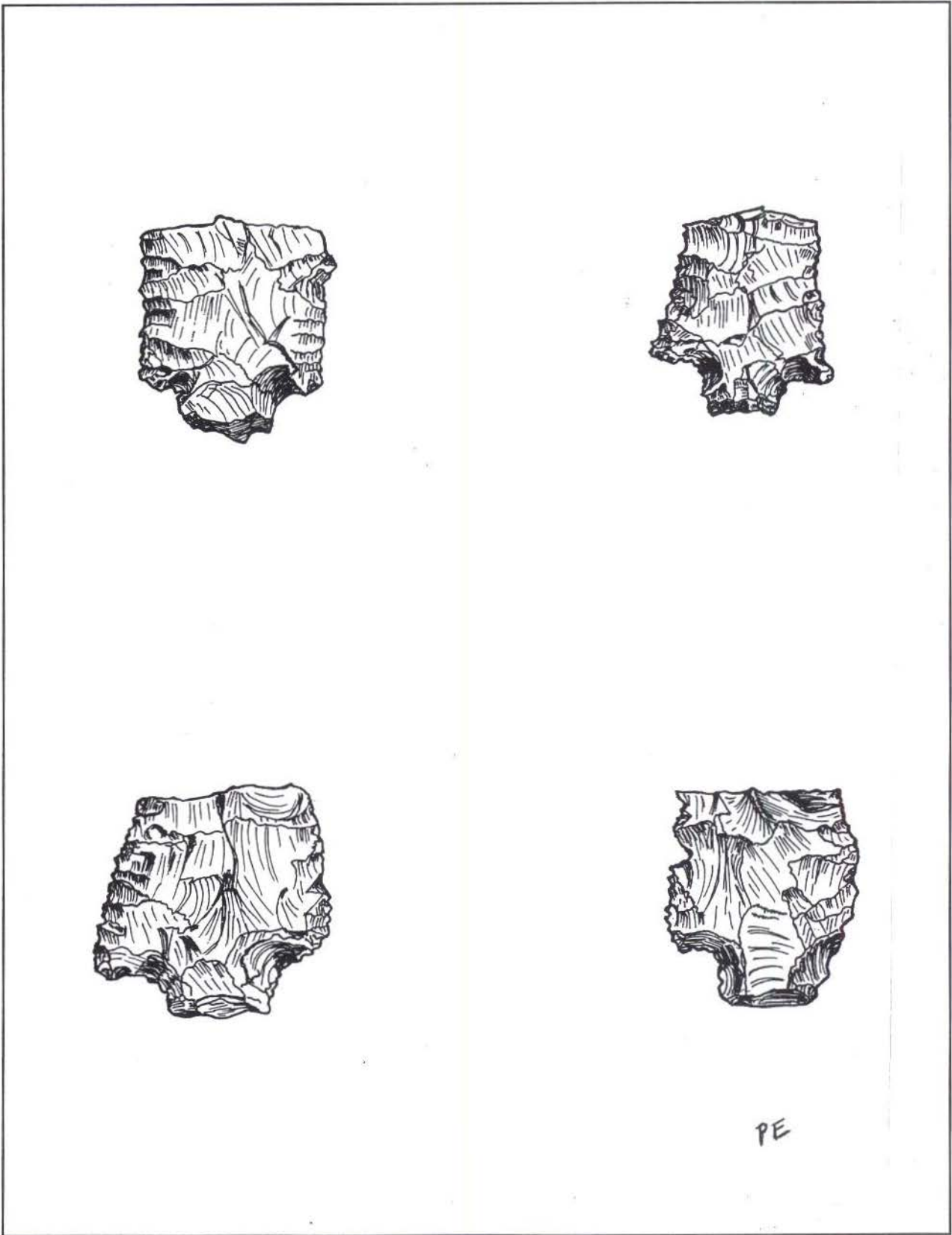


Figure 34. Pickwick *var.* C Points.

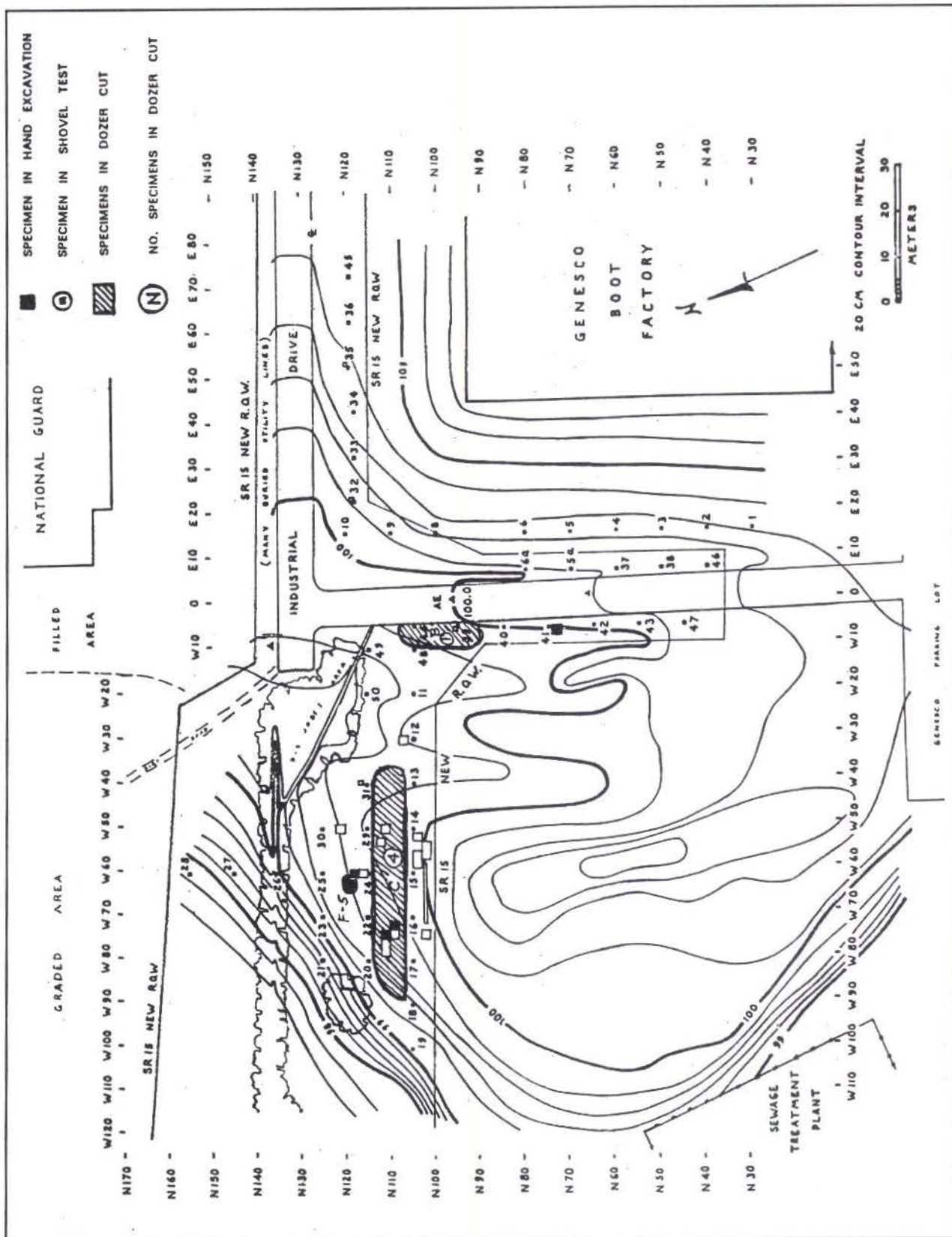


Figure 35. Composite Distribution of Pickwick, vars. B, C, and D Points.

stem lengths range from 9 to 13 mm. Retouch on two of the specimens includes random diagonal lamellar retouch flakes as well as short broad flake removals.

Lick Creek

The Lick Creek type (**Figures 36 and 37**) was defined in western Tennessee (Smith 1979:71 and Fig. 17) where it is found westward from the Tennessee River valley to the eastern frontier of the area of distribution of Poverty Point-like components. Review of the typological discussions and illustrations in the Normandy Reservoir and Tombigbee Waterway survey and excavation reports suggests that the distribution of the type does not extend into either area. The type is apparently Late Archaic, and probably related to Kays Stemmed. Futato (1983) includes Lick Creek-like specimens as a class within the Kays type in the upper Bear Creek watershed of northwestern Alabama.

There are one *var. A*, straight stem, and five *var. B*, expanding stem specimens of the type from 40WY87, with representation throughout the western sector of the site. All are of Fort Payne chert, two of the even grey-brown group, one of grey-brown with fine magenta streaks, and three of grey-brown with light blue inclusions. The *var. A* specimen is a basal portion with a stem 19 mm wide and 15 mm long, lacking sufficient blade completeness for other measurements. There are two complete *var. B* specimens and three bases. The complete specimens are 55 mm and 62 mm long; additional measurements including the rest of the specimens are shoulder width, 32 to 36 mm (av. 34 mm), stem basal width, 19 to 22 mm (av. 20.6 mm), and stem length, 11 to 15 mm (av. 12.6 mm).

Motley

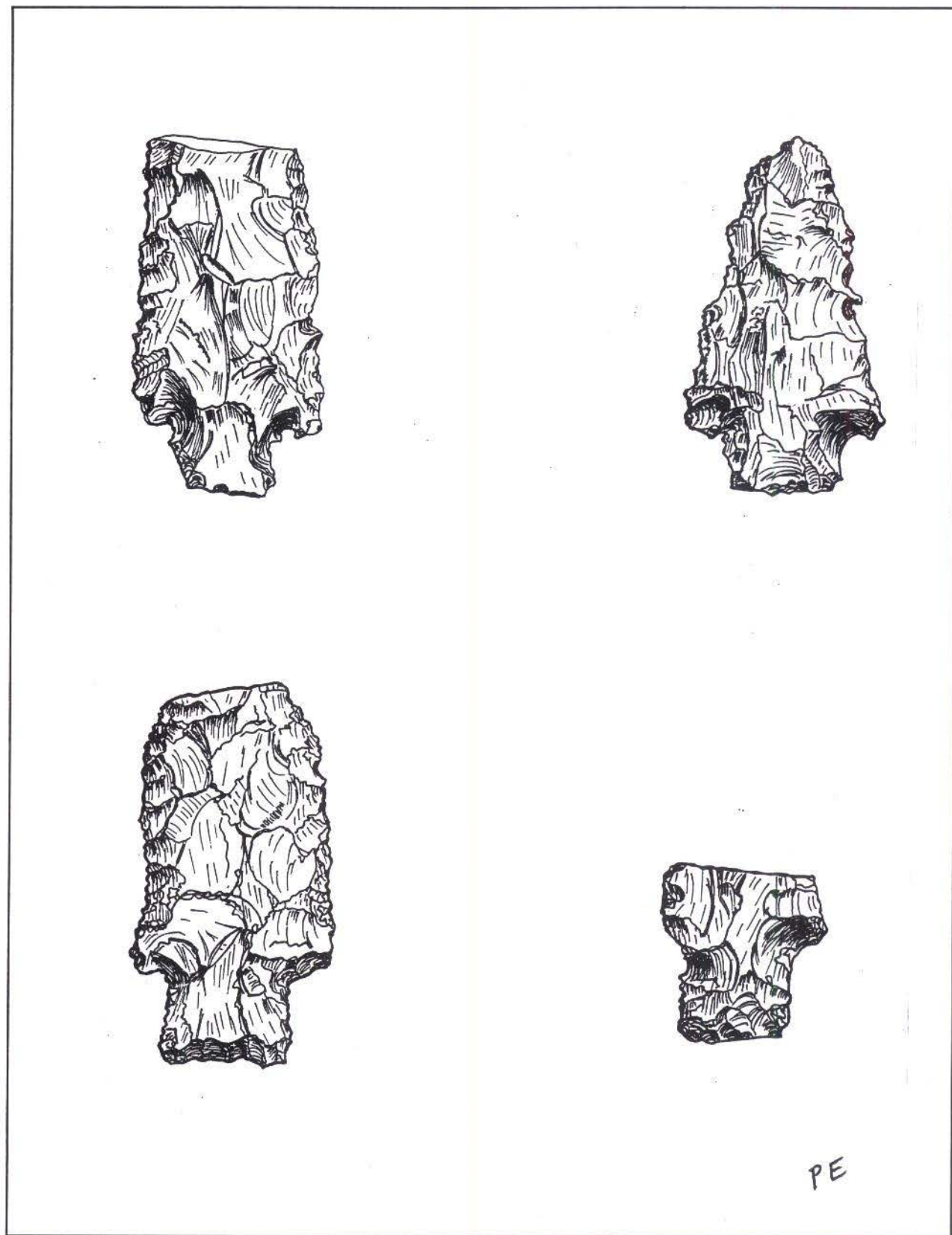
Eight Motley points (**Figures 38 and 39**) were found at the site, scattered throughout the western sector. Four are of local grey-brown Fort Payne chert, two of heated chert, one of apparent Tuscaloosa Gravel chert, and one of grey Fort Payne chert with dark grey streaks and mottles. Only one is complete; the rest are basal fragments with various degrees of additional damage limiting the range of measurements available. Length of the complete specimen is 54mm. Undamaged shoulder width was available from three specimens and ranged from 27.5 mm to 34 mm. Minimum haft widths range from 11 to 17 mm (av. 13.4 mm, n=7), stem basal widths from 17 to 22mm (av. 19.5 mm, n=6), and stem lengths from 9.5 to 17 mm (av. 12.5 mm, n=8).

Wade

A single Wade base (**Figure 40, upper**) was found in the fill from Bulldozer Cut B, beside the road to the Genesco parking lot. It is of grey-brown Fort Payne chert with darker brown streaks. The specimen has a straight base, but loss of one barb precludes meaningful measurements.

McIntire

Three McIntire points (**Figure 40, lower**), all with missing tips, were found in the central part of the study area. One is of grey-brown Fort Payne chert with fine magenta streaks, one of grey-brown Fort Payne chert with darker brown streaks, and the other of pale grey-brown Fort Payne chert. All have straight bases and straight to slightly convex blade edges. Projectable lengths are on the order of 60 to 65 mm for two and longer for the third. Available measurements



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Figure 36. Lick Creek Points.

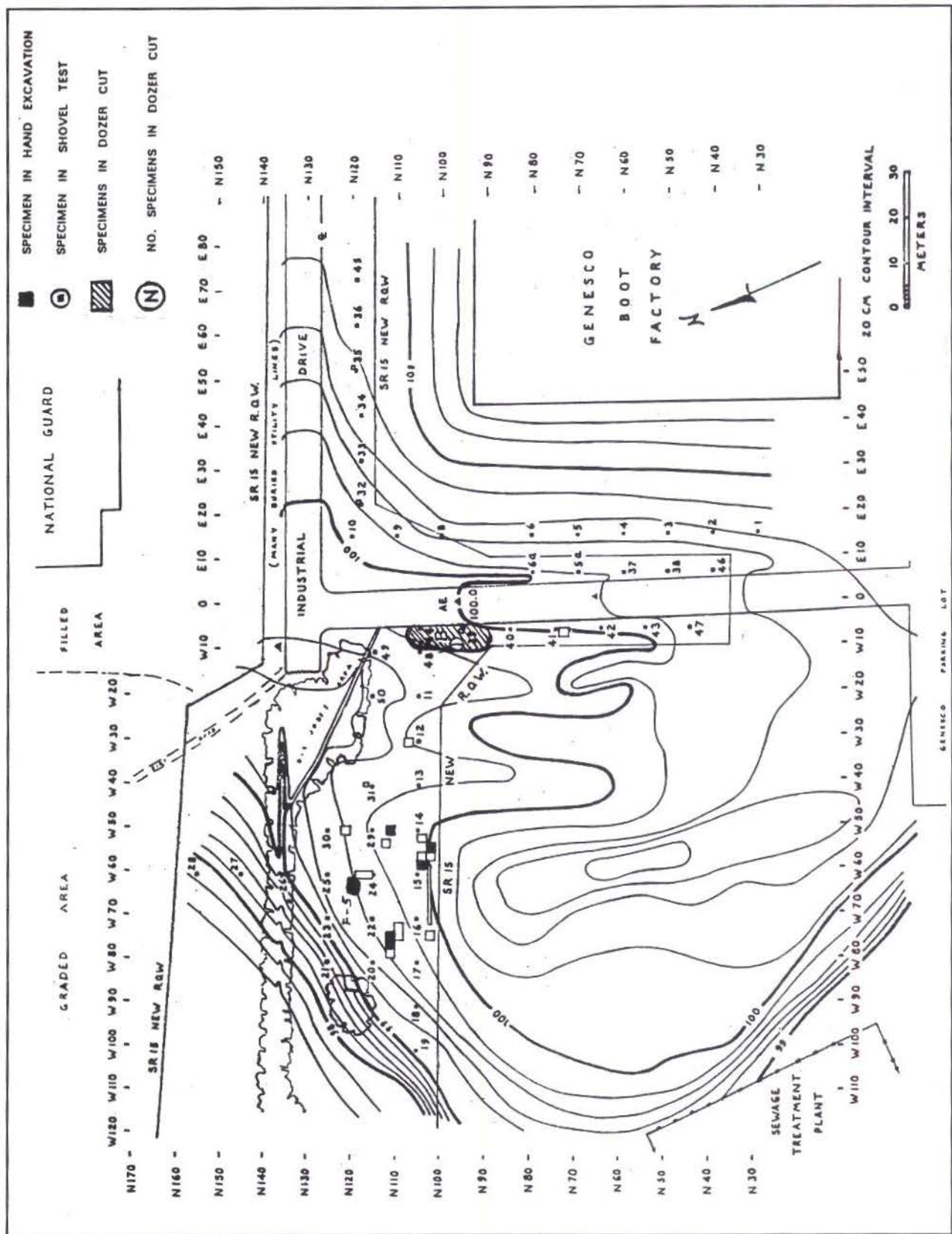


Figure 37. Distribution of Lick Creek Points.

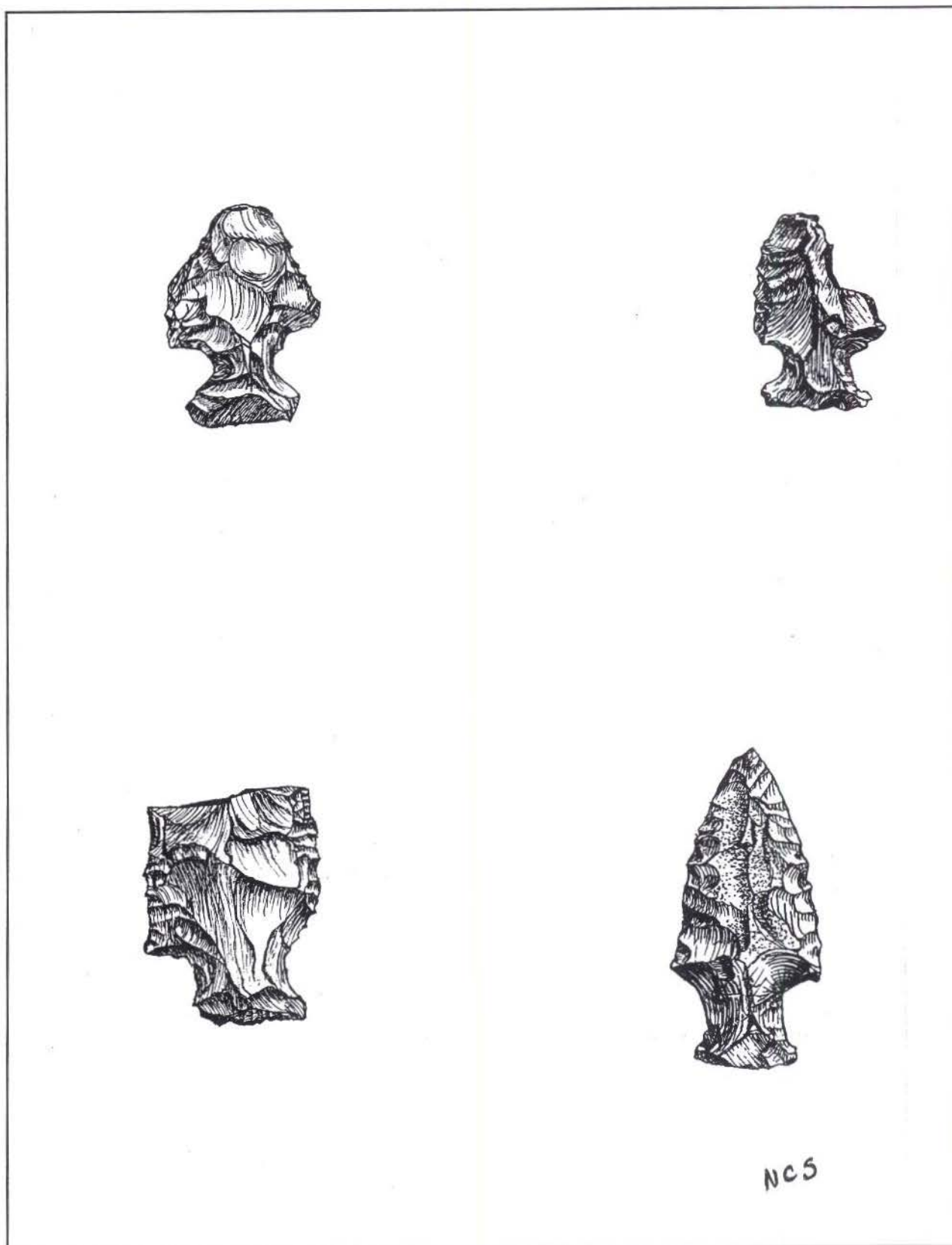


Figure 38. Motley Points.

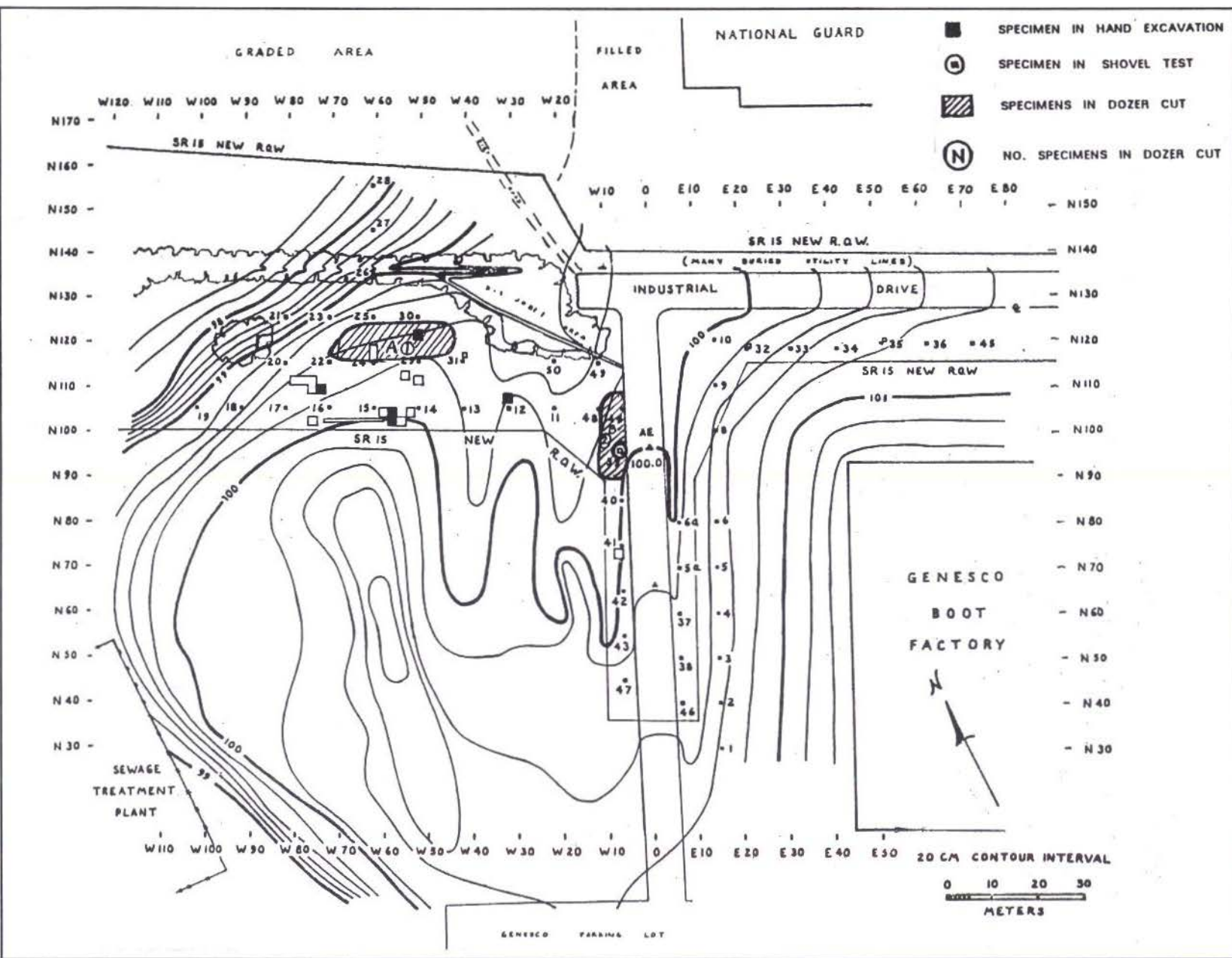


Figure 39. Distribution of Motley Points.

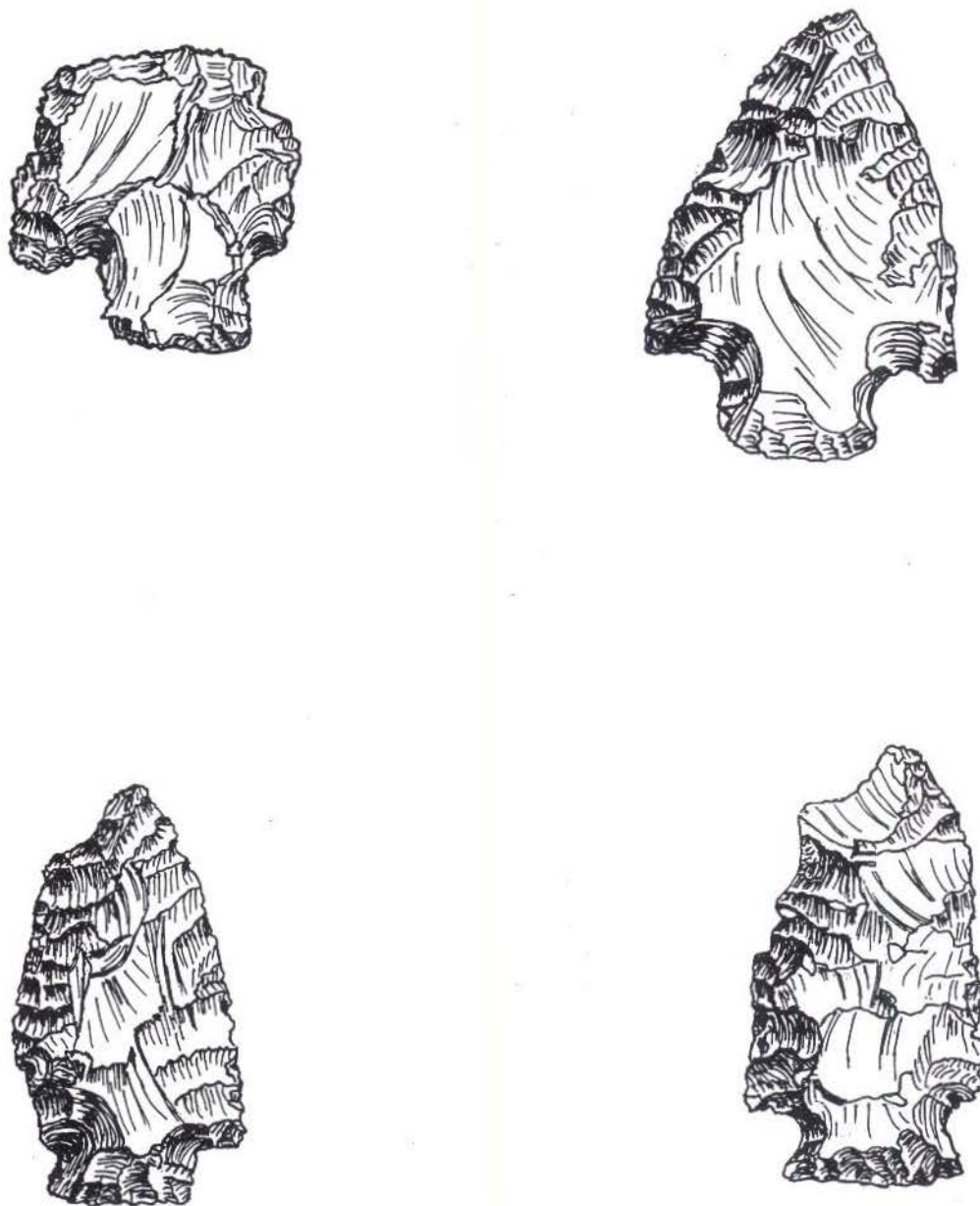


Figure 40. Wade and McIntire Points.

include shoulder width, 22 to 40 mm (av. 30.6 mm); minimum haft width 17 to 19 mm (av. 18 mm); basal width 19 to 22 mm (av. 20.5 mm); and stem length 8 to 11 mm (av. 9.6 mm).

Little Bear Creek

Four Little Bear Creek points (**Figures 41 and 42**) were found on the site, all with small narrow stems slightly longer than their width. Two have inversely tapered shoulders and two have slightly barbed shoulders. Bases are straight on all, and the barbed specimens have unmodified striking platform bases. Blade edges are convex and cross section is biconvex on all specimens. One is from tan chert, two are of grey-brown Fort Payne chert with white inclusions, and one of dark grey-brown Fort Payne chert with faint light streaks and speckles. The only complete specimen is 60 mm long. Additional measurements include shoulder width, 26.5 to 29.5 mm (av. 28.4 mm); stem width, 10.5 to 12 mm (av. 11); and stem length, 10 to 12 mm (av. 10.75 mm).

Flint Creek

Twenty-one Flint Creek points were found on the site; eight with straight stems, eight with expanding stems, and five with bulbous stems as defined in earlier work at Rock Creek in northwestern Alabama (Smith 1982:82-84 and Fig. 35). This is a Late Gulf Formational type with similarities to such previous and contemporary types as Little Bear Creek, Pontchartrain, and Adena.

Straight stem

The eight specimens of this Flint Creek variety (**Figures 43 and 44**) have straight to slightly excurvate finely serrated blades with short, well defined stems with straight edges and bases. All are of Fort Payne chert; three of the local even grey-brown, four of grey-brown with white inclusions, and one of even light brown partially heat discolored. All with provenience other than surface are from the western sector of the site west of the W55 line, in complementary distribution with the expanding stem variety. Two are complete and have lengths of 69 mm and 70 mm. Additional available measurements include shoulder widths of 21.5 to 28 mm (av. 24.5, n=7), stem widths of 15 to 18 mm (av. 16.8, n=8), and stem lengths of 9 to 14.5 mm (av. 10.7 mm, n=7).

Expanding stem

The eight Flint Creek expanding stem specimens (**Figures 45 and 46**) have straight to slightly excurvate blades with tapered shoulders and expanding stems with incurvate lateral edges and straight to slightly excurvate bases. Five are of the local even grey-brown Fort Payne chert and the other three of heated probable Fort Payne chert. Provenienced specimens are from the western part of the study area between the W50 and W60 lines, in complementary distribution to the straight stem variant. Available measurements include shoulder widths of 19.5 to 27 mm (av. 23.9 mm, n=6), stem lengths of 12.5 to 17 mm (av. 14.4 mm, n=8), and basal widths of 14.5 to 20 mm (av. 17.3 mm, n=8).

Bulbous stem

The five Flint Creek bulbous stem specimens (**Figure 47, upper**) have straight to slightly excurvate finely serrated blades and a constricted stem with excurvate stem margins and base.

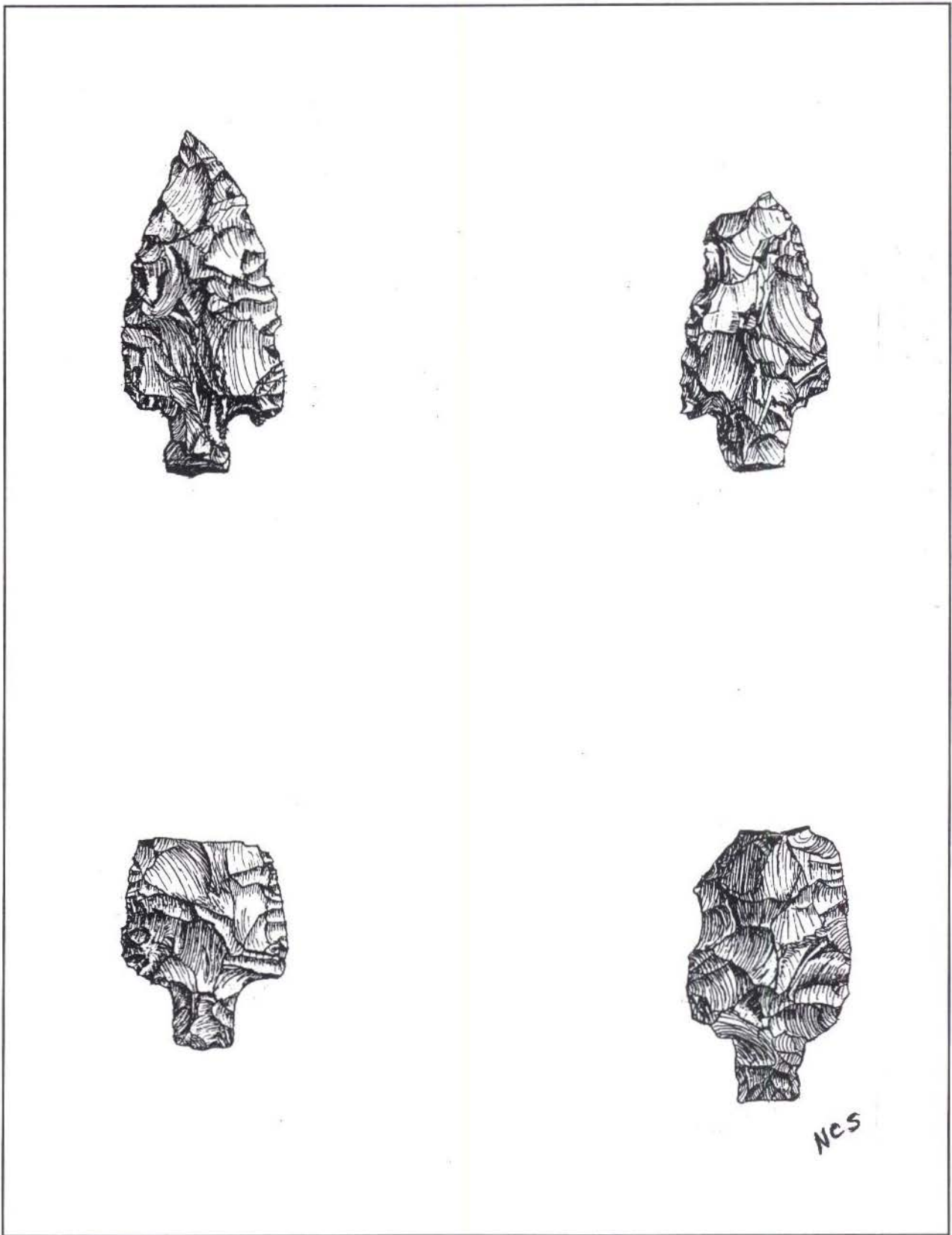


Figure 41. Little Bear Creek Points.

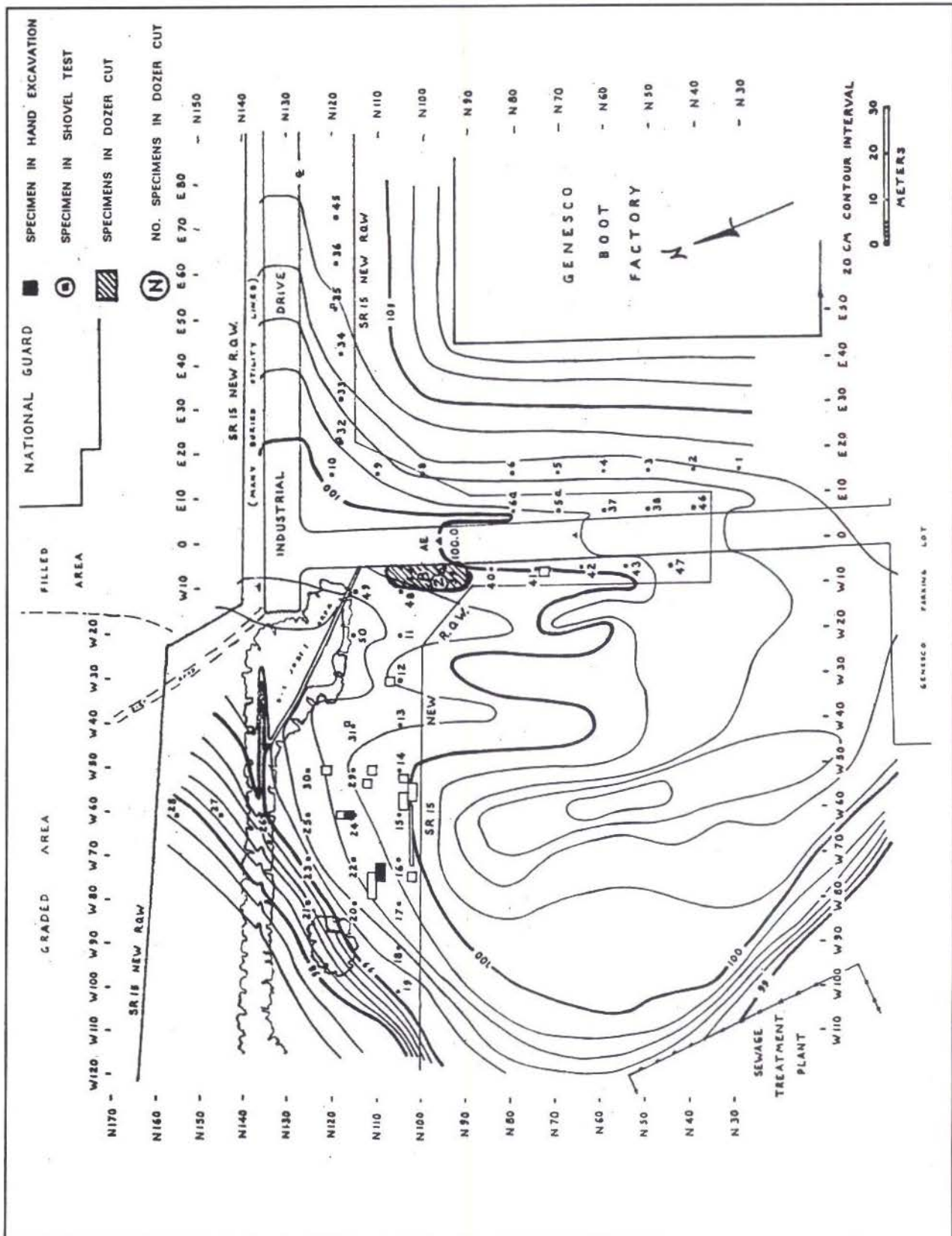


Figure 42. Distribution of Little Bear Creek Points.

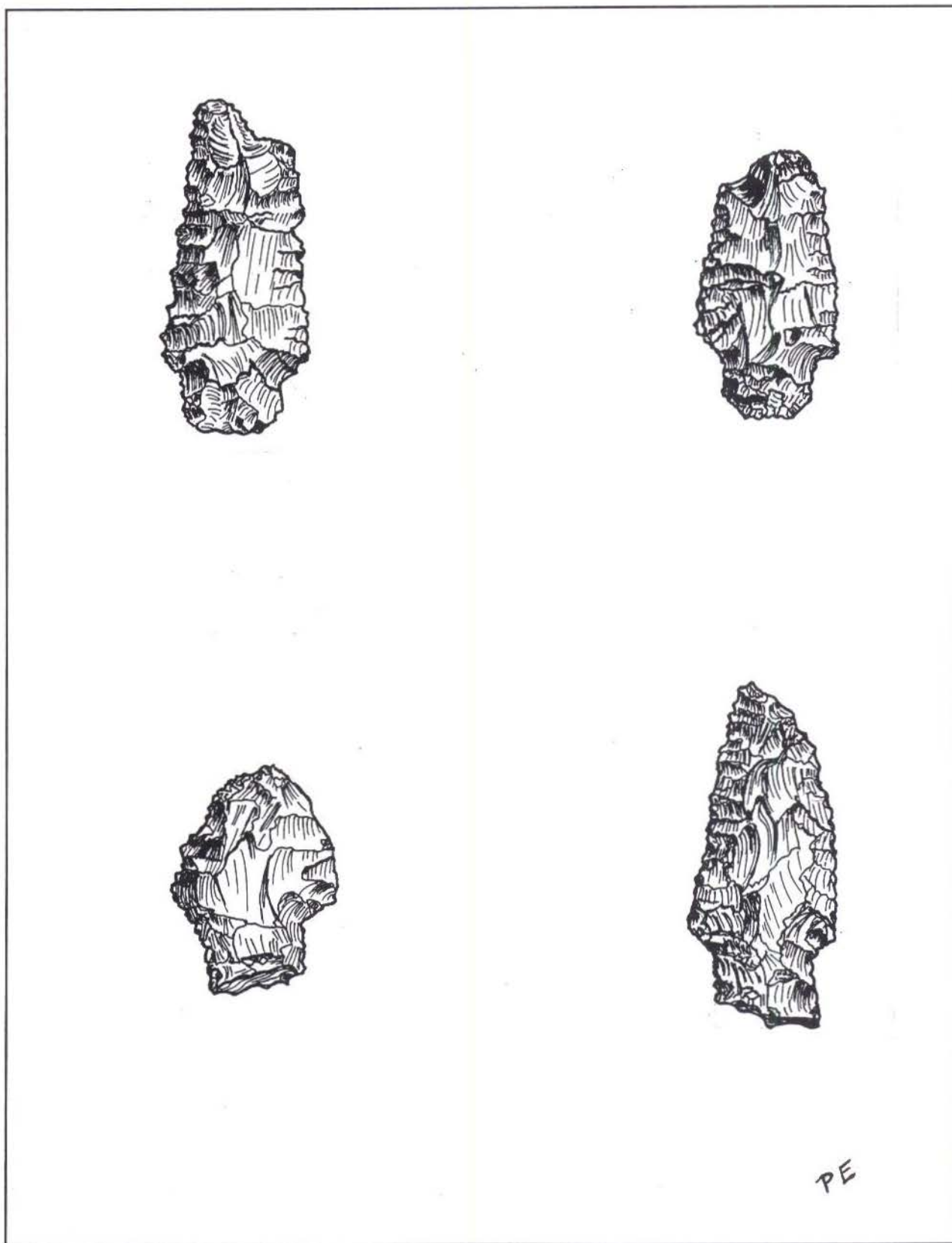
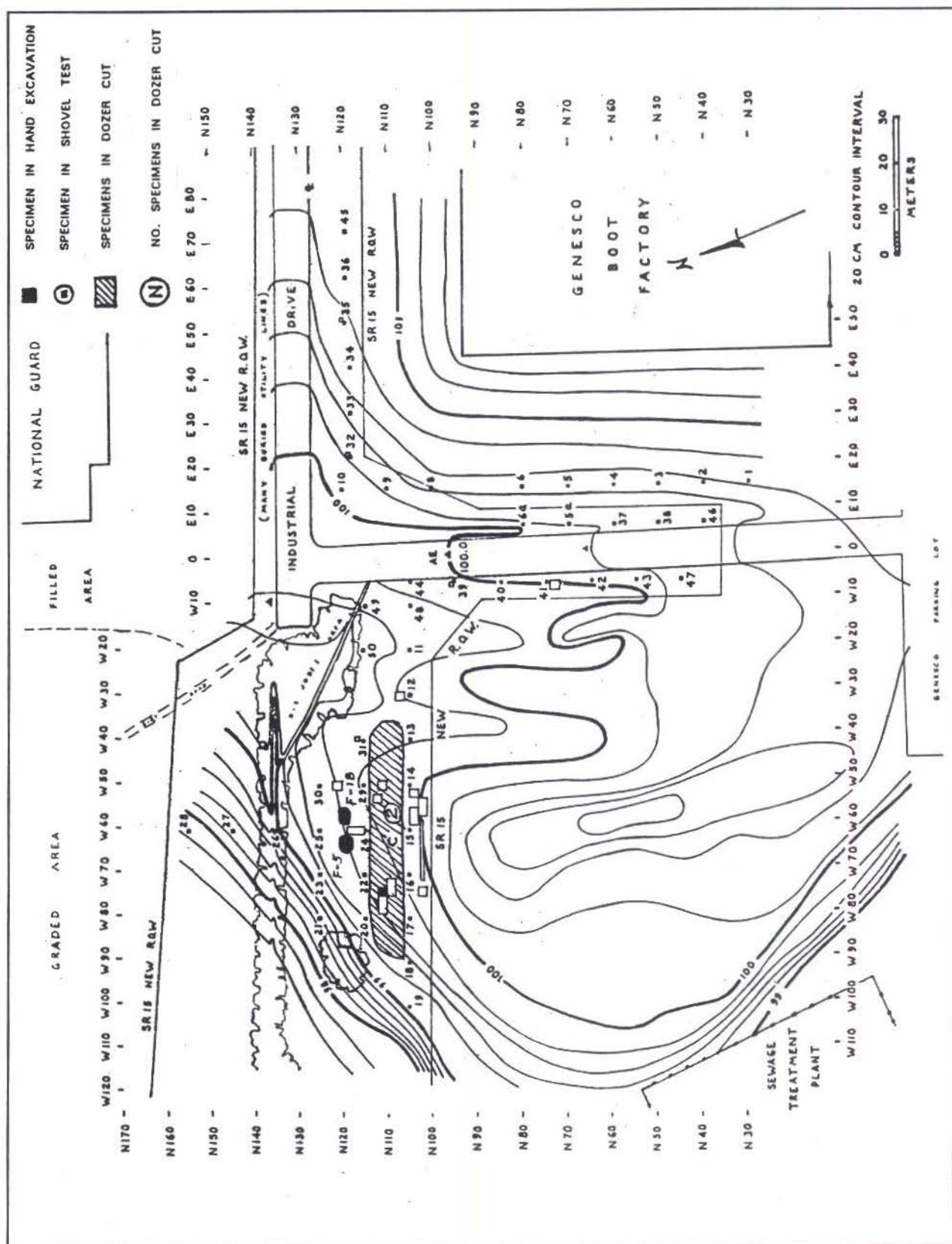


Figure 43. Flint Creek Straight Stem Points.





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Figure 45. Flint Creek Expanding Stem Points.

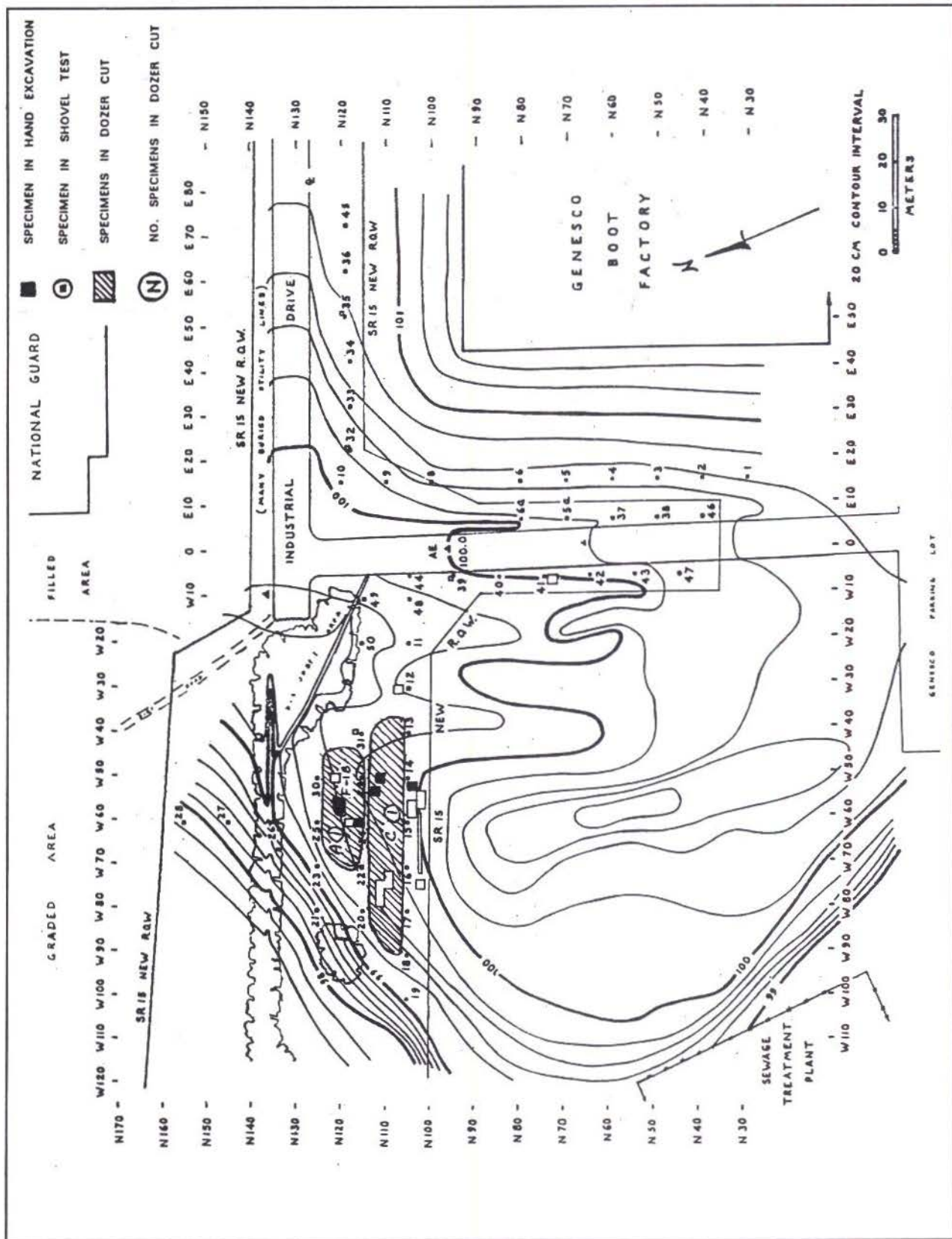
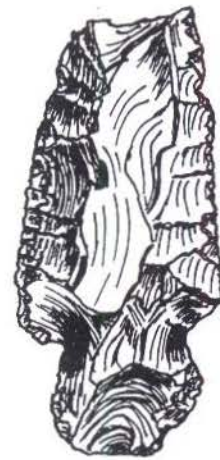


Figure 46. Distribution of Flint Creek Expanding Stem Points.



PE

Figure 47. Flint Creek Bulbous Stem (upper) and Adena (lower) Points.

Each is made from a different variety of apparent Fort Payne chert. The complete specimen is 77 mm long; additional available measurements include shoulder widths of 26 mm and 33.5 mm; stem widths of 16 to 18 mm, and stem lengths of 16 to 18 mm.

Adena

Two Adena points (**Figure 47, lower**) were found in the western sector of the study area, both made of the even grey-brown Fort Payne chert. One (Spec. No. 1661-12) has a constricted stem and the other (Spec. No. 1684-10) has a contracting stem. Projected length of the constricted stem specimen is 56 mm, with a shoulder width of 20 mm, width at stem constriction 14 mm, maximum stem width 17 mm, stem length 18 mm, and thickness of 7 mm. The contracting stem specimen is 55 mm long, with a maximum blade width of 23 mm, stem width of 16 mm, a stem length of 15 mm, and thickness of 7 mm.

Bradley Spike

A single specimen of this type was found in Shovel Test 37, in the south-central part of the site along the drive to the Genesco parking lot. The point is made of the local grey-brown Fort Payne chert. The length is slightly over 50 mm, shortened by an impact fracture; shoulder width is 17 mm, stem width is 12 mm, stem length is 9 mm, and thickness is 12 mm.

Jacks Reef Corner Notched

The only specimen of this type came from Bulldozer Cut A in the western sector of the site. It is made of grey-brown Fort Payne chert. Blade edges are excurvate and the base is straight. Specimen length is 29 mm, but the distal end appears to have either impact damage or reworking which has modified the original length. Shoulder width is 21 mm with one barb removed by apparent reworking, haft width is 12 mm, basal width is 16 mm, haft length is 8 mm, and thickness is 6 mm.

SCRAPERS

At least twelve and probably fourteen items from the project are classifiable as scrapers. Two specimens appear to be proximal fragments of large Type A end scrapers made on thick prismatic blades, one is a side scraper, one is a shaft scraper, and the rest are end scrapers of various forms. Most are of heated chert or local variants of Fort Payne chert, without selection for any higher quality material than that used for points.

End scrapers

Type A

Type A end scrapers (**Figures 48 and 50**) are the most abundant type, being represented by four confirmed and two probable specimens. These are large scrapers made on thick narrow prismatic blades, most with a pronounced longitudinal median ridge. One is made of heated chert, probably Fort Payne, one of light brown Fort Payne chert with off-white mottling, and the rest of even grey-brown Fort Payne chert. Lengths of the complete specimens range from 61 to 66 mm, widths from 22 to 24 mm, and thickness from 7.5 to 18 mm with only one less than 11

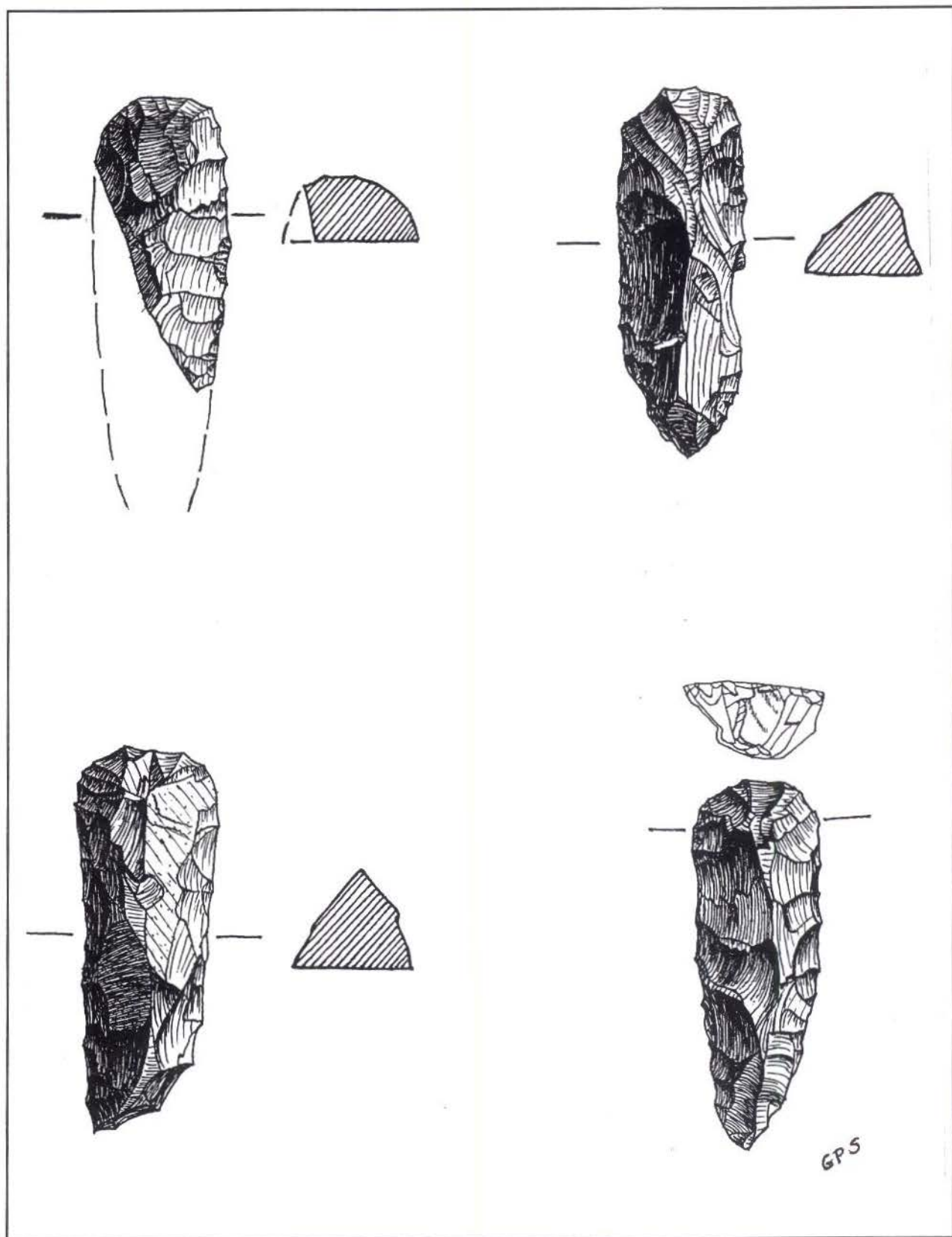


Figure 48. Type A End Scrapers.

mm thick. Edge angles of the working edges range from 65 to 79 degrees. Edge wear on all is characterized by mild rounding and polishing of the edge with very slight crushing, step fracturing and thin scalar flake removal. In only one case is the edge wear sufficient to bring the working edge to a smooth contour lacking projections between the main edge-forming flake scars. Examination of experimental use wear studies, such as Semenov (1964) and Ahler (1971), suggests use as hide defleshing tools as the most appropriate interpretation of the wear patterns, with only slight usage indicated.

Type B

Type B end scrapers (**Figure 49, upper**) are relatively flat, teardrop shaped scrapers made on thick flakes. Two were found at 40WY87, one of waxy medium grey chert and the other of waxy grey-brown Fort Payne chert with pebble cortex remaining on the striking platform and the proximal half of one margin. They are 31 and 54 mm long, 18 and 29 mm wide respectively, 6.5 and 14 mm thick respectively. Both have edge angles of 65 degrees, although the larger one appears to have a damaged or reworked working edge. Edge wear is very slight on both and consists of slight rounding and polishing accompanied by slight step fracturing and crushing of the edge.

Type C

Both Type C scrapers are made on Little Bear Creek point bases, one of grey-brown and dark grey streaked Fort Payne chert and the other of severely weathered light brown Fort Payne chert with off-white streaks. The larger one is 70.5 mm long, 34 mm wide, and 9 mm thick with an edge angle of 66 degrees; there is no indication of use wear on it. The smaller specimen is 48.5 mm long, 27 mm wide, and 9 mm thick with an edge angle of 80 degrees. Use wear consists of rounding and polishing of the working edge and the interflake ridges on both faces.

Type D

One hafted scraper has a long, slightly expanding rectangular stem and an expanded working edge. It is made from near-cortex grey-brown Fort Payne chert with occasional fine dark brown streaks. Length is 54 mm and thickness is 12 mm with an edge angle of 68 degrees on the surviving lateral half of the working edge. Edge wear consists of light polishing of the working edge and the high points of the working edge bevel.

Type E

The specimen designated Type E is a large flake with a scraping edge opportunistically worked on the distal end of the flake. It is of light brown Fort Payne chert with off-white mottling and streaking. Length is 63 mm, width is 55 mm, and thickness is 14 mm with a 70 degree angle at the working edge. Use wear consists of extremely slight rounding and polishing of the working edge.

Side scrapers

A single side scraper was recovered from the site. It is made on a thick blade-like flake with several cortex facets remaining from a waxy medium grey Fort Payne chert pebble. It is 43 mm long, 21 mm wide, and 10 mm thick with scraping edges present down the full length of each

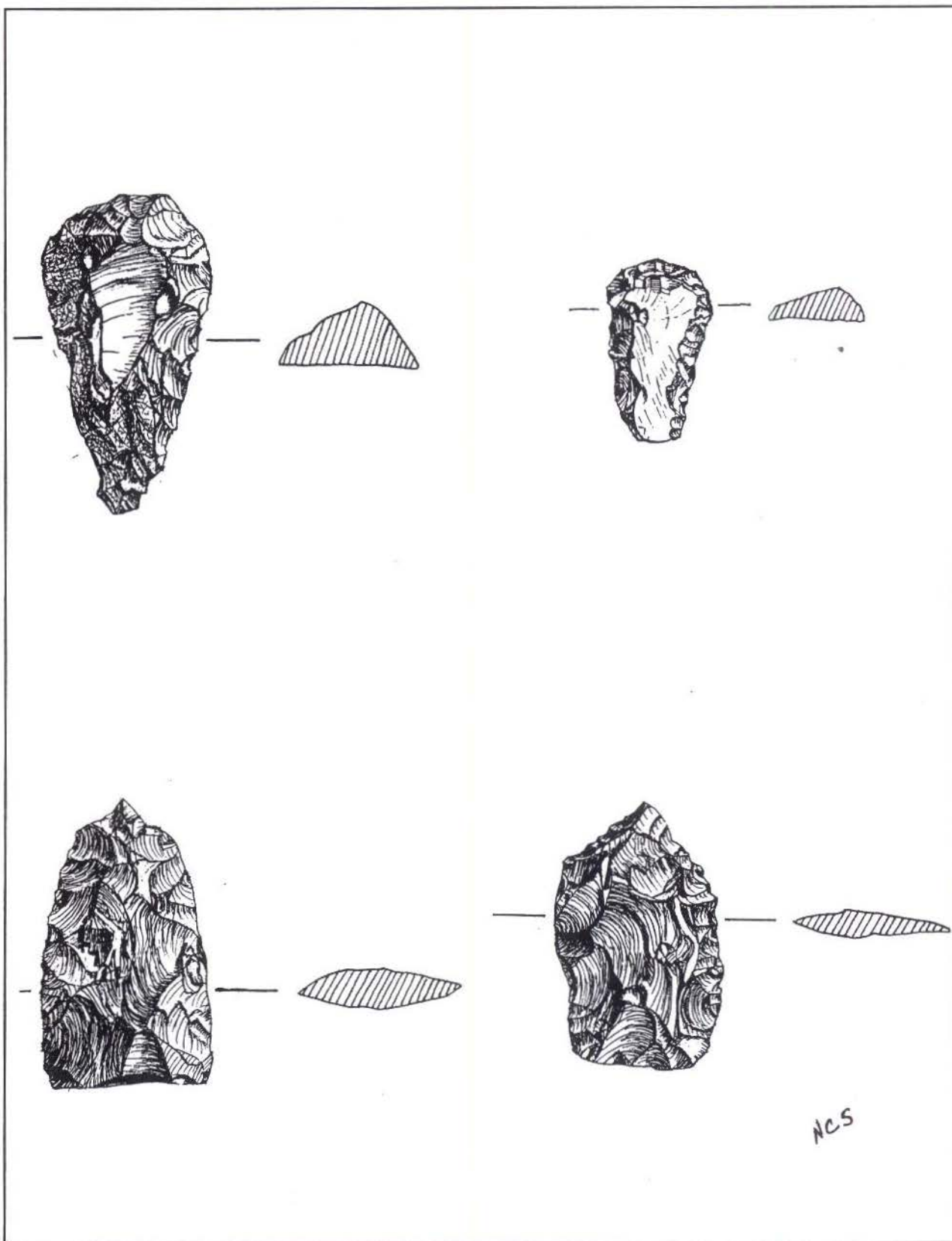


Figure 49. End Scrapers (upper) and Gravers (lower).

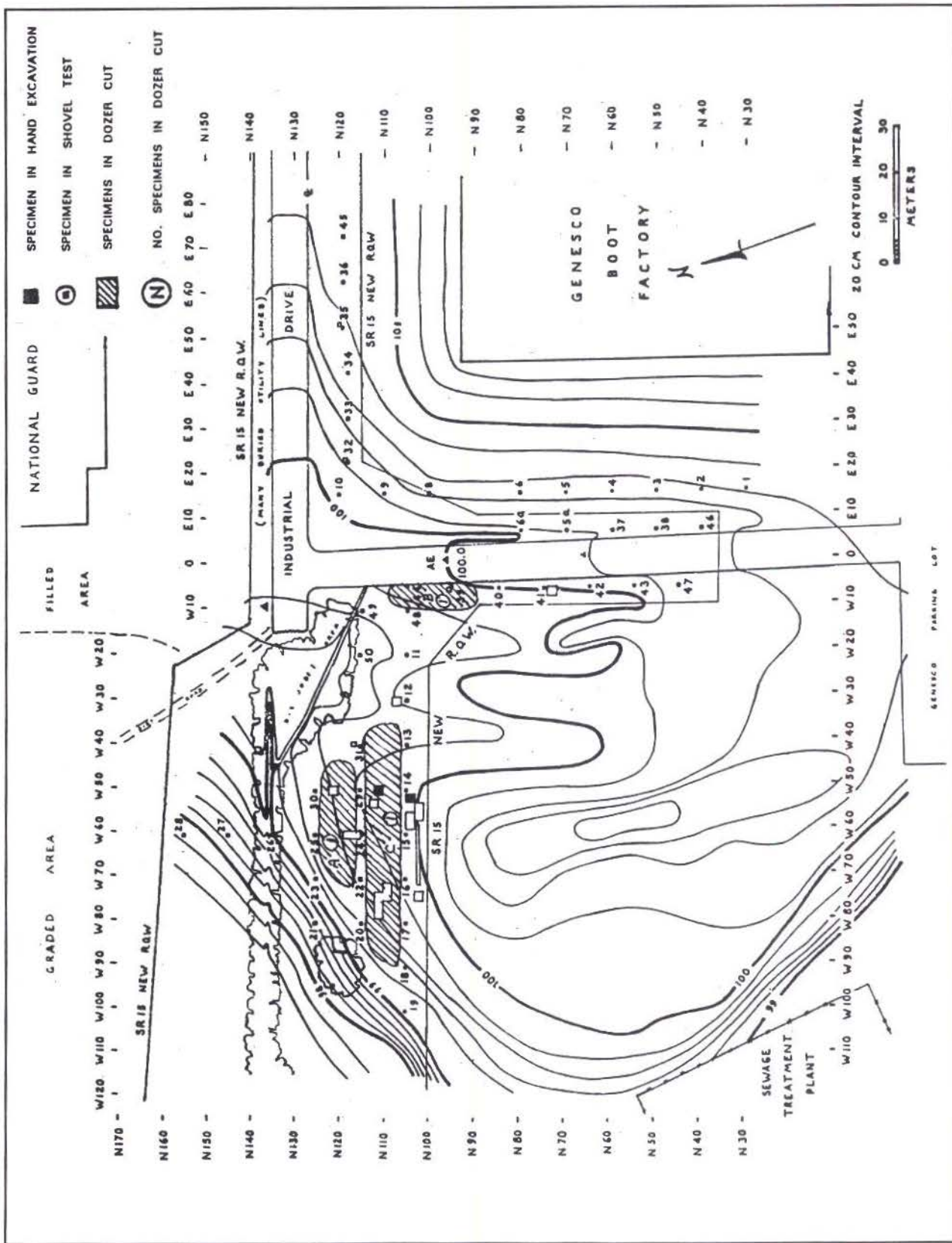


Figure 50. Distribution of Confirmed and Probable Type A End Scrapers.

side. Edge angle varies slightly along the sides, but approximate 60 degrees each. Wear on both edges consists of slight rounding and smoothing of the working edge, accompanied by extensive fine crushing/step fracturing of the edges.

Shaft scrapers

A single shaft scraper was recovered from the site. It is made from the distal end fragment of a large point or biface of grey-brown Fort Payne chert with white angular inclusions. Length is 48 mm, width is 32 mm, and thickness is 11.5 mm.

Gravers

Two apparent gravers (**Figure 49, lower**) were found on the site, both in bulldozer cuts in the western sector and both made on refined biface or projectile point blade sections. One has a fine acuminate tip bifacially worked onto what appears to be the distal end of a distal blade fragment from a projectile point. The other is unifacially flaked on the base of a biface, with the graver tip formed by the intersection of two straight edges flaked diagonally across the biface. The specimen with the acuminate tip is of grey-brown Fort Payne chert and the other is of heated chert, probably a streaked Fort Payne variant. Both have slight to moderate erosion of the ridges between flake scars forming the working tip itself, with additional fine flake removals and step fracturing at the tip of the heated specimen.

DRILLS

Twelve drills/drill fragments were found at the site. There were five bit fragments, three cylindrical drills, one drill made on a flake, one expanded base drill, and two drills made on Lick Creek point bases.

Cylindrical drills

The three cylindrical drills are all basal sections and range from 8 to 15 mm in diameter. Bases are convex and are thinned to a spatulate form--in two cases slightly smaller in diameter than the bit section. Two are made of grey-brown Fort Payne chert and the other is made of tan chert like that commonly found in the Tuscaloosa Gravel Formation.

Flake drill

One drill was made on an otherwise unmodified grey-brown Fort Payne chert flake. The bit is complete and measures 18 mm in length, with a diameter tapering from 4 mm at the tip to 9 mm at the proximal end of the worked bit area.

Expanded base drill

There is one expanded base drill from the site, in Square N101-W54 (28-38 cm level which was primarily grey laminated old plow zone). It is made from light grey and off-white streaked chert. The basal section is 19 mm long and 17 mm in maximum width, with excurvate margins and base. The bit is broken at the distal end, but retains a length of 37 mm, and tapers from a

width of 11 mm at its proximal end to 5 mm at the break, with a thickness of 5 to 6 mm in undamaged areas.

Drills made on Lick Creek point bases

Two apparent drills were made on Lick Creek point bases, one on a *var.* A base and the other on a *var.* B base. Both are of grey-brown Fort Payne chert and have the bit broken off at the proximal end, thus precluding useful measurement of their dimensions.

CHIPPING DEBRIS

Chipping debris includes only a narrow range of categories, with most of the material apparently late stage interior flakes and thinning flakes. The relative proportions of each class are quite consistent from one excavation unit to the next. Fluctuations in frequency of the various classes was quite limited, and usually greatly affected by the overall high frequency of fragmentary flakes, most of which appear to have been thinning flakes. Chipping debris from the non-feature excavation units consists of 64,868 analyzed items.

Cores

Cores are considered to be any amorphous lithic object without a positive bulb of percussion and at least three flake removals. Some retain cobble cortex and others have been worked down to small subspherical lumps. All reflect random opportunistic flake removal, from cobbles where nature of the source is identifiable, without apparent formal platform preparation. They were found in very small frequencies in almost all units, with 149 present.

Decortication flakes

Decortication flakes are those with cortex on the dorsal face. Those with more than half the face covered with cortex were classed as primary decortication flakes and those with less than half were considered secondary decortication flakes. Numerous flakes with cortex platforms, but no dorsal cortex beyond that area, produced initial sorting problems; these flakes were ultimately classed with the interior or thinning flakes, as their platform indicated, since their purpose seemed to be the reduction of the core or biface being worked rather than simple removal of cortex. Many of the bifaces have worked edges within the cortex or immediate subcortex zones of their original source stone whose formation would have produced thinning flakes with variable amounts of cortex at the platform and other sectors. Primary decortication flakes were represented by 1,077 specimens, 1.66 percent of the debitage. There were 674 secondary decortication flakes which represented 1.04 percent of the debitage.

Interior flakes

Interior flakes are those without cortex on the dorsal surface and a striking platform which forms a right angle, or near right angle, with the dorsal face of the flake. Both complete and broken flakes were included in this category, so long as they retained a striking platform sufficient to recognize the class. There are 7,311 interior flakes (11.27 percent of the debitage).

Thinning flakes

Thinning flakes are those whose platform forms a pronounced acute angle with the dorsal surface of the flake; the platform usually also has multiple small negative flake scars on it. There was no attempt to determine whether these flakes may have come from a late or final stage of bifacial item manufacture or from the sharpening of such an item after use. There are 8,696 thinning flakes identified, representing 13.41 percent of the chipping debris.

Fragmentary flakes

Fragmentary flakes are those lacking the cortex or striking platforms necessary to place them in a more definite category. Most are small, fish scale-like flakes or fragments which are almost certainly late stage thinning/retouch flakes rather than those large enough to potentially become usable tools in their own right. The 42,135 fragmentary flakes represent 64.95 percent of the chipping debris.

Chipping shatter

Chipping shatter is a catchall category for any polyhedral piece of siliceous rock without an apparent striking platform and too thick to represent a likely flake fragment. Such factors as poorly directed blows or flaws in the stone seem particularly likely in the production of this class of debris. The relatively small amount of chipping shatter (4,975 specimens representing 7.67 percent of the debitage) further emphasizes the overall late stage nature of the knapping done at the site, since this is primarily an early stage product resulting from raw material flaws producing breakage well before the thin biface stage of manufacture.

CERAMICS

The excavations produced six fired clay items which might best be termed microsherds. They are rather clearly sherds, but hardly exceed a centimeter in diameter. Paste can be determined to a limited extent, but vessel form and surface finish are far beyond the possibilities of these specimens.

Possible fiber-tempered sherds

Three sherds came from deep in Square N103-W52, one in Level 10 (AE 99.51-AE 99.56) and two in Level 11 (AE 99.425-AE 99.51). The paste lacks sand or other aplastics and has numerous tiny holes/passages typical of fiber-tempered ware. The specimen from Level 10 is oxidized on the exterior and reduced on the interior, while the others are reduced throughout.

Sand-tempered sherds

Two sand-tempered sherds, both of a finely sugary micaceous paste more like Alexander than other likely possibilities, were recovered from pits in the western sector of the site. One was from "Feature 6", probably Feature 6B, in Square N108-W74, and the other from Feature 11, a small pit definable near the base of Square N103-W52. The sherd from Feature 6 has a plain, oxidized exterior and interior with a reduced core. The sherd from Feature 11 has an eroded, probably oxidized exterior and reduced core and interior.

Limestone-tempered sherd

A single eroded limestone-tempered sherd was recovered from the base of the plow zone in Square N72-W6. This unit is located in the south-central part of the site near Shovel Test 37 which produced a Bradley Spike point. This tiny sherd is only 4 mm in thickness and is thoroughly oxidized.

VIII. SUMMARY RESULTS OF DATA RECOVERY PROGRAM

The data recovery program provided both significant data recovery and significant limitations of data recovery relative to original expectations. Primary data recovery contributions were in the excavation of data regarding numerous Archaic and Gulf Formational components in the upper Buffalo River drainage, particularly regarding site usage, potential role of this area in regional settlement patterns during these periods, and the recovery of data on probable Gulf Formational structures. Significant limitations involved the almost total lack of preservation of botanic data on a usable scale from the undisturbed deposits and the lack of stratigraphic data sufficient to isolate components on the site.

The stratigraphic sequence in the central part of the site turned out to include both multiple plow zones and in part of the area, midden apparently redeposited from part of the site south (upstream) of the study area with a secondary plow zone developed in that. Most of the anticipated central area stratigraphic development thus turned out to represent complex postcontact, rather than prehistoric, zones formed in disturbed and redeposited prehistoric deposits. The lack of stratigraphic separation of components, while making attribution of debitage to specific occupations impossible, was mitigated by the extremely narrow range of artifact classes represented, which permitted the interpretation that site usage remained consistent throughout the various occupations.

Particularly important contributions of the project were acquisition of upland site usage data regarding much of the span of Archaic and Gulf Formational activity in the area, documentation of the nature and further extent of the Gulf Formational cultural tradition into the upper Buffalo River drainage from the Tennessee River areas where it is best known, and the recovery of the only data so far regarding potential Late Gulf Formational structures.

The Morrow Mountain, Benton, Ledbetter, Little Bear Creek, and Flint Creek/Alexander occupations all appear to represent upland base camps for hunting activities in the upper Buffalo River drainage. In the case of the latter two occupations, this represents a cultural frontier of the Tennessee River-based Gulf Formational tradition with the Terminal Archaic and Early Woodland cultures to the north and east of the study area. The apparent Flint Creek/Alexander structures are the first recorded for that complex and also serve to emphasize the relative permanence of that occupation, apparently a matter of weeks or even months rather than a few nights.

IX. COMPONENTS REPRESENTED

Human activity on the site over a long time span is indicated by artifacts dating from the initial Early Archaic through the Late Woodland periods, followed by Euroamerican activity beginning in the nineteenth century. Most of the prehistoric occupations are represented by only a few diagnostic artifacts, but five appear to have resulted from substantial occupations of the site. These include those characterized by Morrow Mountain, Benton, Ledbetter/Pickwick cluster, Little Bear Creek and Motley, and Flint Creek point types. The historic period activity appears restricted to agricultural use.

EARLY ARCHAIC

Sporadic Early Archaic activity on the site is indicated by five points representing three types. There are also nine end scrapers on thick blades which are probably either Early Archaic or Paleoindian in origin. The scrapers are unusual in that they are made on large prismatic blades of almost equilateral triangular cross section. Only two of the scrapers are from undisturbed context, while the rest of the scrapers and all the points are from plow zone or bulldozer cut proveniences.

Stanfield

A single Stanfield point was found in the fill removed from Bulldozer Cut A, in the western sector of the site. The type was defined from specimens recovered from the Stanfield-Worley rock shelter in northwestern Alabama (DeJarnette, Kurjack and Cambron 1962), where it was in an Early Archaic zone along with Dalton, Greenbrier, and Big Sandy points. Stanfield points are relatively uncommon and little else is known about their distribution or associated tools.

Greenbrier

Two Greenbrier point bases were found in the plow zone in the northwestern part of the investigation area, and at least one more was recovered by a local collector from the northern part of the site used for fill under the National Guard armory. One specimen is made from the almost locally available even grey-brown chert and the other from grey-brown chert with blue inclusions which is best known from the Stewart County, Tennessee vicinity. It is possible that a more extensive occupation of the site occurred at this time, along the northern edge of the terrace, with the evidence now removed by earthmoving activity. Six long, narrow, thick end/side scrapers on blades were recovered from the western sector of the site. These scrapers are triangular in cross section and virtually as thick as they are wide. Sam Brookes (personal communication 1996) indicates that these are the same as scrapers found in a Dalton context at the Hester site (Brookes 1979) in northeastern Mississippi. Greenbrier points were found at Stanfield-Worley rock shelter in northwestern Alabama in the same stratigraphic zone as Dalton, Stanfield, and Big Sandy points. These scrapers may thus be associated with the Greenbrier component at 40WY87.

Kirk Cluster

Two Kirk Corner-notched point bases were recovered from the site, one a Kirk of unspecified variety and the other a Kirk, *var.* Pine Tree. They are made from heat-treated chert, probably locally available Fort Payne. Both are from disturbed contexts in the western part of the site.

MIDDLE ARCHAIC

The Middle Archaic occupations at the site include three which are poorly represented in the area of investigation and a relatively extensive Morrow Mountain component. All are in the western half of the site.

Brannon-like

There is only one specimen to represent the presence of activity involving side-notched points. This is the base of a rather small, thick point with an apparent striking platform base. The use of relatively large flakes and minimal retouch, along with the nature of the base suggest Middle Archaic rather than an earlier cultural period. It corresponds best among published types with Brannon (Cook 1976:148-149) of the Koster series. This and related Middle Archaic side notched types are common in northern central Tennessee and occur occasionally southward.

Cypress Creek

Three Cypress Creek points were found in the western sector of the site, two between the W60 and W80 lines and the other in the Bulldozer Cut C backfill. One was from the lower midden zone in unit N110-W76.

Sykes/White Springs

A single Sykes/White Springs point was recovered from the backfill of Bulldozer Cut B, well away from the other diagnostics except for Bentons.

Morrow Mountain

The Morrow Mountain component is the earliest major occupation on the investigated area of the site. It includes the entire study area west of the W30 line and is represented by 17 diagnostic points, including variants with rounded bases (6), short rounded stems (6), and tapered stems (5). Two of the points are from midden contexts; one of which is from the upper midden zone of unit N110-W76 and thus stratigraphically above the Cypress Creek point from that square. There is no apparent horizontal localization of varieties within the study area.

LATE ARCHAIC

Benton

The Benton component is apparently the most intensive occupation in the study area. There are 36 diagnostic points, most included within varieties corresponding to Buzzard Roost Creek and to varieties C and D as used in western Tennessee (Smith 1979). All are from plow zone contexts, with varieties C and D present throughout the study area west of the Genesco parking lot road, and *var.* Buzzard Roost Creek concentrated west of the W50 line. Most are either of local Fort Payne chert or of unidentifiable heat-treated chert.

Pickwick

A component characterized by Pickwick and the probably closely related Lick Creek points is the other Late Archaic occupation on the site and is almost as intensive as the Benton component. This occupation also includes the entire study area of the site west of the road to the Genesco parking lot. Diagnostics include 17 Pickwick points and 8 Lick Creek points, most either of local Fort Payne chert or unidentifiable heat-treated chert.

MIDDLE GULF FORMATIONAL

A Middle Gulf Formational occupation is represented by specimens of four point types: 11 Motley; 6 Little Bear Creek; 2 Wade; and 1 McIntire. While Wheeler Series fiber-tempered pottery is an element of the cultural period, only three tiny specimens were found at 40WY87. The Motley and Little Bear Creek points are predominantly of local Fort Payne chert or heat-treated chert, while the McIntire and one of the Wade points appear to be of non-local material, possibly Fort Payne chert from the Humphreys-Stewart County, Tennessee area north of the project area. A Little Bear Creek point was found with Feature 16 and a Motley point with Feature 15, both part of a cluster of rock hearths in the area south of the N112 line and west of the W65 line. Another Motley point was part of a lithic activity area, designated Feature 7, which was in the midden zone of unit N103-W56.

LATE GULF FORMATIONAL

The latest major occupation of site 40WY87 is a Late Gulf Formational component represented by 20 Flint Creek points, and possibly by the two tiny sand-tempered sherds recovered. There are three varieties of the Flint Creek type present: those with a bulbous stem (n=4); those with an expanded stem (n=8); and those with a straight stem (n=8). The expanding stem and straight stem variants have an almost complementary distribution within the western sector of the site--the provenienced expanding stem points being found east of the W60 line and the straight stem points west of the W55 line.

There are also three apparent structure basins in the north central part of the western sector of the site, in which Flint Creek points appear to be the latest diagnostic items. These are Features 5, 13, and 18. Features 5 and 18 are subrectangular and Feature 13 is subsquare. Each is characterized by a central zone of yellow-brown silty loam to gravelly silt loam, surrounded by a concentric zone of dark brown midden-like deposit which is thick at the basin margins and

thin to discontinuous at the apparent floor level. Basin margins are almost vertical along the upper walls, then curve sharply into the relatively even apparent floor surface. There are no surviving postmolds or prepared floors; however, the form of the basins corresponds to that of later structure basins. The upper margins were sufficiently truncated by plowing, erosion, and the stripping activities to render the survival of any postmolds around the outside of the basin very unlikely. Features 5 and 18 each have one expanded stem and one straight stem Flint Creek point variant present, while Feature 13 has a bulbous stem variant. Feature 5 approximates 3.2 m long by 2.3 m wide, and over 30 cm deep; Feature 18 approximates 3.4 m long by 2.4 m wide, and over 15 cm deep; and Feature 13 approximates 2.4 m long by 2.3 m wide, and over 45 cm deep. These apparent structures are particularly similar to Late Archaic apparent structures excavated at the Brinkley site, 22TS729, in the Yellow Creek drainage of northeastern Mississippi (Otinger, Hoffman and Lafferty 1982).

MIDDLE WOODLAND

A single Bradley Spike point from Shovel Test 37 and a tiny eroded limestone-tempered sherd from Square N72-W6 (in the south central part of the study area beside the entrance road to the Genesco parking lot) indicates Middle Woodland activity of unknown extent in that part of the site.

LATE WOODLAND

A Jacks Reef Corner-notched point from Bulldozer Cut A indicates ephemeral Late Woodland activity on the site.

X. SELECTED WAYNESBORO SITE COMPONENTS IN REGIONAL CONTEXT

The Waynesboro site (40WY87) is located on the most headward large terrace along the Green River, a tributary of the Duck River with its headwaters interdigitating with those of Shoal Creek, which enters the Tennessee River near Mussel Shoals. It thus is located at a potential stopover point for travellers between the Buffalo River and the Shoals sector of the Tennessee River. This factor alone may well have been a consideration of those leaving only evidence of ephemeral occupation of the site. Components leaving a more substantial record of their activity at the site are further discussed in this section, the existence of the most ephemeral having been duly noted in the previous section.

EARLY ARCHAIC

Greenbrier/Stanfield

Close association of the marker types, particularly at Stanfield-Worley rock shelter, suggests a strong possibility of their membership in the same lithic complex. Scrapers corresponding to the long thick end/side scrapers on blades have been found in various Paleoindian and initial Early Archaic contexts in the eastern United States and may thus also be included. Purdy (1981:18) notes their widespread occurrence in Paleoindian contexts, referring to them as Hendrix scrapers; and Brookes (1979:67) illustrates such scrapers from a Dalton context at the Hester site in northeastern Mississippi. The lithic raw materials used include local Fort Payne chert, used for all the scrapers and for one of the Greenbrier points, and Fort Payne chert resembling variants from north of the site area in Stewart County, Tennessee for the other points. Lack of stratigraphic means to isolate the apparent component precludes its more definitive analysis, however the range of chert sources present is consistent with a generalized foraging subsistence base utilizing residential mobility within a relatively large territory. Survey data from the area is quite limited, and consists almost entirely of data from terraces and floodplains of large streams. Greenbrier points are present in all surveyed topographic contexts without sufficient clustering or frequency to define specific settlement patterning.

MIDDLE ARCHAIC

Cypress Creek

A small portion of the western sector of the area studied included a Cypress Creek occupation, significant primarily for the occurrence of one of these points stratigraphically below a Morrow Mountain specimen in Unit N110-W76. Cypress Creek points are best known from the lower half of the Tennessee River valley and the Duck River valley in middle Tennessee. Review of the various Tennessee and Normandy/Columbia Reservoir reports indicates the presence of numerous Cypress Creek components in valley floor settings but no extensive settlements or major involvement in shell midden development. Limited upland area survey indicates scattered small components, but without sufficient data to define settlement patterns.

Morrow Mountain

The Morrow Mountain component is one of several known relatively large components on minor drainages or in upland portions of large streams in the Tennessee River drainage west of the

Cumberland Plateau. Severe ecological restriction of the distribution of key resources and transition from a foraging to a logistically based subsistence system are likely to be key factors in this temporal shift from scattered small sites to larger sites placed in key locations. Apparent Morrow Mountain burials were recovered from pits at the base of the Mulberry Creek site, 1CT27, during the WPA excavations in the Pickwick basin, but further attempts to extricate definable Morrow Mountain components from the WPA reports foundered on typological problems. While some of the WPA Pickwick basin types can be translated into modern usage with reasonable reliability, Morrow Mountain points, if present, can be expected to have been included at random among any or all of Types 6, 7, 16, 17, 27, and/or 57, and thus cannot be presumed either present or absent pending reanalysis of the surviving collections from those sites. More recent work has provided reports of excavated components at Stanfield-Worley (DeJarnette, Kurjack and Cambron 1962) and Stucks Bluff (DeJarnette, Walthall and Wimberly 1975) in northwestern Alabama; Anderson (Dowd 1989) in middle Tennessee; Walnut (Ensor and Studer 1983) and Poplar (Bense 1983) in northeastern Mississippi; and the closely related Eva component (Lewis and Lewis 1961) at Eva in the Kentucky Lake basin near the mouth of Duck River.

The earliest potential structures reported for the area are the four "prepared areas" from the Morrow Mountain component at the Walnut site, 22IT539, in the upper Tombigbee river drainage (Ensor and Studer 1983). These consist of ovoid areas of finely laminated clay/soil deposits with central fired areas and surrounded by rich midden indicative of intensive activity associated with the prepared area. Their sizes are listed by Ensor and Studer (1983:5.106-5.107) as Feature 128, 2.11 m by 2.80 m; Feature 129, 1.80 m by 2.50 m; Feature 131, 1.03 m by 1.48 m; and Feature 132, 1.31 m by 1.49 m. No associated postmolds were found to define these areas as structures, and all appear rather small for enclosed structures with the reported intense fires were the dimensions restricted to the prepared surfaces only. The key factor here is the appearance of tightly restricted, prepared activity areas reutilized repeatedly in the context of an intensively used base camp. The component includes a full range of lithic tools, evidence of extensive preparation of weapons and cutting tools through most of the manufacturing process, and large quantities of charred hickory nut hulls. Uncorrected radiocarbon dates from the component are 5518 +/- 85 B.C. and 5353 +/- 95 B.C..

Two more such areas were found in the Sykes/White Springs component at the site, one of which was Feature 120, measuring 5.08 m by 6.39m, and the other of undetermined dimensions. Again there were no postmolds found, and the nature of the component corresponded well with that of the Morrow Mountain component. An uncorrected radiocarbon date of 4199 +/- 95 B.C. was obtained from nut hulls associated with Feature 120.

Other excavated Middle Archaic components in the region, including the other Tombigbee Waterway sites, the Normandy Reservoir sites, Eva, Anderson in central Tennessee, and various rockshelter excavations have failed to produce similar surfaces. Prepared clay surfaces are reported from several of the Pickwick basin sites, but without sufficient information to assign them to any definable component. Faulkner and McCollough (1974:201-204) report a possible semicircular shelter from Banks I, 40CF34, with a Type 114 Sykes/White Springs cluster point on its approximate floor. In this regard they note the appearance of similar arcs on other, unpublished, Archaic sites in the Kentucky Lake sector of the lower Tennessee River valley as well as other portions of the Tennessee valley, and suggest that such structures were commonly used in the region during the Archaic period.

Stanfield-Worley and Stucks Bluff are both upland short term occupations, probably hunting camps, while the rest appear to be intensively occupied base camps on the floodplains or low terraces of major streams. Anderson and the Mississippi sites have full ranges of tool categories and multiple burials, with the burials at the Poplar site suggestive of high status positions in at least that social system rather than a completely egalitarian society. The Mississippi sites also include prepared floor surfaces which were utilized as activity areas at the very least, but for which no related postmold patterns could be discerned to identify them as structure floors. The overall extremely narrow range of tool categories at 40WY87, regardless of ability to assign specific tools to specific components, indicates that the Morrow Mountain component here should be regarded as a short term and/or specialized occupation, primarily concerned with hunting activities, by a population based elsewhere. The nature and degree of contrast between the riverine and upland components appears consistent with a shift to a logistic subsistence system in the study area comparable to that postulated further north during this same period by Brown and Vierra (1983), Nance (1987), and Stafford (1991, 1994). Inadequate survey information precludes determination of whether the related base camps were to the north in the Buffalo or Duck River valley or to the south in the Mussel Shoals area. The Brannon-like point from the site may represent contact of this component with groups to the north using side notched points of the Midwestern tradition rather than a separate occupation by visitors from the north.

LATE ARCHAIC

Benton

The Benton complex is the primary initial Late Archaic manifestation across the western half of Tennessee (Smith 1979, 1991), northeastern Mississippi (Bense 1983) (Ensor and Studer 1983), and northern Alabama (Futato 1983) (Webb and DeJarnette 1942). Major base camps occur along the Tennessee River and the upper Tombigbee, with others expectable on other major streams. The base camp at Mulberry Creek (1CT27) includes a dense workshop zone where blue-grey Fort Payne chert with dark blue-grey streaks was processed, as well as a dense shell midden. An additional Tennessee River base camp in the Pickwick basin is at Long Branch (1LU67). Futato (1983:417-419) includes the upper Pickwick and lower Wilson reservoir components in his Seven Mile Island Phase, including also the upland components in the adjacent tributaries. Recent data indicates that the Tennessee River drainage sites are characterized by type varieties commonly found in central and western Tennessee, but the upper Tombigbee sites appear to have primarily varieties which are rare or absent to the north.

Two Benton components in the upper Tombigbee drainage, Walnut (22IT539) and Poplar (22IT576), include prepared areas essentially like the Middle Archaic prepared areas at Walnut, but larger. One, Feature 6 at Walnut was 1.8 m by 3.4 m, with an uncorrected radiocarbon date of 3540 +/- 70 B.C. Those at Poplar (Bense 1983) were Feature 44, 3.09 m by 4.0 m in diameter, and Feature 49, 2.62 m by 2.65 m. Both those at Poplar appear to be associated with pits, postmolds, and burials, and are considered to represent structures (Bense 1983:7.91). Both upper Tombigbee components represent intensely occupied/utilized base camps with indication of at least fall season activity.

An additional probable Benton structure was excavated at 40FY13, associated with an apparent short term fall gathering camp. A partial rectanguloid postmold pattern composed of individually set posts or poles on the order of 6 cm in diameter, set 5 to 7 cm deep, was recorded in one unit of a 10 foot by 60 foot excavation across the site. The pattern appears to

be from a structure on the order of 2.0 m by 2.8 m in size, with no indication of a prepared floor or hearth area. It appears that the southwestern wall, part of the southeastern end, and part of the northeastern wall were included in one 10-foot square, with the eastern corner in a previously excavated unit and most of the northwestern end in an area destroyed by land levelling before the excavations could be expanded there.

The large Tombigbee components include prepared floors and large quantities of charred nut hulls, suggestive of relatively long term occupation including fall as well as the warmer season activity implied by heavy turtle/terrapin usage there. Prepared clay floors are mentioned at Mulberry Creek (Webb and DeJarnette 1942:238, 265), but are not sufficiently discussed to determine which components included them. Additional relatively large Benton components which may represent shorter term base camps from which secondary activities were conducted exist in several of the larger tributary drainages. Small, presumably transient special-purpose occupations, are frequent throughout the area of distribution and occur in all environmental settings. The western Tennessee loess zone includes numerous small gathering camps littered with charred hickory nut hulls in environmental settings known to include groves of shagbark and scalybark hickories (Smith 1979).

Site 40WY87 includes the largest known Benton component in the upper Buffalo River drainage. The rest appear to represent only minor short term occupations scattered along the terraces of Buffalo River downstream from the mouth of Green River. The varieties represented in those collections, primarily the Memphis State University canoe-based surveys of the mid-1960's, are the *var. C* and *var. Buzzard Roost Creek* which are also the main varieties at 40WY87. Southward placement of 40WY87 in this distribution is suggestive of a secondary base camp established by populations based in the Mussel Shoals area; but lack of the distinctive blue-grey Fort Payne chert typical of the workshop level at Mulberry Creek and lack of survey data from the lower Buffalo and Duck Rivers render such a conclusion insupportable at this time. The narrow range of tool types present at the site suggest a camp oriented toward hunting activities and the manufacture of the necessary tools and weapons from local materials. The component at 40WY87 may well be analogous to such sites as 1FR310 and 1FR538 in the Little Bear Creek drainage of northwestern Alabama (Futato 1983), which are also extensive sites with apparent restricted use and without the storage pits considered characteristic of long-term base camps.

Ledbetter

Ledbetter is here used as the portion of the regional Late Archaic tradition following Benton, characterized by Ledbetter Cluster points, and preceding the appearance of the Middle Gulf Formational tradition in the area. The temporal span of the Ledbetter complex in the study area appears to extend from about 3,000 B.C. to about 2,000 B.C., when it is replaced by the Perry/Little Bear Creek complex, but continues until about 1,200 B.C. in central Tennessee where it is followed by the Wade complex. The Ledbetter complex includes Ledbetter and Pickwick points, drills, hoes, chisels, mortars and pestles, and pitted grinding stones. Large cylindrical storage pits occur in the Normandy Reservoir area at Jernigan II, 40CF37 (Faulkner and McCollough 1982), possibly in a fall/winter base camp context.

Extensive excavations conducted in the Normandy Reservoir included several sites with significant Ledbetter components which had multiple feature clusters including storage pits, but no recorded structure patterns. Components of particular importance in the reservoir area include Hicks I, 40CF62 (Faulkner 1977a), a terrace zone base camp; Eoff I, 40CF32 (Faulkner 1977b), a multicomponent site at which all the structures are apparently Middle Woodland; Aaron Shelton, 40CF69 (Wagner 1982), where discrete Ledbetter feature clusters were recorded

but without structure patterns; and Jernigan II, 40CF37 (Faulkner and McCollough 1982), again with Ledbetter feature clusters but no recorded structural patterns. The Bailey site, 40GL26 (Bentz 1996) has reported Late Archaic structures on a shallow site with extensive Middle Archaic, Benton, Ledbetter, Middle Gulf Formational, Middle Woodland, and Late Woodland occupations. The structures were assigned to cultural periods based on that of nearby pits since there were no associated diagnostics. Review of the feature distributions indicates features of all major components scattered throughout the site when assignment is made by the period of the latest included diagnostics, rendering structure assignments by nearby pits ambiguous at best.

Ledbetter components are clearly major elements of several Pickwick basin shell middens, especially 1CT27 and 1LU59, but are difficult to extract in detail due to typological and excavation level/stratigraphic problems. Materials which would be included in Lauderdale are also reported from the Spring Creek site, 40PY207, where they are present in the "Perry" zone (Peterson 1973:35-37). The Ledbetter component at 40WY87 may well be a seasonal/short term camp emphasizing hunting activity. Ledbetter components are quite common along the upper portion of the Buffalo River drainage as surveyed so far; information is lacking about the lower Buffalo and Duck Rivers.

MIDDLE GULF FORMATIONAL

Perry/Little Bear Creek

The appearance of the Middle Gulf Formational tradition in the area centered on the Pickwick basin is marked by the appearance of the Pontchartrain-like Little Bear Creek points, Wheeler series fiber-tempered ceramics, and a microblade industry. A component at the Spring Creek site, 40PY207, had a corner of a rectilinear sunken floor house of unknown size. Oakley and Futato (1975) have defined the Perry Phase as being characterized in particular by Little Bear Creek points and lacking ceramics; but more recent data indicate that ceramics appear before the end of the phase. The Spring Creek site, 40PY207 (Peterson 1973), and the Poplar site, 22IT576 (Bense 1983), both appear to have Wheeler ceramics in otherwise good Perry Phase contexts. There is indication from Spring Creek that Motley points should also be included in the inventory in at least the northern portion of the area of distribution. The settlement pattern remains poorly known, but appears to include long-term base camps and shorter term extractive camps of various sizes and purposes. The limited tool inventory and lack of storage facilities implies that the component at 40WY87 served as a relatively large and/or repeatedly used base camp for hunting and related activities.

LATE GULF FORMATIONAL

Alexander/Flint Creek

The Late Gulf Formational is marked in the study area and adjacent portions of the Tennessee River valley by the appearance of sand-tempered Alexander ceramics and Flint Creek points. Large base camps or villages occur in the main Tennessee River valley, with Bluff Creek (1LU59) and Perry (1LU25) as the main reported such sites. Upland components are known from a variety of environmental contexts and often have sharply restricted tool inventories, most commonly sites with points and a variety of cutting tools and debitage present. No reported sites in the Tennessee valley or the upper Tombigbee include structural data assignable to this

cultural period. The Tennessee River sites have been assigned to the Hardin Phase and the upper Tombigbee sites to the Henson Springs Phase (DeJarnette, Walthall and Wimberly 1975). Dye and Galm (1986) have proposed an internal chronology for Alexander based on changes in ceramic decorative frequencies--shifting from an early (600 - 400 B.C.) emphasis on punctation to a later (400 - 200/100 B.C.) emphasis on incising and zoned stamping--but which O'Hear (1990) found to be reversed based upon additional data, and shifted to an approximate 800 - 400 B.C. span. The floral and faunal data from Sanders (O'Hear 1990) indicate extremely strong emphasis on hickory nuts, acorns, and deer for the food supply, at least in part probably reflective of the season(s) of that site's occupation. Plant cultivation there was indicated only by two sunflower seeds.

The apparent structures from this period at 40WY87 are the only reported ones, but the restricted tool inventory from the site and the lack of ceramics do little to clarify their context. They might best be explained as shelters for use in a long term or repeated-use winter hunting camp context, without further implications for cultivation or permanence of settlement. Approximately contemporary structures have been recorded to the east and west, in different cultural contexts. One is from a terminal frontier variety of the Poverty Point cultural tradition in western Tennessee and the other is from a terminal Archaic Wade component in the Normandy Reservoir area.

A small circular structure, on the order of 1.8 m by 2.0 m, was recorded as part of a late Poverty Point derived component at 40FY13. It was discovered during the course of an experimental excavation in which each object found was piece-plotted within thin levels following visible stratigraphy and a circular blank spot appeared in a unit otherwise covered with artifacts and lithic debris. Careful trowelling at the base of the stratigraphic unit revealed a series of small postmolds around the margin of the blank spot; no prepared floor or hearth was encountered within the circle. The postmolds were on the order of 4 to 6 cm in diameter. A radiocarbon date of 450 B.C.+/- 95 was obtained for the component from nut hulls in another feature.

An apparent Wade Phase circular structure was excavated at the Ewell III site, 40CF118 (DuVall 1982). The structure was approximately 15 feet (4.58 m) in diameter with individually set posts forming a clearly defined circular pattern enclosing two features and a few other posts. The postholes in the east wall averaged 0.1 foot (3 cm) larger in diameter and 0.2 foot (6 cm) deeper than those in the west wall, and those in the west wall appeared to be paired. One feature was near the center and was a hearth with Wade diagnostic artifacts, while the other was a shallow basin near one wall. The hearth provided a radiocarbon date of 840 B.C. +/- 80.

Review of the currently available data indicates that a variety of structural forms were in use in the region by at least the Late Archaic period, and quite likely the Middle Archaic. The "prepared areas" recorded on the sites in the upper Tombigbee were so designated only because they lacked the postmolds necessary to clearly define a structure. In actual prehistoric use it is quite likely that they were covered by self-supporting frameworks and roofs such as conical or A-frame forms; the accretion of laminated floors with elevated central areas seems highly unlikely in open-air conditions of exposure to rainfall erosion. The continued use of these prepared areas in the upper Tombigbee during the Benton occupations there, contemporaneously with the appearance of a pole-framed Benton structure in western Tennessee is of particular importance in this regard. The lack of information on Ledbetter structures is disappointing, but appears to be a result of shallow muticomponency, plowing,

and erosion on the sites whose excavation was most likely to have recovered it with modern field methods. By the post-Ledbetter, pre-Middle Woodland period of multiple local traditions it appears that the southeastern summer house-winter house dichotomy had already become established, as well as the use of both rectilinear and circular structures.

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APPENDIX: INDEX OF MATERIALS COVERED

. list

Record#	LOCUS	POTT	PPK	BIF	ENDSC	DRILL	HAMM	GRNDST	CORE	MISCFL	WK_FL	UT_FL	CHIPSH	FIR_SH	F_C_R	BR_RK	CBBL	C_14	NOTES
1	N101W54 Lev 1	0	2	13	0	1	0	0	1	1191	0	8	80	51	4	0	0	0	Flint Creek, Benton
2	N101W54 Lev 2	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
3	N101W54 Lev 3	0	1	7	1	2	2	0	5	59	0	1	61	43	1	0	0	0	
4	N101W54 Lev 4	0	1	8	0	0	0	0	0	1272	0	27	11	3	0	3	0	0	
5	N101W54 Lev 5	0	2	2	1	0	0	0	1	412	0	21	19	14	0	0	0	0	
6	N101W54 Lev 6	0	0	1	0	0	0	0	1	117		5	9	3	0	0	0	0	
7	N105W31 PZ	0	3	8	0	0	1	0	1	0	0	53	70	7	0	0	0	0	
8	N105W31 Lev 1	0	0	0	0	0	0	0	0	1427	0	0	5	0	0	0	0	0	
9	N101W73 PZ	0	1	18	0	0	0	0	7	767	0	54	23	18	0	0	0	0	Benton
10	N95W6 PZ	0	0	0	0	0	0	0	0	61	0	5	4	6	0	0	0	0	
11	N95W6 Lev 1	0	0	0	0	0	0	0	0	117	0	11	4	6	0	0	0	0	
12	N101W73 Lev 1	0	1	1	0	0	0	0	0	457	0	12	32	15	0	0	0	0	
13	N101W73 Lev 2	0	1	2	0	0	0	0	0	86	0	4	6	2	0	0	1	0	
14	N119W53 PZ	0	0	1	0	0	0	0	0	168	0	6	18	4	2	0	0	0	
15	N119E53 Lev 1	0	0	0	0	0	0	0	0	30	0	1	3	4	0	0	0	0	
16	N118E23 PZ	0	0	1	0	0	0	0	0	178	0	3	12	5	0	0	0	0	
17	N118E23 Lev 1	0	0	0	0	0	0	0	0	73	0	0	8	2	0	0	0	0	
18	N111W53 PZ	0	0	11	0	0	0	0	1	1159	0	27	70	43	0	0	0	0	
19	N111W53 Lev 1	0	4	8	0	1	0	0	5	1000	1	54	102	53	55	0	0	0	Flint Cr., Benton, Pic
20	N111W53 Lev 2	0	0	2	0	0	0	0	0	156	1	7	8	2	8	0	0	0	
21	N72W6 PZ	0	2	5	0	0	0	0	4	721	2	0	60	0	20	0	0	0	
22	N72W6 Lev 2	0	0	0	0	0	0	0	3	453	2	0	40	0	3	1	0	0	
23	N72W6 Lev 3	0	1	8	0	0	0	0	2	655	3	0	109	25	22	0	0	0	
24	N72W6 Lev 4	0	1	4	0	0	0	0	1	285	2	1	22	13	41	0	0	2	
25	N72W6 Lev 5	0	0	1	0	0	0	0	0	286	1	1	15	2	7	0	0	1	
26	N72W6 Lev 6	1	0	0	0	0	0	0	1	159	1	0	13	0	1	0	0	0	
27	N101W56 PZ	0	0	5	0	0	0	0	3	317	3	0	59	13	5	0	0	0	
28	N101W56 Lev 2	0	0	2	0	0	0	0	1	692	3	1	102	10	3	0	0	0	
29	N101W56 Lev 3	0	0	2	0	1	0	0	7	589	3	0	67	7	6	0	0	0	one geode found
30	N101W56 Lev 4	0	0	8	0	0	0	0	9	732	2	0	85	7	4	0	0	0	
31	N101W56 Lev 5	0	1	5	0	0	0	0	5	1059	0	10	170	6	15	0	0	0	
32	N101W56 Lev 6	0	0	7	0	0	0	0	3	792	0	1	91	5	16	0	0	0	
33	N101W56 Lev 7	0	0	1	0	0	0	0	0	190	0	0	35	5	2	0	0	0	
34	N103W58 Lev 1	0	3	10	1	0	0	0	8	2662	2	6	146	11	19	0	0	0	
35	N103W58 Zone 2	0	1	1	0	0	0	0	0	317	0	1	25	11	2	0	0	0	
36	N103W58 L3 Z3	0	2	9	0	1	0	1	5	2280	1	0	160	18	57	0	0	0	
37	N103W58 L4 Z3	0	1	3	0	0	0	0	0	981	2	0	67	25	35	0	0	0	
38	N103W58 L5 Z4	0	0	1	0	0	0	0	0	96	0	0	13	3	10	0	0	0	
39	N103W58 L6 Z5(4	0	0	1	0	0	0	0	0	0	0	0	4	2	1	0	0	0	
40	N103W56 PZ	0	2	7	0	0	0	0	6	1353	1	0	37	18	23	0	0	0	
41	N103W56 Level 2	0	0	2	0	0	1	0	6	558	0	0	38	6	9	0	0	0	
42	N103W56 Level 3	0	1	3	0	0	0	0	6	710	0	0	44	4	4	0	0	0	

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43	N103W56 Level 4	0	0	3	0	0	0	0	3	1150	1	0	114	18	25	0	0	0
44	N103W56 Level 5	0	0	2	0	0	0	0	1	905	0	0	59	12	11	0	0	0
45	N103W56 Level 6	0	0	1	0	0	0	0	0	460	2	0	19	3	6	0	0	0
46	N103W56 Level 7	0	1	1	0	0	0	0	0	166	0	0	8	5	0	0	0	0
47	N103W56 Level 8	0	0	1	0	0	0	0	0	0	0	0	4	1	4	0	0	0
48	N103W56 Level 9	0	0	1	0	0	0	0	0	62	0	0	4	0	2	0	0	0
49	N103W56 Level 10	0	0	1	0	0	0	0	0	50	0	0	2	1	7	0	0	0
50	N103W56 Level 11	0	0	0	0	0	0	0	0	13	0	0	1	0	2	0	0	0
51	ST #1 0-10cm	0	0	0	0	0	0	0	0	11	0	2	2	0	0	0	0	0
52	ST #1 10-20cm	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
53	ST #1 20-30cm	0	0	0	0	0	0	0	0	26	0	2	0	0	0	0	0	0
54	ST #2 0-10cm	0	0	0	0	0	0	0	0	32	0	1	1	0	0	0	0	0
55	ST #2 10-20cm	0	0	0	0	0	0	0	0	9	0	3	0	0	0	0	0	0 PZ to 16cm
56	ST #2 20-30cm	0	0	0	0	0	0	0	0	28	0	1	1	0	0	0	0	0
57	ST #2 30-38cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
58	ST #2 38-52cm	0	0	0	0	0	0	0	0	22	0	2	0	0	0	0	0	0
59	ST #3 0-10cm	0	0	0	0	0	0	0	0	29	0	1	5	0	0	0	0	0
60	ST #3 10-20cm	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0
61	ST #3 20-30cm	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0
62	ST #4 0-10cm	0	0	0	0	0	0	0	0	51	0	3	0	1	0	0	0	0
63	ST #4 10-20cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
64	ST #4 20-30cm	0	0	0	0	0	0	0	0	51	0	3	0	0	0	0	0	0
65	ST #4 30-40cm	0	0	0	0	0	0	0	0	21	0	2	0	0	0	0	0	0
66	ST #4 40-50cm	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
67	ST #5 0-10cm	0	0	0	0	0	0	0	0	20	0	0	1	0	0	0	0	0
68	ST #5 10-20cm	0	0	0	0	0	0	0	0	7	0	3	1	0	0	0	0	0
69	ST #5 20-30cm	0	0	0	0	0	0	0	0	12	0	1	0	0	0	0	0	0
70	ST #5 30-40cm	0	0	0	0	0	0	0	0	47	0	6	3	0	0	0	0	0
71	ST #5 40-50cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
72	ST #5A 0-10cm	0	0	0	0	0	0	0	0	49	0	1	11	2	0	0	0	0
73	ST #5A 10-20cm	0	1	2	0	0	0	0	0	26	0	0	6	2	0	0	0	0
74	ST #5A 20-30cm	0	0	0	0	0	0	0	0	13	0	0	0	4	0	0	0	0
75	ST #6 0-10cm	0	0	0	0	0	0	0	0	22	0	1	3	0	0	0	0	0
76	ST #6 10-20cm	0	0	0	0	0	0	0	0	32	0	9	1	0	0	0	0	0
77	ST #6 20-30cm	0	0	0	0	0	0	0	0	47	0	4	4	2	0	0	0	0
78	ST #6 30-40cm	0	0	0	0	0	0	0	0	17	0	1	2	0	0	0	0	0
79	ST #6A 0-10cm	0	0	0	0	0	0	0	0	19	0	3	6	0	0	0	0	0
80	ST #6A 10-20cm	0	0	0	0	0	0	0	0	23	0	2	5	0	0	0	0	0 PZ to 16cm
81	ST #6A 20-30cm	0	0	0	0	0	0	0	0	23	0	1	0	0	0	0	0	0
82	ST #6A 30-40cm	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
83	ST #6A 40-50cm	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0
84	ST #8 0-10cm	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
85	ST #8 10-20cm	0	0	0	0	1	0	0	0	17	0	1	8	0	0	0	0	0 tip of drill
86	ST #8 20-30cm	0	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0
87	ST #8 30-40cm	0	0	0	0	0	0	0	0	3	0	0	5	2	0	0	0	0

88	ST #9 0-10cm	0	0	0	0	0	0	0	0	24	0	1	2	6	0	0	0	0
89	ST #9 10-20cm	0	0	0	0	0	0	0	1	53	0	1	27	4	0	0	0	0
90	ST #9 20-30cm	0	0	0	0	0	0	0	0	10	0	1	0	0	0	0	0	0
91	ST #9 30-40cm	0	0	0	0	0	0	0	0	15	0	1	0	0	0	0	0	0
92	ST #9 40-50cm	0	0	0	0	0	0	0	0	5	0	1	2	0	0	0	0	0
93	ST #10 0-10cm	0	0	0	0	0	0	0	0	36	0	2	9	0	0	0	0	0
94	ST #10 10-20cm	0	0	0	0	0	0	0	0	12	0	0	1	0	0	0	0	0
95	ST #10 30-40cm	0	0	0	0	0	0	0	0	9	0	2	0	0	0	0	0	0
96	ST #10 40-50cm	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
97	ST #11 0-10cm	0	0	0	0	0	0	0	0	59	0	2	2	0	0	0	0	0
98	ST #11 10-20cm	0	0	0	0	0	0	0	0	30	0	3	0	0	0	0	0	0
99	ST #11 20-30cm	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
100	ST #12 0-10cm	0	0	0	0	0	0	0	1	35	0	5	3	2	0	0	0	0
101	ST #12 10-20cm	0	0	0	0	0	0	0	0	68	0	7	6	0	0	0	0	0
102	ST #12 20-30cm	0	0	0	0	0	0	0	0	14	0	1	1	0	0	0	0	0
103	ST #12 30-40cm	0	0	0	0	0	0	0	0	15	0	2	0	0	0	0	0	0
104	ST #12 40-48cm	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
105	ST #14 0-10cm	0	0	0	0	0	0	0	0	21	0	2	4	2	0	0	0	0
106	ST #14 10-22cm	0	0	0	0	0	0	0	0	15	0	3	2	0	0	0	0	0
107	ST #14 22-26cm	0	0	0	0	0	0	0	0	28	0	4	2	0	0	0	0	0
108	ST #14 26-30cm	0	0	0	0	0	0	0	0	18	0	1	4	5	0	0	0	0
109	ST #14 30-38cm	0	1	0	0	0	0	0	0	52	1	4	5	0	0	0	0	0 Benton base
110	ST #14 38-48cm	0	0	0	0	0	0	0	0	22	0	1	0	1	0	0	0	0
111	ST #14 48-60cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
112	ST #15 0-10cm	0	0	0	0	0	0	0	0	33	0	2	6	0	0	0	0	0
113	ST #15 10-20cm	0	0	0	0	0	0	0	0	7	0	4	0	0	0	0	0	0
114	ST #15 20-30cm	0	0	0	0	0	0	0	0	21	0	6	6	0	0	0	0	0
115	ST #15 30-40cm	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
116	ST #15 40-50cm	0	0	0	0	0	0	0	0	3	0	1	8	0	0	0	0	0
117	ST #13 0-10cm	0	0	0	0	0	0	0	0	30	0	0	6	3	0	0	0	0
118	ST #13 10-20cm	0	0	0	0	0	0	0	0	10	0	2	0	1	0	0	0	0
119	ST #13 20-30cm	0	0	0	0	0	0	0	0	13	0	2	0	0	0	0	0	0
120	ST #13 30-40cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
121	ST #13 40-50cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
122	ST #16 0-10cm	0	0	2	0	0	0	0	0	105	0	5	15	7	0	0	0	0
123	ST #16 10-20cm	0	0	0	0	0	0	0	0	47	1	2	5	4	0	0	0	0 PZ to 13cm
124	ST #16 20-30cm	0	0	0	0	0	0	0	0	12	0	2	0	0	0	0	0	0
125	ST #16 30-40cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
126	ST #17 0-10cm	0	0	1	0	0	0	0	0	56	0	10	3	0	0	0	0	0
127	ST #17 10-20cm	0	1	1	0	0	0	0	0	46	0	2	3	0	0	0	0	0 PZ to 18cm
128	ST #17 20-30cm	0	0	0	0	0	0	0	0	37	0	2	3	1	0	0	0	0
129	ST #17 30-40cm	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
130	ST #18 0-10cm	0	0	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0
131	ST #19 0-10cm	0	0	0	0	0	0	0	0	15	0	1	8	2	0	0	0	0
132	ST #19 10-20cm	0	1	1	0	0	0	0	0	9	0	1	0	2	1	0	0	0 PZ to 15cm

133	ST #19 20-30cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
134	ST #20 0-10cm	0	1	0	0	0	0	0	0	42	0	5	2	0	0	0	0	0
135	ST #20 10-20cm	0	0	0	0	0	0	0	0	28	0	4	8	1	2	0	0	0
136	ST #20 20-30cm	0	0	0	0	0	0	0	0	18	0	1	0	0	0	0	0	0
137	ST #22 0-10cm	0	0	0	0	0	0	0	1	18	0	1	10	0	2	0	0	0
138	ST #22 10-20cm	0	0	0	0	0	0	0	0	11	0	3	0	1	0	0	0	0
139	ST #22 20-30cm	0	0	0	0	0	0	0	0	11	0	2	0	2	0	0	0	0
140	ST #23 0-10cm	0	0	0	0	0	0	0	0	29	0	3	10	3	1	0	0	0
141	ST #23 10-20cm	0	0	0	0	0	0	0	0	19	0	1	1	3	0	0	0	0
142	ST #24 0-10cm	0	0	0	0	0	0	0	0	32	0	3	9	0	0	0	0	0
143	ST #24 10-20cm	0	0	0	0	0	0	0	0	35	0	0	8	1	0	0	0	0
144	ST #24 20-30cm	0	0	0	0	0	0	0	0	18	0	2	1	3	0	0	0	0
145	ST #24 30-40cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
146	ST #24 40-50cm	0	0	0	0	0	0	0	0	0	0	0	1	4	1	0	0	0
147	ST #24 50-60cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
148	ST #25 0-10cm	0	0	0	0	0	0	0	0	35	0	5	9	1	4	0	0	0
149	ST #25 10-20cm	0	0	0	0	0	0	0	0	19	0	1	6	1	0	0	0	0
150	ST #25 20-30cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
151	ST #25 30-40cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
152	ST #26 0-10cm	0	1	0	0	0	0	0	0	26	0	3	2	1	0	0	0	0
153	ST #26 10-20	0	0	0	0	0	0	0	0	23	0	0	2	2	0	0	0	0
154	ST #26 20-30cm	0	0	0	0	0	0	0	0	20	0	1	2	0	0	0	0	0
155	ST #26 30-40cm	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0
156	ST #27 0-10cm	0	0	0	0	0	0	0	0	5	0	0	8	0	0	0	0	0
157	ST #28 0-10cm	0	0	0	0	0	0	0	0	9	0	0	3	0	0	0	0	0
158	ST #28 10-20cm	0	0	0	0	0	0	0	0	5	0	3	1	0	0	0	0	0
159	ST #29 0-10cm	0	0	0	0	0	0	0	0	24	0	3	8	0	0	0	0	0
160	ST #24 40-50cm	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
161	ST #29 10-20cm	0	0	0	0	0	0	0	0	53	0	1	2	2	0	0	0	0
162	ST #29 20-30cm	0	0	0	0	0	0	0	0	12	0	1	2	2	0	0	0	0
163	ST #29 30-40cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
164	ST #30 0-10cm	0	0	0	0	0	0	0	0	45	0	0	2	1	1	0	0	0
165	ST #30 10-20cm	0	0	2	0	0	0	0	0	34	0	3	5	1	1	0	0	0
166	ST #30 20-30cm	0	0	1	0	0	0	0	0	71	0	4	5	4	0	0	0	0
167	ST #30 30-40cm	0	0	0	0	0	0	0	0	12	0	3	2	0	0	0	0	0
168	ST #30 40-50cm	0	0	0	0	0	0	0	0	18	0	0	3	2	0	0	0	0
169	ST #30 50-60cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
170	ST #31 0-10cm	0	0	0	0	0	0	0	0	12	0	0	5	1	0	0	0	0
171	ST #31 10-20cm	0	0	0	0	0	0	0	0	21	0	4	1	1	0	0	0	0
172	ST #31 20-30cm	0	0	1	0	0	0	0	1	88	0	1	8	0	3	0	0	0
173	ST #31 30-40cm	0	0	0	0	0	0	0	0	16	0	2	0	0	0	0	0	0
174	ST #32 0-10cm	0	0	1	0	0	0	0	0	26	0	0	1	1	0	0	0	0
175	ST #32 10-20cm	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
176	ST #32 20-30cm	0	0	0	0	0	0	0	0	49	0	0	1	2	0	0	0	0
177	ST #32 30-40cm	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0

178	ST #33	0-10cm	0	1	0	0	0	0	0	0	27	0	0	3	2	0	0	0	0	McIntire PPK
179	ST #33	10-20cm	0	0	0	0	0	0	0	0	10	0	0	0	1	0	0	0	0	
180	ST #33	20-30cm	0	0	0	0	0	0	0	0	21	0	0	1	0	0	0	0	0	
181	ST #33	30-40cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
182	ST #34	0-10cm	0	0	0	0	0	0	0	0	10	0	0	2	0	0	0	0	0	
183	ST #34	10-20cm	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	
184	ST #34	20-30cm	0	0	0	0	0	0	0	0	21	0	0	3	2	0	0	0	0	
185	ST #34	30-40cm	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	
186	ST #34	40-50cm	0	0	0	0	0	0	0	0	10	0	0	0	1	0	0	0	0	
187	ST #34	50-60cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
188	ST #35	0-10cm	0	0	0	0	0	0	0	0	20	0	0	2	0	0	0	0	0	
189	ST #35	10-20cm	0	0	0	0	0	0	0	0	8	0	0	2	0	0	0	0	0	
190	ST #35	20-30cm	0	0	0	0	0	0	0	1	29	0	0	1	3	0	0	0	0	
191	ST #35	30-40cm	0	0	0	0	0	0	0	0	20	0	0	1	0	0	0	0	0	
192	ST #36	0-10cm	0	0	0	0	0	0	0	0	24	0	0	1	0	0	0	0	0	
193	ST #36	10-20cm	0	0	0	0	0	0	0	0	11	0	0	1	1	0	0	0	0	
194	ST #36	20-30cm	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	
195	ST #37	0-10cm	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	
196	ST #37	10-20cm	0	1	0	0	0	0	0	0	20	0	0	2	0	0	0	0	0	Bradley Spike PPK
197	ST #37	20-30cm	0	0	0	0	0	0	0	0	16	0	0	2	1	0	0	0	0	
198	ST #38	0-10cm	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	
199	ST #38	10-20cm	0	0	0	0	0	0	0	0	29	0	0	1	0	0	0	0	0	
200	ST #38	20-30cm	0	0	0	0	0	0	0	0	21	0	0	1	0	0	0	0	0	
201	ST #38	30-40cm	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	
202	ST #39	0-10cm	0	0	0	0	0	0	0	0	33	0	0	2	0	0	0	0	0	
203	ST #39	10-20cm	0	0	0	0	0	0	0	1	37	0	0	1	0	0	0	0	0	
204	ST #39	20-30cm	0	1	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	
205	ST #39	30-40cm	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	0	0	
206	ST #39	40-50cm	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	
207	ST #40	0-10cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
208	ST #41	0-10cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
209	ST #41	10-20cm	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
210	ST #41	20-30cm	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
211	ST #41	30-40cm	0	0	0	0	0	0	0	0	10	1	0	1	0	0	0	0	0	
212	ST #41	40-50cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
213	ST #41	50-60cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
214	ST #42	0-10cm	0	0	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	
215	ST #42	10-20cm	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	0	0	
216	ST #42	20-30cm	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	
217	ST #42	30-40cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
218	ST #42	40-50cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
219	ST #43	0-10cm	0	0	1	0	0	0	0	0	67	0	0	6	1	0	0	0	0	
220	ST #43	10-20cm	0	0	0	0	0	0	0	0	47	0	0	1	0	0	0	0	0	
221	ST #43	20-30cm	0	0	0	0	0	0	0	0	32	0	0	1	2	0	0	0	0	
222	ST #43	30-40cm	0	0	0	0	0	0	0	0	24	0	0	2	0	1	0	0	0	

223	ST #43 40-50cm	0	0	0	0	0	0	0	0	10	0	0	1	0	0	0	0
224	ST #43 50-60cm	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	0
225	ST #44 0-10cm	0	0	0	0	0	0	0	0	32	0	0	3	0	0	0	0
226	ST #44 10-20cm	0	0	1	0	0	0	0	1	40	0	0	2	0	0	0	0
227	ST #44 20-30cm	0	0	0	0	0	0	0	0	54	0	0	3	4	0	0	0
228	ST #44 30-50cm	0	1	0	0	0	0	1	1	74	0	0	4	5	9	0	0
229	ST #44 50-60cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
230	ST #45 0-10cm	0	0	0	0	0	0	0	0	5	0	0	2	0	0	0	0
231	ST #45 10-20cm	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
232	ST #46 0-10cm	0	0	0	0	0	0	0	0	30	0	0	3	0	0	0	0
233	ST #46 10-20cm	0	0	0	0	0	0	0	1	37	0	0	3	2	0	0	0
234	ST #46 20-30cm	0	0	0	0	0	0	0	0	17	0	0	4	3	0	0	0
235	ST #46 30-40cm	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
236	ST #46 40-50cm	0	0	0	0	0	0	0	0	7	0	0	1	2	0	0	0
237	ST #46 50-60cm	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
238	ST #47 0-10cm	0	0	0	0	0	0	0	2	111	0	0	8	2	1	0	0
239	ST #47 10-20cm	0	0	0	0	0	0	0	0	48	0	0	2	0	0	0	0
240	ST #47 20-30cm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
241	ST #48 0-10cm	0	0	0	0	0	0	0	0	35	0	0	1	0	0	0	0
242	ST #49 0-10cm	0	0	0	0	0	0	0	0	18	0	0	3	0	0	0	0
243	ST #49 10-20cm	0	0	0	0	0	0	0	0	59	0	0	2	2	0	0	0
244	ST #49 20-30cm	0	0	1	0	0	0	0	0	27	0	0	1	0	0	0	0
245	ST #49 30-40cm	0	0	1	0	0	0	0	0	16	0	0	0	0	0	0	0
246	ST #49 40-50cm	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0
247	ST #49 50-60cm	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
248	ST #50 0-10cm	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0
249	ST #50 10-20cm	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
250	FEA 2 N101W54	0	0	3	0	0	1	0	0	158	0	11	11	0	25	0	2
251	FEA 1 N111W53	0	0	0	0	0	0	0	0	97	0	3	1	7	0	0	1
252	N103W52 PZ	1	1	3	0	2	0	1	4	1425	2	0	124	22	48	0	0
253	N103W52 Lev 2	1	0	3	0	0	0	0	1	618	1	0	43	10	12	0	0
254	N103W52 Lev 3	0	1	2	0	0	0	0	2	338	0	0	36	10	11	0	0
255	N103W52 Lev 4	1	0	0	0	0	0	0	0	581	1	1	67	12	8	0	0
256	N103W52 Lev 5	0	1	8	0	0	0	0	6	0	1	0	171	35	0	0	0
257	N103W52 Lev 6	0	0	5	1	0	0	0	5	1069	2	0	119	21	25	2	0
258	N103W52 Lev 7	0	0	2	0	0	0	0	1	778	1	0	80	9	22	0	0
259	N103W52 Lev 8	0	0	1	0	0	0	0	1	280	1	3	39	6	8	0	0
260	N103W52 Lev 9	0	0	1	0	0	0	0	0	160	0	0	36	11	9	0	0
261	N103W52 Lev 10	1	0	0	0	0	0	0	0	69	0	0	9	0	2	0	0
262	N103W52 Lev 11	2	0	0	0	0	0	0	0	33	0	0	0	0	2	0	0
263	N106W30 PZ	0	5	7	0	0	0	0	5	1771	0	3	132	27	0	0	0
264	106W30 Lev 3	0	0	2	0	0	0	0	1	173	0	0	24	7	9	0	0
265	N106W30 Lev 4	0	0	0	0	0	0	0	0	34	0	0	9	2	9	4	1
266	N106W30 Lev 5	0	0	0	0	0	0	0	0	17	0	0	1	0	0	0	0
267	N106W30 Lev 6	0	0	0	0	0	0	0	0	7	0	0	0	0	1	0	0

268	N106W30 Lev 7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
269	N108W74 PZ	0	7	0	18	0	0	0	13	4518	2	0	293	57	51	0	0	0
270	N108W74 Lev 2	0	0	1	0	0	0	0	0	57	0	0	2	0	0	0	0	0
271	N106W30 Lev 2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
272	N108W72 PZ	0	4	16	0	0	0	0	5	2511	2	0	145	42	36	0	0	0
273	N108W72 Lev 2	0	1	3	0	0	0	0	2	451	0	0	43	4	5	0	0	0
274	N108W72 Lev 3	0	0	1	0	0	0	0	0	133	0	0	20	2	5	0	0	0
275	N108W72 Lev 4	0	0	0	0	0	0	0	0	31	0	0	7	2	3	0	0	0
276	N108W72 Lev 5	0	0	0	0	0	0	0	0	19	0	0	4	0	4	0	0	0
277	N108W72 Lev 6	0	0	0	0	0	0	0	0	10	0	0	3	0	0	0	0	0
278	N110W78 PZ	0	1	7	0	0	0	0	4	2313	3	0	77	9	21	0	0	0 4 pebble tools
279	N110W78 Lev 2	0	0	0	0	0	0	0	0	416	0	0	25	4	9	0	0	0
280	N110W78 Lev 3	0	0	0	0	0	0	0	1	225	0	0	12	1	2	0	0	1
281	N110W78 Lev 4	0	0	1	0	0	0	0	0	74	0	0	4	3	3	0	0	0
282	N108W72 PZ	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
283	N110W78 Lev 5	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	0
284	N110W78 Lev 6	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	1
285	N110W78 Lev 7	0	0	8	0	0	0	0	0	7	0	0	1	0	0	0	0	0
286	N1110W76 PZ	0	2	8	0	1	0	0	7	2748	0	4	388	39	56	1	0	0
287	N110W76 Lev 2	0	1	2	0	0	0	0	3	344	0	0	51	2	6	0	0	0
288	N110W76 Lev 3	0	1	0	0	0	0	0	0	187	0	0	14	2	1	0	0	0
289	N110W76 Lev 5	0	0	0	0	0	0	0	0	11	0	0	0	2	0	0	0	0
290	N110W76 Lev 6	0	0	0	0	0	0	0	0	5	0	0	2	2	0	0	0	0
291	N110W76 Lev 7	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0
292	N110W74 PZ	0	4	17	0	0	0	0	13	2505	1	7	236	38	30	0	0	0 1 ppk modi-drill
293	N110W74 Lev 2	0	0	0	0	1	0	0	0	51	0	0	2	0	1	0	0	0
294	N110W74 Lev 3	0	0	0	0	0	0	0	0	109	0	0	11	0	1	0	0	0
295	N110W74 Lev 4	0	0	0	0	0	0	0	0	87	0	0	12	0	3	0	0	1
296	N110W50 PZ	0	8	24	1	0	0	0	9	2892	0	0	319	26	34	0	0	0
297	N110W50 Lev 2	0	0	8	0	0	0	0	4	1466	3	0	203	17	21	0	0	1
298	N110W50 Lev 3	0	0	3	0	0	0	0	0	890	0	2	85	8	5	0	0	0 12-misc-fl/dkcrossec
299	N110W50 Lev 4	0	0	0	0	0	0	0	1	89	0	0	42	1	4	0	0	0
300	N110W50 Lev 6	0	0	0	0	0	0	0	0	19	0	0	4	0	1	0	0	0
301	N110W50 Lev 7	0	0	1	0	0	0	0	0	67	0	0	25	3	3	0	0	0
302	N110W50 Lev 8	0	0	0	0	0	0	0	0	33	0	0	7	0	2	0	0	0
303	N115W60 PZ	0	0	1	0	0	0	0	2	1294	0	0	210	13	20	0	0	0
304	N115W60 Lev 2	0	0	3	0	0	0	0	2	803	0	0	207	12	23	0	0	0
305	N115W60 Lev 3	0	2	2	0	0	0	0	2	360	0	0	40	5	9	0	0	0
306	N115W60 Lev 4	0	0	0	0	0	0	0	0	96	1	0	13	3	8	0	0	0
307	N115W60 Lev 5	0	0	0	0	0	0	0	0	21	0	0	1	0	2	0	0	0
308	N115W60 Lev 5-7	0	0	0	0	0	0	0	0	87	0	0	5	4	1	0	0	0 NWr/con/dk-midden
309	N115W60 Lev 9	0	0	0	0	0	0	0	0	10	0	0	5	1	0	0	0	0 unit/slot/trench
310	N116W40 PZ	0	0	1	0	0	0	0	2	431	0	0	31	7	4	0	0	0
311	N116W40 Lev 2	0	1	1	0	0	0	0	0	516	1	0	28	5	5	0	0	0
312	N116W40 Lev 3	0	0	0	0	0	0	0	0	413	1	0	22	2	6	0	0	0

313	N116W40 Lev 4	0	0	0	0	0	0	0	0	74	0	0	10	3	0	0	0	0
314	N117W60 PZ	0	0	4	0	0	1	0	2	1	1223	0	78	15	4	0	0	0
315	N117W60 Lev 2	0	0	3	0	0	0	0	0	847	0	0	54	7	12	0	0	0
316	N117W60 Lev 3	0	1	5	0	0	0	0	8	2960	1	0	94	23	26	0	0	0
317	N117W60 Lev 4	0	0	1	0	0	0	0	0	52	0	0	1	0	1	0	0	0
318	N117W60 Lev 4	0	0	0	0	0	0	0	0	120	0	0	3	1	1	0	0	0 Dkmid/fea9/fea5?
319	N117W60 Lev 5	0	0	0	0	0	0	0	0	202	0	0	5	0	1	0	0	0
320	N117W60 Lev 6	0	0	0	0	0	0	0	1	49	0	0	2	0	0	0	0	0
321	N117W60 Lev 6	0	1	0	0	0	0	0	0	210	0	0	2	0	0	0	0	0 Dk soil/fea5?
322	N117W60 Lev 7	0	0	0	0	0	0	0	1	36	0	1	0	0	1	0	0	0
323	N117W60 Lev 7	0	0	0	0	0	0	0	0	168	0	0	4	0	1	0	0	0 Dksoil/fea5?0
324	N117W60 Lev 8	0	0	0	0	0	0	0	0	111	0	0	1	0	1	0	0	0
325	N120W50 Pz	0	5	10	0	1	0	0	6	1358	1	0	94	16	6	0	0	0 1 pebble tool
326	N120W50 Lev 2	0	0	1	0	0	0	0	1	652	0	2	40	9	5	0	0	0
327	N120W50 Lev 3	0	3	0	0	0	0	0	0	59	0	0	2	2	0	0	0	0
328	N120W50 Lev 4	0	0	0	0	0	0	0	0	31	0	0	2	0	0	0	0	0
329	N120W50 Lev 50	0	0	0	0	0	0	0	0	45	0	0	4	3	0	0	0	0
330	N120W50 Lev 6	0	0	0	0	0	0	0	0	17	0	0	2	0	1	0	0	0
331	N120W50 Lev 7	0	0	0	0	0	0	0	0	55	0	0	5	0	1	0	0	1
332	N120W50 Lev 8	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
333	FEA-3-N120W50	0	0	0	0	0	0	0	0	40	0	0	3	1	1	0	0	0
334	FEA-4-N110W76	0	0	2	0	0	0	0	1	697	0	2	12	6	1	0	0	0
335	FEA-5-Lt-Zone	0	0	0	0	0	0	0	0	14	0	0	1	0	0	0	0	0
336	FEA-5-E1\2Floor	0	0	0	0	0	0	0	0	11	0	0	1	0	1	0	0	1
337	FEA-5-FLO/Depos	0	1	1	0	0	0	0	0	97	0	0	14	1	6	0	0	0 1-Pickwick-var D
338	FEA-5-S/Side	0	0	1	0	0	0	0	1	115	0	0	6	1	4	0	0	0
339	Fea5-W-Wall-dkf	0	1	1	0	0	0	0	1	280	0	0	30	3	28	0	0	1 1-MarrowMt-roundstem
340	Fea5-N-Wall/Cen	0	3	1	0	0	0	0	1	226	0	0	16	5	7	0	0	0 1-FlCr-sst 1-Pkwk-D
341	Fea 5 DkSo/Ewal	0	0	0	0	0	1	1	0	30	1	0	0	0	1	0	0	0
342	Fea 5/S-walcsec	0	0	0	0	0	0	0	0	63	0	0	4	0	4	0	0	0
343	Fea 5-Yel-Clay	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
344	Fea 5 Outer Fil	0	1	0	0	0	0	0	0	80	0	0	12	0	6	0	0	0 1morrow/mt-cont-stem
345	Fea 5-Slot/tren	0	0	3	0	0	0	0	0	78	0	0	19	2	3	1	0	0
346	Fea 5-Inner fil	0	0	0	0	0	0	0	0	24	0	0	6	3	1	0	0	0
347	Fea 5 N115W60L8	0	1	1	0	0	0	0	0	55	0	0	6	1	2	0	0	0 1-Benton/mid-sec
348	Fea 5 W-end/Nsi	0	4	6	0	0	0	0	1	878	0	0	56	18	66	0	0	2 1-FlCr1Ben-v-s 1CyCr
349	Fea 6 N108W74L2	1	1	3	0	0	0	0	3	523	0	0	136	15	0	1	0	0 1-Adze
350	Fea 6 N108W74L3	0	0	1	0	0	0	0	0	47	0	0	10	0	38	0	0	0
351	Fea 7 N103W56L6	0	1	1	0	0	0	0	1	525	0	0	0	0	9	0	0	1 1-wrk/peb 1-Motley
352	Fea 7 N103W56L7	0	0	0	0	0	0	0	0	12	0	0	4	0	9	0	0	1
353	Fea 8 N103W56L6	0	0	0	0	0	0	0	0	2	0	0	2	2	4	0	0	0
354	Fea 10 N103W52	0	0	0	0	0	0	0	0	71	0	0	15	1	37	0	0	0
355	Fea 11 N103W52	1	0	0	0	0	0	0	0	16	0	0	3	0	7	0	0	0
356	Fea12 N108W74L3	0	0	0	0	0	0	0	0	54	0	0	4	3	9	0	0	0
357	Fea 13 Tren/E-W	0	0	1	0	0	0	0	0	44	0	0	10	3	11	0	0	0

358	Fea 13 NE Quad	0	1	7	0	0	0	0	0	1315	0	1	113	14	102	0	0	1 1 Fl/Cr Bub/stem
359	Fea 13 Surf-cut	0	0	3	0	0	0	0	0	112	0	0	32	2	10	0	0	0
360	Fea 13 Grav-Dep	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
361	Fea 13 Cla-plug	0	0	0	0	0	0	0	0	50	0	0	6	1	2	0	0	0
362	Fea 13 Lg-InPor	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0
363	Fea 13 NW Quad	0	0	1	0	0	0	0	1	25	0	0	8	0	11	0	0	0
364	Fea 14 DozerC-C	0	0	0	0	0	0	2	3	2	0	0	7	0	26	0	0	0 Cok-grid/1-2-3\21fra
365	Fea 15N105W70	0	1	1	0	0	1	4	7	213	0	0	26	2	269	3	0	0 4-Cok-Grid\11-Frags
366	Fea 16 DozerC-C	0	0	1	0	0	0	0	1	161	0	0	39	2	15	0	0	0
367	Fea 17 DozerC-C	0	1	0	0	0	0	0	0	8	0	0	2	0	0	0	0	0
368	Fea 18 SE Quadc	0	0	0	0	0	0	0	0	47	0	0	1	2	0	0	0	0
369	Fea 18 NW Quadc	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
370	Fea 18 SW Quadc	0	0	1	0	0	0	0	0	19	0	0	2	2	0	0	0	0
371	Fea 18 NEQuadDW	0	0	1	0	0	0	0	0	72	0	0	4	2	1	0	0	0
372	Fea 18 NE Core	0	1	0	0	0	0	0	0	14	0	0	3	0	1	0	0	0 1 Flint Cr-Ex-Stem
373	Fea 18 SlTrSwal	0	2	2	0	0	0	0	0	255	0	0	5	3	1	0	0	0 1 Fl-Cr Bub-stem
374	Fea 18 SW-Q\DKW	0	0	1	0	0	0	0	0	182	0	0	3	2	5	0	0	0
375	Fea 18 S-Tr/Cla	0	0	0	0	0	0	0	0	18	0	0	8	0	0	0	0	0
376	Fea 18 Se-Q-DkW	0	0	2	0	0	0	0	1	605	0	0	42	9	9	0	0	0
377	Fea 18 Nw-DkW	0	0	2	0	0	0	0	0	82	0	0	5	0	1	0	0	0
378	Fea 19 N110W72	0	0	1	0	0	0	0	1	147	1	0	14	13	75	0	0	1
379	Fea 20 N106W73	0	0	2	0	0	1	0	0	28	0	0	27	0	20	1	0	0
380	Fea 21 N107W67	0	0	3	0	0	0	1	0	102	0	0	10	5	95	0	0	0 1Cok-Grid/2 frags
381	Fea 22 N101W56	0	0	0	0	0	0	0	0	1	0	0	1	0	22	0	0	0
382	SURFACE-Collect	0	3	14	1	0	0	1	0	5	2	0	2	0	0	0	0	0 1-peb-tool
383	DOZER CUT-A-Sur	0	1	8	3	0	0	0	10	121	2	0	63	7	7	0	0	0 1-scapula
384	DOZER CUT B-Sur	0	28	54	1	1	1	0	4	42	1	0	3	1	0	0	0	0 1-Adze
385	Dozer Cut C Sur	0	23	70	4	0	1	1	18	452	8	0	101	0	15	0	0	0 3-Preforms

Record#	LOCUS	GROUP	ITEM	NUMBER	NOTES
1	ST #32 10-20cm	Kitchen	REFEWR	1	
2	ST #38 30-40cm	Kitchen	glass	1	amber
3	ST #39 10-20cm	Kitchen	glass	1	clear
4	ST #39 10-20cm	Kitchen	glass	3	clear
5	ST #41 10-20cm	Kitchen	glass	17	8 amb 9 cl
6	ST #41 20-30cm	Kitchen	glass	2	amber
7	ST #42 0-10cm	Kitchen	glass	17	
8	ST #42 0-10cm	Hardware	miscrbr	1	hose
9	ST #42 10-20cm	Kitchen	glass	3	2 amb 1 cl
10	ST #43 0-10cm	Kitchen	btllcap	1	metal
11	ST #43 0-10cm	Kitchen	glass	1	clear
12	ST #44 0-10cm	Kitchen	glass	5	3 cl 2 amb
13	ST #44 10-20cm	Kitchen	glass	6	clear
14	ST #44 20-30cm	Kitchen	glass	1	clear
15	ST #44 30-50cm	Kitchen	glass	1	
16	ST #47 0-10cm	Kitchen	glass	1	clear
17	ST #47 10-20cm	Kitchen	glass	1	clear
18	ST # 49 0-10cm	Kitchen	glass	3	2 cl 1 gr
19	ST # 50 0-10cm	Kitchen	glass	1	green
20	N72W6 PZ	Kitchen	bottle	12	
21	N72W6 PZ	Kitchen	can	1	Budweiser
22	N72W6 PZ	Kitchen	glass	1488	gr,br,cl
23	N72W6 PZ	Kitchen	btl cap	1	plastic
24	N72W6 PZ	Kitchen	miscplasti	4	
25	N72W6 PZ	Kitchen	pulltab	12	
26	N72W6 PZ	Kitchen	bottlecap	8	1 w/neck
27	N72W6 PZ	Hardware	miscmetal	39	
28	N72W6 Level 2	Kitchen	pulltab	1	
29	N72W6 Level 2	Kitchen	glass	26	10br,16cl
30	N72W6 PZ	Clothing	sock	1	
31	N72W6 Level3	Kitchen	glass	2	1 cl 1 amb
32	N72W6 Level 3	Hardware	miscmetal	1	
33	N72W6 Level 3	Hardware	iron frag	1	
34	N72W6 Level 3	Kitchen	miscplasti	1	
35	N72W6 Level 5	Kitchen	miscplasti	1	Lt. yellow
36	N72W6 Level 6	Hardware	rbr-frag	1	black
37	N101W56 Level 5	Hardware	nail	1	
38	N103W58 Level 4	Hardware	wire frag	1	
39	N103W58 Level4	Hardware	Misc-lead	1	
40	N103W56 PZ	Hardware	nail	1	
41	N103W56 Level 3	Hardware	wire-frag	1	
42	N103W56 Level 3	Kitchen	glass1	1	
43	N103W52 PZ	Kitchen	ceramics	1	glazed
44	N103W52 Level 2	Kitchen	ceramics	1	glazed
45	N103W52 Level 2	Kitchen	miscplasti	1	white-chip
46	N103W52 Level 5	Hardware	nail	1	
47	N106W30 PZ	Kitchen	glass	103	amber
48	N106W30 PZ	Hardware	nail	1	
49	N106W30 PZ	Hardware	miscrbr	1	
50	N108W72 Level 3	Kitchen	glass	1	
51	N110W78 Level 2	Hardware	wire-frag	1	
52	N110W74 Pz	Ammunition	shotshell	1	base
53	N116W40 PZ	Kitchen	glass	5	4cl,1ltgre
54	Dozer Cut A sur	Hardware	knife	1	
55	Dozer Cut C sur	Hardware	nail	1	
56	Dozer Cut C sur	Kitchen	ceramics	1	glazed
57	Dozer Cut C sur	Hardware	metal bar	1	
58	N72W6 Level 3	Hardware			

SPINE FOR WAYNE COUNTY REPORT:

1st Choice: (reduce if necessary)

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1999

2nd Choice: (reduce if necessary)

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