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DEPARTMENT OF ANTHROPOLOGY
WESTERN MICHIGAN UNIVERSITY

ARCHAEOLOGICAL REPORT NO. 18
1988

ARCHAEOLOGICAL INVESTIGATIONS AT THE WALTERS 1 (20SJ144)
AND CUPP 5 (20SJ104) SITES, ST. JOSEPH COUNTY, MICHIGAN

PROJECT NO. S87-244

A REPORT OF AN INTENSIVE LEVEL SURVEY PROJECT FUNDED, IN PART, THROUGH A GRANT FROM THE U.S. DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (UNDER THE PROVISIONS OF THE NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED), THROUGH THE MICHIGAN DEPARTMENT OF STATE AND CONDUCTED BY STAFF OF WESTERN MICHIGAN UNIVERSITY, UNDER THE DIRECTION OF WILLIAM M. CREMIN, WITH DALE W. QUATTRIN, FIELD SUPERVISOR, AND TEAM MEMBERS KIM STEWART, CONRAD KAUFMAN, ZACK ZISK, BRIAN DEROD, AND GREG WALZ DURING THE PERIOD BETWEEN 25 JUN - 17 JUL 87.

ACKNOWLEDGEMENTS

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In addition to the aforementioned source of funding, the junior author's work with the cultural material during the fall of 1987 was supported by a Dean's Research Assistantship from the WMU Graduate College, Dr. Laurel Grotzinger, Dean, and the able assistance of Mr. Conrad Kaufman during the analysis phase of our research program was made possible through a Graduate Research Assistantship awarded him by the WMU Department of Anthropology.

The authors, on behalf of Western Michigan University and the archaeology program in the Department of Anthropology, wish to express their appreciation to Mr. H. David Walters of Burr Oak and Roger and Barbara Cupp of Mendon on whose properties these investigations were undertaken. Without the interest and cooperation provided by Mr. Walters and Mr. and Mrs. Cupp, our work on the Walters 1 and Cupp 5 sites and, generally speaking, our pursuit of a better understanding of prehistoric lifeways in the Middle St. Joseph River Valley would not be possible. We are greatly indebted to them and their neighbors for two very informative field seasons (1986 and 1987) in this, our current research universe.

Finally, in addition to the members of the 1987 field research team whose names appear on the title page, we would also like to acknowledge the contribution of Mr. Jeff Blyveis, an undergraduate Anthropology major at WMU, who volunteered two days of his time to participate in the fieldwork at the sites.

W.M.C.

D.W.Q.

ABSTRACT

During the 1987 field season, a research team from Western Michigan University conducted Phase II investigations at the Walters 1 and Cupp 5 sites in the Middle St. Joseph River Valley to determine the eligibility of these sites for listing in the National Register of Historic Places. Discovered during a Phase I survey of this area in 1986, these two sites were among 10 of 87 previously unrecorded sites to which "high priority" assignments were given (Cremin and Quattrin 1987).

Following intensive walk-over survey of the "well fitted" fields in May by an all volunteer group for purposes of precisely delineating site area, the project research team returned to the sites in late June for three weeks of Phase II study. Employing standard test excavation procedures, together with some shovel testing on Walters 1, the team opened 227 "windows" into the sites in hopes of recovering a sample of the artifactual material present and ascertaining whether there existed any site integrity. Regardless of our best efforts, we observed neither stratigraphy nor significantly preserved context on either site; observed archaeological context was confined to a single prehistoric pit feature, without meaningful contents, on Cupp 5.

Given our observations of the impacts resulting from historic land use, the paucity of artifactual information retrieved, and the extreme rarity or absence of preserved archaeological context on these sites, we must conclude that the better part of a century of intensive cultivation has reduced Walters 1 and Cupp 5 to the status of "plow zone" sites. Both Walters 1 and Cupp 5 lack the integrity necessary to make a case for their being eligible for listing in the National Register of Historic Places.

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A BRIEF HISTORY AND RATIONALE FOR THE CURRENT PROJECT

For more than a decade, the senior author (and project director) has conducted programs of archaeological site location survey and excavation in southwest Michigan. Following six years of continuous research in the Kalamazoo River Basin, and two seasons of work along the Thornapple River in Barry County, our research activity shifted southward into the Portage River drainage of southern Kalamazoo and northern St. Joseph Counties in order that we might "sample" for comparative purposes the archaeological resource potentials of an area lying within the drainage of the St. Joseph River. The results of survey and excavation programs conducted along the Portage River in 1982 and again in 1984 convinced us that it would be most useful to proceed into the St. Joseph Valley proper. And, in 1986, with grant support from the National Park Service through the Bureau of History, Michigan Department of State, we initiated the first program of systematic survey ever undertaken in the Middle St. Joseph River Valley.

The data set recovered during the 1986 field season exceeded our expectations in all respects, comparing more than favorably with any data set derived from many seasons of survey work in the aforementioned drainages. Although our observations reflected only on information acquired through the application of surface reconnaissance procedures, the locations in which we found sites, the number and size of sites recorded, and the kinds and quantities of cultural debris retrieved from the surface--all pointed to relatively greater intensity of occupation of this survey universe in prehistory than had been noted in our previous studies!

This was nowhere more evident than in the population of sites that could at least tentatively be associated with the Middle Woodland period. In our report of the 1986 survey work, we (Cremin and Quattrin 1987: 78) noted the relatively great number of Middle Woodland components, perhaps as many as 25 (23% of all identified prehistoric occupations), reflecting the unanticipated frequency with which surface collections revealed the presence of diagnostic point types and/or exotic or nonlocal debitage entering the area from chert sources as far away as Illinois, Indiana, and Ohio, as well as elsewhere in Michigan. The presence of such materials was viewed as being strongly suggestive of the level of interregional interaction commonly attributed to Middle Woodland manifestations throughout the Middle West. Moreover, we recognized the presence in our study area of a number of very impressive and presumably Middle Woodland residential sites, including the two that are the subject of this report, occupying either stream's edge locations or positions overlooking lakes through which perennial streams like Swan Creek flowed, possibly correlating with subsistence activities centered on certain aquatic and riparian resources and the presence of annually renewed and easily tilled alluvial soils for gardening, as well as the obvious role that watercourses would have served as arteries of transportation and communication with populations lying beyond the St. Joseph River Valley of southwest Michigan. And, finally, the former presence of mounds and geometric earthworks, briefly referenced in the 19th century documents and, in at least some cases, subsequently assigned to the Middle Woodland Goodall Focus, in close proximity to some of our purported Middle Woodland residential (habitation) sites, certainly argued for more intensive

investigation of several of the identified Middle Woodland sites in our research universe.

With these thoughts in mind, we sought and received additional funding from the previously mentioned source to undertake Phase II archaeological research at two of the potentially more interesting sites, seeking to further elucidate and explain the nature of Middle Woodland occupation in the Middle St. Joseph River Valley and, of course, to gather information of sufficient value to support nomination of Walters 1 and Cupp 5 for listing in the National Register of Historic Places.

THE ENVIRONMENTAL SETTING OF THE MIDDLE ST. JOSEPH RIVER VALLEY

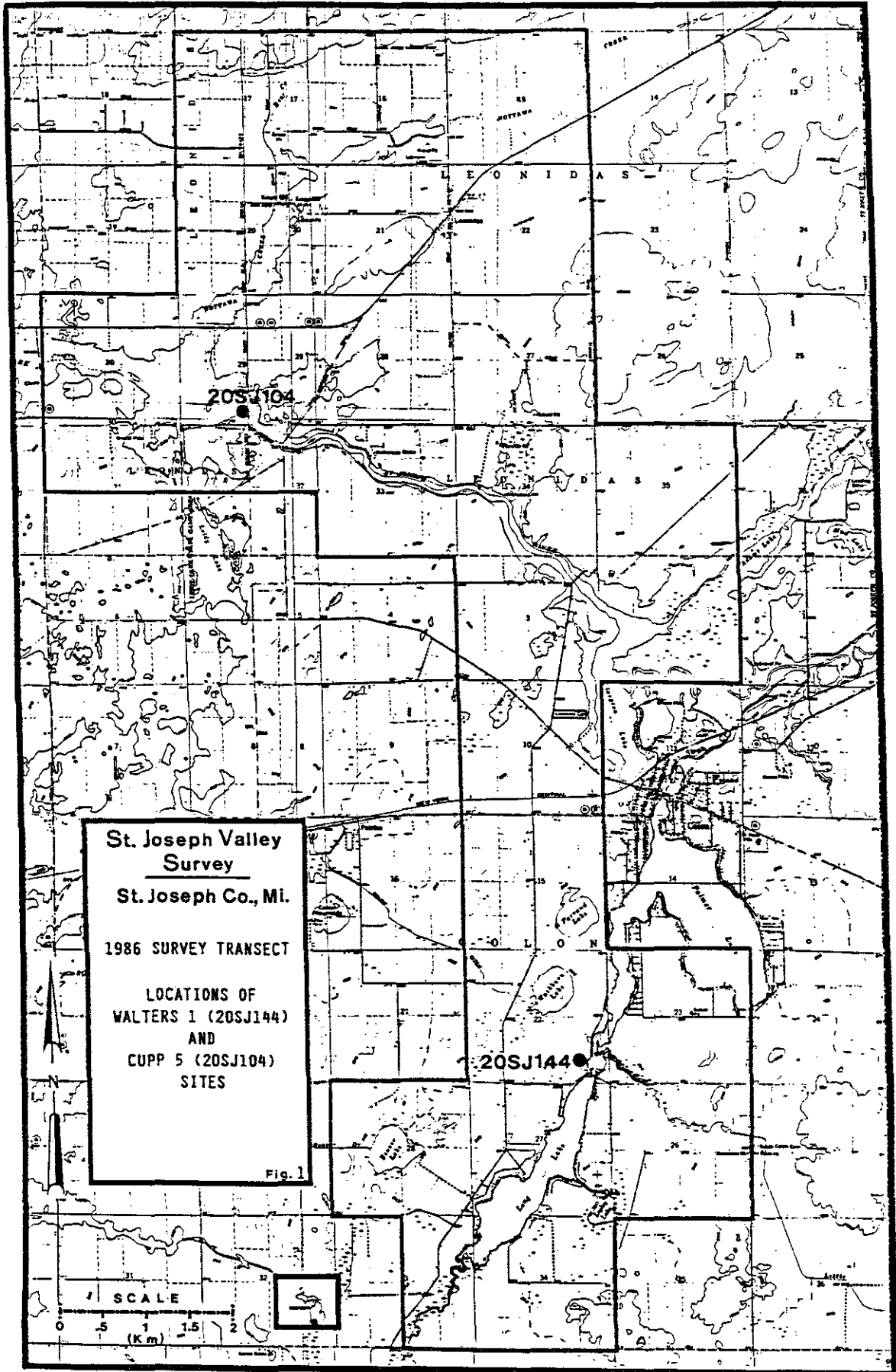
The landscape of the general area of the 1986 survey and follow-up Phase II investigations at the Walters 1 and Cupp 5 sites is distinctively glacial in origin. Moraines are few in number and limited in extent, and till plains are confined to the uplands flanking the valley of the St. Joseph River. Most of the area features level to gently undulating outwash plains and/or old glacial melt-water channels.

Elevations exceeding 270 m ASL are recorded for both the northern and southern limits of the 1986 study area, descending toward the center where the St. Joseph passes through the transect. Here, the elevation recorded for Sturgeon Lake is 251 m ASL, providing for overall relief of 19 m.

The dominant feature on the local landscape is the valley of the St. Joseph River. After rising in Baw Beese Lake in Hillsdale County, the St. Joseph flows in a generally westerly direction from its source and enters the 1986 transect in the SE 1/4 of Section 2, Colon Township. Within a short distance, it enters Sturgeon Lake, and after exiting the lake it continues toward the west passing out of the study area through the NW 1/4 of Section 30, Leonidas Township. Figure 1 shows the relationship of the river to the survey transect established for the 1986 program of research.

Within the area of our concern, the St. Joseph is joined by three major tributary streams. Swan Creek rises to the south of the study area and enters it through Section 33 of Colon Township. Thereafter, it follows a northeasterly course through Long and Palmer Lakes before joining the St. Joseph in Section 11 just above that point where the

Figure 1: the sites in the 1986 survey universe.



river enters Sturgeon Lake. Nottawa Creek enters the 1986 survey area from the NE through Section 15 of Leonidas Township and flows in a southwesterly direction before joining the St. Joseph in the SE 1/4 of Section 30 just a short distance from the western limits of the transect. The third tributary having its confluence with the river within the limits of the 1986 transect is an unnamed stream that drains three small lakes (Adams, Mud, and Havens) in Section 1 of Colon Township and Section 36 of Leonidas Township. It joins the St. Joseph near the center of Section 2 in Colon Township where the river exits Sturgeon Lake.

In addition to the above named streams and the lakes which they drain or through which they pass, several smaller third-order streams (Bear Creek, Little Swan Creek) and standing bodies of water lacking outlets (Beaver, Farrand, and Washburn Lakes), as well as Lepley Lake, a small body of water having an active outlet to Long Lake (through which Swan Creek flows), occur within the boundaries established for the 1986 survey transect. These, too, presumably exerted some influence on prehistoric subsistence-settlement patterns in the Middle St. Joseph River Valley.

With respect to the presettlement vegetation, both the GLO survey fieldnotes and plats and the county histories (Cutler 1906; Everts 1877) enable us to recognize the following plant communities:

1. Oak savanna and bur oak openings dominated on uplands in both townships at the time of American settlement, with oak forest representing a third association. Bur oak openings or "barrens" featured scattered but often pure stands of the bur oak and bordered dry prairies. The recorded tree density of 1-15 mature trees per acre indicates a very open canopy. The understory was

sparse, if even extant, and ground cover consisted of herbaceous plants similar to those of adjacent prairies. Oak savanna, too, supported 1-15 mature trees/acre, but can be differentiated from the preceding association by the strong dominance of white oak. Yellow oak was second in importance, with small numbers of black oak, bur oak, pignut hickory, and shagbark hickory also being present. Finally, oak forest, with white oak being the dominant species and with the co-dominants being essentially the same as those trees listed above, can be distinguished from oak savanna by its much greater tree density, resulting in a more closed canopy, and the notable addition of the red oak.

The only other upland community, beech-sugar maple forest, was mainly confined to the extreme northern and northeastern portions of the survey transect and is characterized by the strong dominance of these two species. However, basswood, ironwood, white ash, tulip poplar, bitternut hickory, shagbark hickory, black walnut, and black cherry are important constituents of this community.

2. Bottomland or wetland associations occupied more than one-half of the area included within the limits of the transect at the time of American settlement. Common in the floodplain of the St. Joseph River were water tolerant species such as American elm, slippery elm, silver maple, and red maple. Less abundant in the canopy of the southern floodplain forest were riparian or water's edge species such as cottonwood, sycamore, black willow, honey locust, hackberry, and black maple. Drier sites in the flood bottoms supported stands of beech-sugar maple forest.

A variant of the aforementioned community occurred in wetlands located away from major stream bottoms. Here, was found

the swamp forest, dominated by American elm, slippery elm, and black gum. Minor species shared by both wetland associations included swamp white oak, butternut, black walnut, and green ash.

Undifferentiated wetlands, including swamp, marsh, and bog, supported stages in the succession from open bog or fen to forest. In the study area these stages were represented by swamps dominated by tamarack or black ash, cat-tail and bulrush marshes, sedge meadows, and mosaics that comprised elements of the above associations together with thickets of dogwood, alder, and willow. They were spotted throughout the study area at the time of the GLO surveys in the Middle St. Joseph River Valley.

3. An extension of Nottawa Prairie occurred in the transect area. It was confined to the south side of the St. Joseph River in Sections 30, 31, and 33 of Leonidas Township and Section 3 of neighboring Colon Township. Native grassland occupied nearly level land and was characterized by fewer than a single mature tree/acre and a plant cover of grasses, herbs, and forbs. The dominant species were of the genus Andropogon; specifically big bluestem and little bluestem or wiregrass.

In addition to those sources of information cited earlier in this overview of the presettlement vegetation, the descriptions of the species composition of the various plant communities provided by Hodler et al. (1981) have been most important in our efforts to evaluate the prehistoric occupation of the Middle St. Joseph River Valley from the standpoint of natural or wild resource potentials.

PREVIOUS RESEARCH IN THE MIDDLE ST. JOSEPH RIVER VALLEY

Prior to the Phase II program of research that is the subject of this report, the only major study of archaeological resources in the Middle St. Joseph River Valley was the systematic site location survey in 1986 during which the Walters 1 and Cupp 5 sites were recorded. The report prepared and submitted by Cremin and Quattrin (1987) on this occasion presented 87 new archaeological sites located during the field phase of this project, as well as three sites that were recorded on the basis of evidence contained in the documents consulted as part of the project background study. Moreover, this report also summarized the information available for 19 previously recorded sites occurring both within and near to the 1986 survey universe, including nine sites derived from the documents, four that were recorded during a compliance survey undertaken by WMU on behalf of the Village of Colon, Michigan, and six that were reported by area residents/collectors to the University of Michigan and entered into the state site files by that institution. Rather than reiterate this information here, the reader is referred to the thorough presentation of all previously recorded sites in the general area provided by Cremin and Quattrin (1987: 9-17).

The 1986 program of research leading to the discovery of 20SJ144 and 20SJ104 represents a concerted effort on the part of WMU archaeologists to record site locational data with an eye toward the potential influence of certain environmental variables on prehistoric site location decision-making. To this end, a survey transect encompassing 63.5 km² was laid across the St. Joseph River Valley in Leonidas and Colon Townships in St. Joseph County and investigated through the

application of a research design employing stratified random sampling and reconnaissance level field procedures.

The 1986 survey universe comprised an irregularly shaped transect commencing 1.6 km north of the Village of Leonidas and extending in a southerly direction to a point 1.2 km south of Long Lake at the base line of Colon Township. Figure 1 shows the boundaries of the 1986 transect and the locations of the two sites which are the subject of this report.

Within the limits of the 1986 study area WMU surveyors achieved coverage of 15.3 km^2 (24.2%), including all or portions of 59 quarter-section (64.75 ha) sampling units in each of 16 strata created on the basis of the following criteria: (1) rank ordering of all permanent streams and standing bodies of water; (2) landforms occurring on the local landscape as these are differentiated on various maps; and (3) differences in the distribution and composition of major plant associations found in the study area at the time of American settlement, as determined from the fieldnotes and plats of the Government Land Office surveys and comparison of these data with the distribution of soils as plotted on maps prepared by the USDA-Soil Conservation Service (1983).

For their efforts surveyors recorded 87 new sites while in the field. These sites, together with the three new ones identified in the documents, were felt to tentatively represent 110 prehistoric and 14 historic components, ranging from Paleo-Indian to mid 19th century American farmsteads. The vast majority were light lithic scatters, some of which possibly represent logistical sites from which specific activities were undertaken on a seasonal basis over an unknown number of years. Many represent findspots; isolated occurrences of an object of human origin, usually a projectile point, quite possibly representing

an isolated episode of hunting (or a related activity) during which the tool recovered by surveyors was either lost or discarded. Finally, there were 22 sites for which Cremin and Quattrin (1987: 74) felt that a "moderate to very high priority" recommendation was warranted. The basis for such a recommendation included the following: (1) location in space; (2) spatial extent of the debris scatter; (3) the presence of soil staining possibly signaling the occurrence of sub-surface features (i.e. good context or site integrity); and/or (4) the kinds and quantities of cultural items in the surface collections. Such surface observations may point to the site(s) having functioned as a residential or base settlement, requiring that additional assessment be undertaken. And this is especially the case for 10 of these sites, for which evaluation of their eligibility for listing in the National Register of Historic Places appeared to be in order.

Which brings us to the purpose of the present investigation. By all criteria presented above, Walters 1 and Cupp 5 presented comparatively great opportunities to assess the rich potential of the site data recorded during the 1986 survey program. Moreover, comparison of the observations derived from these two sites with those from sites recorded during survey programs undertaken in other nearby drainages also served to set these sites apart from other sites for which surveyors had previously and unequivocally recommended a "high priority" rating. That is to say, these sites "promised" preserved context/integrity, albeit beneath a long reworked plow zone, and the contents of the surface collections "smelled" of Middle Woodland cultural affiliation. Given the ephemeral 19th century references to mounds (Goodall Focus) in close proximity to these Middle Woodland components, it was to say the least tempting to suggest that 20SJ144

and 20SJ104 might be main habitation areas to which the mound sites were ancillary (i.e. the mounds were cemeteries and/or "markers" relating to Middle Woodland occupation of the study area and, perhaps, these two sites in particular). Parenthetically, the same considerations were felt to pertain to the Zerfas site (20SJ102), but our desire to include this habitation site in our research program had to be abandoned due to budgetary constraints.

THE WALTERS 1 AND CUPP 5 SITES AS
RECORDED ON THE BASIS OF SURFACE COLLECTIONS

As previously noted, 10 of 87 new archaeological sites recorded in the field during the 1986 survey appeared to warrant additional evaluation. And, of this number, it seemed to us that two sites, Walters 1 (20SJ144) and Cupp 5 (20SJ104), in particular, afforded us an excellent opportunity to propose Phase II intensive reconnaissance surveys to assess their eligibility for listing in the National Register of Historic Places.

Briefly, our 1986 Phase I study provided the following commentary on these two potentially very significant sites:

Walters 1

This site occupies an estimated 4,000 m² in a field and extends into a nearby grassed area surrounding an abandoned farmstead on a ridge that parallels Swan Creek as it passes from Long Lake to Palmer Lake in the Center of the S 1/2, SE 1/4, SE 1/4 of Section 22, Colon Township. This site has been heavily collected over the years by area residents, and the survey team felt quite fortunate to recover one diagnostic item among the 140 pieces picked up from the surface. This artifact is a Matanzas point, with Middle Archaic Helton phase affiliations in the Lower Illinois River Valley. The lithic debitage constitutes the largest collection recovered during the survey, exceeding by a factor of more than two the next largest assemblage recorded. Given the highly varied chert types in the collection, including specimens of Burlington and Cobden chert from Illinois, Flint Ridge and Upper Mercer from Ohio, and Indiana hornstone, and the proximity of this site to the property where the

George Teller Mound (20SJ8) is presumed to have been located, a Middle Woodland Goodall Focus component might reasonably be anticipated to occur here (Cremin and Quattrin 1987: 69-70). The location of Walters 1 is given in Figure 1.

Cupp 5

This site occupies the inside bank of a pronounced meander loop in the St. Joseph River in the S 1/2, SE 1/4, SW 1/4 of Section 29, Leonidas Township. Although part of the riverbank is in dense woods, the recently cultivated field flanking the woodlot afforded surveyors excellent surface visibility, resulting in the discovery of a very dense lithic and FCR scatter over an area of some 2.4 ha (with additional site area most probably concealed by tree cover between the river and the field). The two diagnostic implements recovered, consisting of a projectile point base and a serrated blade missing the distal end, tentatively suggest a Middle Woodland temporal placement. While the presence of Burlington chert from Illinois in the debitage has been noted, the single most interesting observation is that fully 70% of all lithic pieces is quartzite. To our knowledge, no previously recorded site in the St. Joseph River Valley shows such heavy utilization of this raw material (Cremin and Quattrin 1987: 54-55).

Several aspects of this site's location, also shown in Figure 1, are of interest to us. First, the field in which Cupp 5 lies is surrounded on three sides by ground sloping toward river's edge, with the fourth facing land that rises higher as one proceeds southward from the St. Joseph. Furthermore, it is possibly of interest that the 19th century documents reference two mound groups, the

Scott Mounds (20SJ2) and the Phineas Farrand Mounds (20SJ2), both of which have been assigned by Quimby (1941a; 1941b) to the Goodall Focus, located either on the banks of the river or overlooking Sturgeon Lake near that point where the St. Joseph exits the lake in Colon Township. Albeit less than precise, the information now available to us with respect to the locations of these mound groups, together with recently acquired locational data for 29 sites, many of which, like Cupp 5, evidence Middle Woodland components, strongly point to a substantial Middle Woodland presence in the main river trench between Sturgeon Lake on the east and the confluence of Nottawa Creek and the St. Joseph River about 6 km downstream and to the west. Clearly, the location of Cupp 5 amidst this concentrated population of Middle Woodland components in the Middle St. Joseph River Valley warranted our proposing this site for some additional Phase II study.

PROJECT RESEARCH DESIGN

As originally specified in the final grant application, the project research design called for the implementation of the following phases of fieldwork at each of the two sites:

1. Following establishment of the site datum and grid, the field crew was to undertake a controlled surface collection in order to delineate the area of cultural debris scatter.
2. Within the area so delimited, a judgement sample of grid points would be selected for the placement of small test squares one meter on a side.
3. This judgement sample should reflect surface observations providing maximum opportunity to locate and recover data enabling us to ascertain site integrity (i.e. the presence of archaeological context), in the form of undisturbed midden deposits and/or sub-surface features and possibly define feature clusters and activity areas.
4. Following acquisition of a data set judged to be adequate for making the requisite evaluation, and considering time and cost constraints, illustrate both the site boundaries and the extent of our excavation on the site map and prepare all cultural items for study and ultimate curation in the repository of the Department of Anthropology at Western Michigan University.

In actuality, the program of fieldwork by which these sites were evaluated for their eligibility for listing in the National Register of Historic Places varied in a number of respects from the research design as outlined above. First, as was the case in 1986 when these sites were discovered and recorded, the land that they occupy was in large part under cultivation in 1987. When informed by the Bureau of

History that our contract would not be executed prior to the middle of June, at which time crops in the fields would be so well developed as to prohibit our plans to conduct controlled surface collections, we opted for intensive pedestrian survey and the performance of general surface collections on both properties.

The sites were resurveyed on 22 May 87, after both fields had been plowed, planted, and on several occasions washed by spring rains. The survey crew consisted of an all volunteer group of experienced people, including the authors and several others who would participate in the fieldwork following execution of the contract on 12 Jun 87. On this occasion, both sites were carefully walked by surveyors spaced no more than five meters apart. Every observation of cultural items on the surface was noted by placing a red flag at that location. In the event that a concentration of debris and/or FCR was encountered, several flags were used to mark the point. As the limits of the cultural debris scatter in each field became apparent, interior flags were removed; save for those marking areas of concentrated debris to which we might later wish to return for purposes of test excavation. For portions of the sites that might extend beyond the margins of land then under cultivation, examination by means of either shovel testing or test pitting would necessarily await our return in the summer.

Formally, our project began on 25 Jun, when the authors returned to the two properties to visit the landowners, drop our equipment, and examine the fields. Corn in the Walters field was already three feet or more tall, and the soybean crop on the Cupp property was so dense as to thoroughly conceal the surface of the ground. However, we were able to relocate the red flags that we had placed in the

fields one month earlier. Thus, while surface work at the sites would no longer be possible, we were reasonably confident that we had already acquired the information necessary to provide a reasonably good estimate of site area (within the limits of each field) and to place our excavation units where they might do the most good in terms of potentially valuable subsurface observations.

Investigation of the Walters 1 site began in earnest on 29 Jun with the establishing of the site grid, plotting of all flag loci marking the site limits on the map, shovel testing field margins about the farmhouse and outbuildings, and selecting six locations for subsequent test excavation (Figure 2). The six areas in which excavation activity was to be concentrated were determined on the basis of; (1) observations provided by the 1986 survey team; (2) locations denoted as producing surface concentrations of debris during the flagging operation conducted in May of 1987; (3) information provided by an area collector who frequently walked the field and visited the site to share his knowledge with us; and (4) observations made by excavators while on the site.

As is shown in Figure 2, site limits within the field greatly exceed the estimate of site area provided by the 1986 survey team. Moreover, shovel tests have confirmed that the site does extend into the grassed area about the farm buildings, and a series of test squares located on a small grass covered rise across Long Lake Road from the farm and adjacent to the wetlands through which the channel connecting Long and Palmer Lakes flows also produced evidence that this area of the Walters property must be included within the limits assigned to 20SJ144. This site is now estimated to comprise about 2.4 ha of very diffuse cultural debris scatter.

Another notable modification in project field procedures involved excavation units. At both sites, the placement of test squares represents the application on our part of judgement and random sampling procedures. Moreover, the population of test squares on both sites included excavation units one meter on a side (1 m^2) and two meters on a side (4 m^2). And in plow zone contexts, where disturbed soil extended to a depth of between 25 cm - 30 cm below the surface, this zone was removed as a single excavation level with only a percentage of unit sediments being processed through sifting screens. In this manner we were able to excavate a greater number of "windows" into each site in search of subsurface feature contexts than originally anticipated. Nevertheless, as excavators expanded their activities into areas of the site where surface visibility was restricted due to either grass or tree cover, prohibiting us from determining whether a plow zone was present, soil was removed from test squares in 10 cm arbitrary levels until excavation was terminated. But no unit was closed before it had been positively determined that culturally sterile subsoil had been encountered through careful scraping of the test square floor and a final probing of the unit floor with either soil tester or shovel for an additional 50 cm or more.

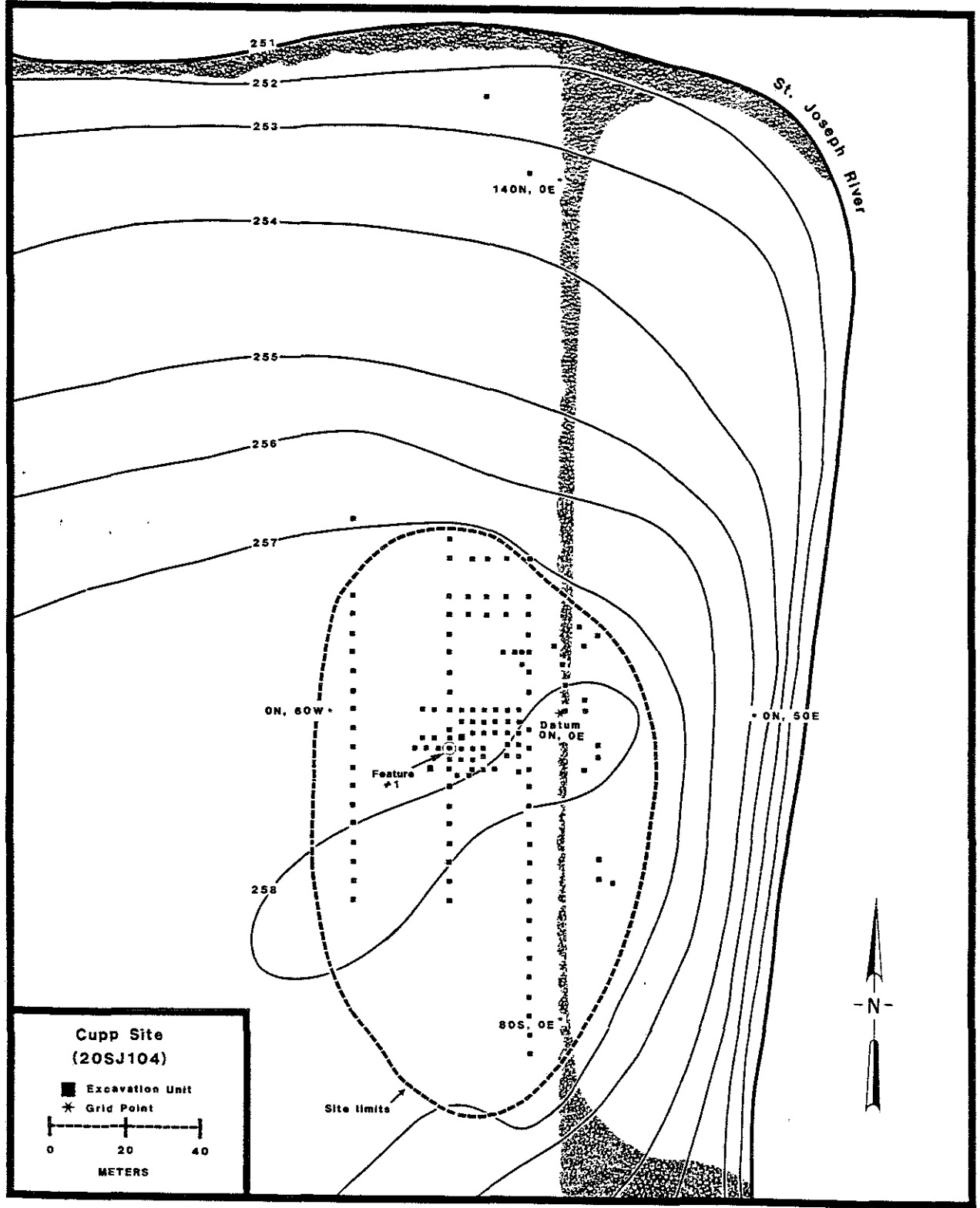
As previously noted, we have deliberately opted for less screening of plow zone sediments, with concomitant loss of artifactual information, in favor of opening a larger number of test squares in our search for undisturbed archaeological context at these sites. Given that screened units seldom if ever revealed significant numbers of cultural items of any sort, coupled with the fact that without some evidence of site integrity it would be impossible to make a case for nomination to the National Register of Historic Places, this

decision has proven to be a wise one. That is, we are now in a position to make recommendations based upon excavation of a larger number of test squares than would otherwise have been the case in light of limited funding and resulting time spent on the two sites by a crew consisting of three two-person excavation teams.

On the Walters 1 site, evidencing a light but continuous scatter of cultural material and FCR over an area of 2.4 ha, we were able to excavate 89 test squares; the soil from 20 (22.5%) units was screened through 6.25 mm hardware mesh in its entirety. At the Cupp 5 site, encompassing only 1.2 ha of area, a total of 138 test units were excavated. Here, all soil removed from 46 (33.1%) test squares was processed through the sifting screen, including every excavation unit that was placed in the woodlot lying between the field and the St. Joseph River. Figure 3 depicts the site area delineated during fieldwork and locates all excavation units opened during our time on this site.

All cultural material recovered from each level recognized for the various test squares was bagged separately and labeled with the appropriate provenience information. At the end of each field day, artifact bags were brought back to the laboratory at WMU for subsequent cleaning, analysis, and curation. When field activities concluded on 14 Jul, study of the collected material commenced. Each specimen was carefully cleaned and inspected in order to distinguish those which could confidently be attributed to human manufacture. Thereafter, lithic debitage was examined under magnification for evidence of deliberate retouch and/or utilization, and each item was compared with material in our type or synoptic set to make a determination as to the source of the raw material. The same careful inspection was accorded

Figure 3: the Cupp 5 site in Leonidas Township, Michigan.



each stone tool, with an attempt also being made to determine if an artifact might have a known analog permitting at least tentative temporal placement and/or recognition of cultural affiliation. Finally, each of the several body sherds recovered from these sites was examined to extract the maximum amount of useful information. Unfortunately, the few anomalous ceramic specimens available to us proved to be of little value with respect to informing us about either method of manufacture or decorative technique which might have enabled us to assign them to a particular period and/or ceramic tradition. All cultural material recovered during our excavations at 20SJ144 and 20SJ104 is catalogued in Tables 1 and 2, respectively.

SITE DESCRIPTIONS AND OBSERVATIONS PERTAINING TO THE PRESENCE/ABSENCE OF ARCHAEOLOGICAL CONTEXT

Our Phase II program of research at the Walters 1 and Cupp 5 sites has resulted in some revision of the descriptions published by Cremin and Quattrin (1987) following completion of the Phase I survey conducted in 1986. In this section, each site is discussed from the perspective of our more intensive investigations during the summer of 1987, including remarks that pertain to the important matter of site integrity. For without doubt, discernible stratigraphy and archaeological context, either in the form of preserved feature fills or midden deposits, have considerable bearing on the nomination of any site for listing in the National Register of Historic Places.

Walters 1

This site occupies 2.4 ha of gently sloping ground lying just west of and overlooking a broad expanse of wetlands flanking the narrow channel linking Long and Palmer Lakes. It occupies much of the SW 1/4, the S 1/2 of the NW 1/4, and extends slightly into the SE 1/4 of the SE 1/4, SE 1/4 of Section 22, Colon Township. In addition to being optimally situated for exploitation of the two lakes and the adjacent wetlands through which Swan Creek flows, it is also possibly noteworthy that smaller areas of wetland are located both immediately to the west and northwest of the site and that a third standing body of water, Washburn Lake, lies only 600 m to the north of 206J144. Except for the areas lying east of Long Lake Road and around the farm buildings, both of which support grass cover, this site is presently under cultivation. Be that as it may, our shovel testing and excavation program clearly showed that site stratigraphy and archaeological context had everywhere been impacted

either by the plow or activities related to construction and use of buildings on the farm. Moreover, it is also quite evident that construction of Long Lake Road along the western edge of the wetlands flanking the creek channel and, perhaps, Decker Road to the south (and between Long Lake and the site) have at least destroyed some portions of the prehistoric occupation area.

In addition to construction activities on the eastern and southern peripheries of Walters 1 which have apparently resulted in total destruction of the archaeological record, it came as no small surprise to us that remnant features were entirely absent in our excavation units located in the field occupying most of the site area. Given our comparatively exciting surface observations, we had every reason to anticipate that subsurface feature contexts, if not more extensive midden deposits, would be encountered at the base of the plow zone. Yet the plow zone in test square after test square produced little if any cultural debris, and upon reaching the base of the disturbed zone not a single observation of soil staining suggestive of possible archaeological sediments was made. Thus, we are now reasonably convinced that this potentially informative "main habitation area" is nothing more than a plow zone site! It is a victim of the deep action of the plow over an extended period of time throughout most of that area delineated as site on the basis of the surface debris scatter noted by two survey parties. And in those areas of the site that are proximal to the creek channel on the east and Long Lake to the south, stripping, cutting, and filling activities associated with road construction have taken their toll of what may well have been the most intensively occupied areas of Walters 1 during the long period of time that prehistoric residents of the St. Joseph River Valley were

attracted to this location on the creek between two lakes.

Cupp 5

Site 20SJ104 is clearly confined to an area of 1.2 ha on the eastern end of a small knoll overlooking the St. Joseph River in the E 1/2, SE 1/4, SW 1/4 and extending into the SW 1/4, SE 1/4 of the SE 1/4, SE 1/4 of Section 29, Leonidas Township. While the 1986 survey team thought that this site was slightly more extensive in that portion of the Cupp property under cultivation, our resurvey of the field and program of test excavation found it be be more confined to the field margin and extending into the woods lying between the field and the river immediately to the east. Figure 3 shows the estimated area now assigned to the Cupp 5 site and the suite of excavation units that were placed both in the field and in the narrow woodlot occupying the bluff above the river.

The stratigraphy observed in test squares placed in the woods is quite complex and not completely understood. Since cement posts were still standing, we were able to trace the former fence line lying just within the forest edge. And given the distance between this remnant fence and the edge of the bluff, together with the presence of a two track (field road?) for the entire length of the fence line in this narrow space, it seemed to us quite unlikely that plowing had extended much beyond the present limits of the Cupp field in at least the recent past.

Despite the fact that all test units placed in the woodlot were excavated in 10 cm levels, no clearly recognizable plow zone could be discerned. The shallowness of the topsoil, thoroughly impregnated with tree roots, made it impossible to note any stratigraphy. And the co-occurrence of historic and prehistoric materials in all levels

overlying culturally sterile subsoil in our test squares argued for prior mixing of culture bearing deposits. Whether this observation can be attributed to 19th century farming practices, activities such as filling and/or leveling prior to establishment of a field road between the old fence and the river, or processes of bioturbation cannot at this time be ascertained.

That portion of the site presently under cultivation is more easily explained and understood. The plow zone is comprised of a well developed sandy loam extending to a depth in excess of 30 cm and grading toward a more gravelly material as one proceeds downward. From that point where the knoll begins its gradual descent to the river on the north, the soil is less well developed with coarser material nearer the surface. The soil in the few units placed at the northern limits of the knoll was described by the excavators as being "as hard as cement".

The most significant factor in degradation at Cupp 5 is the almost continuous plowing over a period of more than 100 years. While mapping the site it became all too apparent that there was a considerable difference in elevation at the forest-field margin, resulting in the plowed portion of the knoll having been reduced by 50 cm or more. Obviously, this activity has contributed greatly to the destruction of site context over time.

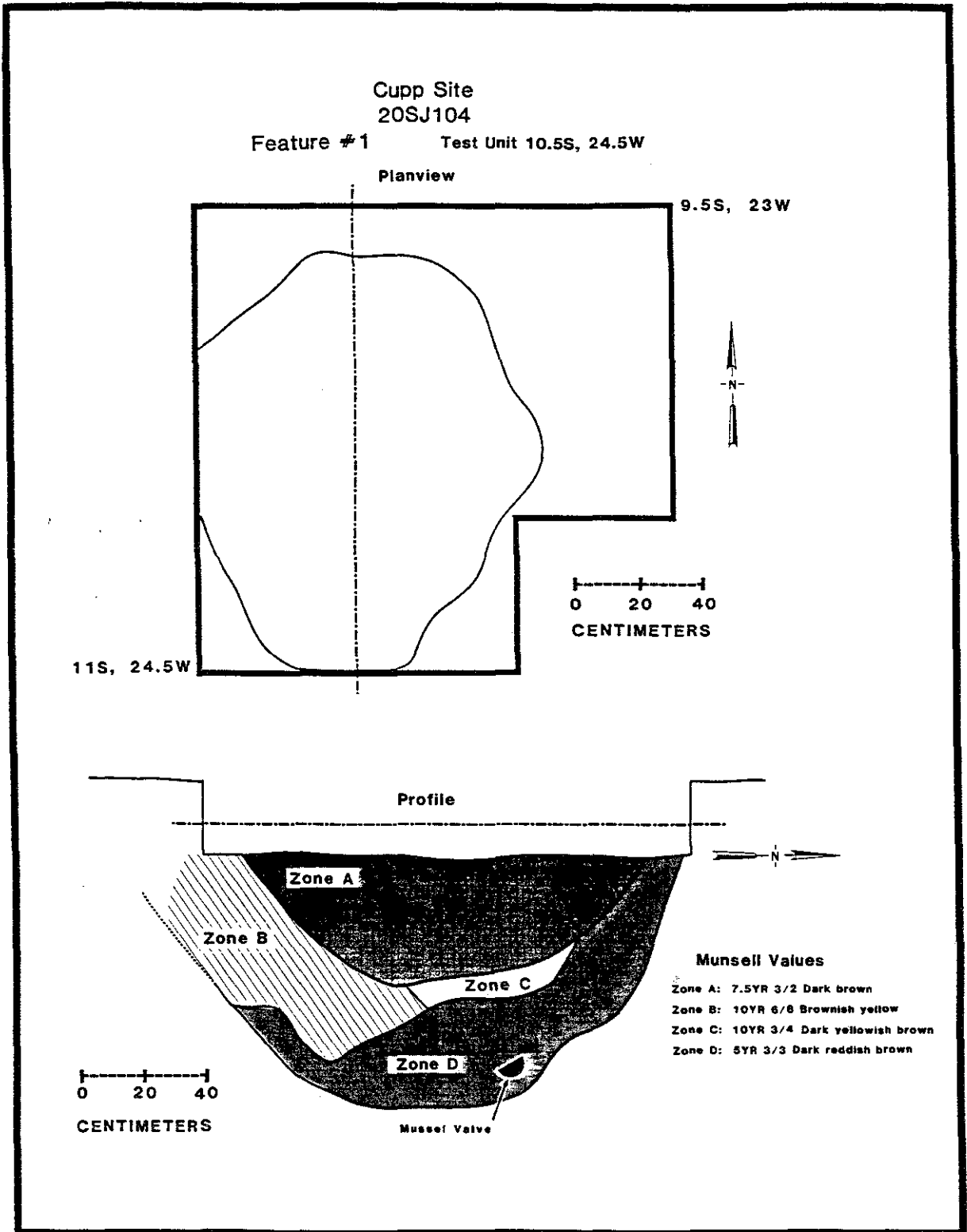
Be that as it may, we did delineate one remnant feature at the base of the plow zone in Test Square 21 (10S, 25E). At a depth of 28 cm below the surface, excavators observed a heavily mottled soil stain 115 cm in width and 134 cm in length. Cross-sectioning of this feature, following completion of plan view drawings and photographs, revealed a deep basin-shaped pit extending for 98 cm below the plane of origin and consisting of four distinct fill units. The uppermost

soil zone (A) was a dark lens interspersed with flecks of charcoal and heavily mottled as a result of bioturbation. The zones labeled B and C appear to be the result of natural slumping of the pit wall. The composition of these two zones was virtually indistinguishable from the culturally sterile subsoil surrounding the pit. Zone D is a lens that commences at the plane of origin near the northern limits of the feature and extends downward to form the basal fill unit across the floor and reaching for a short distance up the opposite wall in the profile exposed during excavation. Observed within this dark reddish brown fill unit were some rather large pieces of charcoal and a mussel valve identified as Amblema costata (three-ridge).

Feature 1, illustrated in both plan view and cross-section in Figure 4, would appear to be the result of two episodes of use; the basal unit represents in situ remains of the initial use of this deep facility, followed by natural slumping of the pit wall and subsequent re-excavation of a shallower facility, the use of which is evidenced by the uppermost soil zone in the feature profile. The contents of two 12 l Flotation samples that were collected from Soil Zones A and D will be presented in the following section of this report.

One final comment is warranted regarding the sample of test squares on the two sites. As is apparent to the reader, while Cupp 5 is estimated to cover about one half the area assigned to Walters 1, the number of units excavated is considerably greater (55%) at 20SJ104 than at 20SJ144. This is merely the reflection of our having failed to locate subsurface features at Walters 1 in 89 tries! However, at Cupp 5, where our 21st excavation unit produced a substantial pre-historic pit, we intensified our efforts in the belief that "where

Figure 4: feature 1 on the Cupp 5 site.



there is one, there should be more"!! And the definition of feature contexts was regarded as essential to the objectives of the Phase II study of these sites. Unfortunately, and regardless of our best efforts, other subsurface features, if present at the site, eluded us.

CULTURAL MATERIAL AND CONTENTS OF FEATURE FLOATS

There follows a brief discussion of artifactual materials from the two sites and the contents of two 12 l flotation samples from the single cultural feature recorded at the Cupp 5 site. These data, while insufficient for making a case of potential significance for either 20SJ144 or 20SJ104, have nevertheless proven useful in firming up tentative temporal placement and/or cultural affiliation assigned the sites following our analysis of the 1986 general surface collections.

Artifact Descriptions

Walters 1

Figure A, Plate 1

Provenience: TS 21 (127N, 105E)

This worked flake of Burlington chert has been proximally fractured. The entire tool evidences the removal of large, flat thinning flakes, with occasional pressure flaking noted along two margins. The cross-section is thin and plano-convex. The distal end shows evidence of both intentional thinning and subsequent utilization. The "notched" area exhibits moderate grinding. No temporal placement can be assigned this specimen.

Figure B, Plate 1

Provenience: TS 57 (135N, 108E)

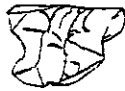
This projectile point evidences loss of the distal end and one basal ear due to previous fracturing. Basal thinning has been achieved by long, slender flakes having been removed longitudinally. Grinding is absent except within the notch, where it has been observed to be very slight. Notching was accomplished through the removal of short, broad

Plate 1: artifacts from Walters 1 (and Walters 2; 20SJ151).

**WALTERS SITE
20SJ144**



A



B



C



D



E



F



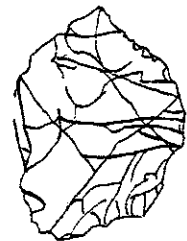
G



H



I



J



K



L



M



N



O

Scale: 1:1

flakes. While appearing somewhat similar to Upper Mercer chert, the raw material upon which this tool has been fabricated cannot be firmly identified. In the absence of a typological analog, it is proposed that this specimen can be tentatively assigned a Late Archaic temporal placement.

Figure C, Plate 1

Provenience: TS 58 (38S, 100E)

This small straight-sided, straight-based projectile point is typical of specimens assigned to the category of Madison point. The reduction procedure has been noted to be rather "sloppy", including a combination of both large and small thinning flakes with some pressure flaking evident along the margins. A post A.D. 1200 temporal placement is generally accorded points of this widespread type.

Figure D, Plate 1

Provenience: TS 58 (38S, 100E)

This specimen consists solely of a biface stem exhibiting large, wide flake scars. A few pressure flakes have been removed from the tool margins. Little can be said regarding the temporal placement and/or cultural affiliation of this point, but based on the presence of bifurcation it is tentatively suggested to date to the Early Archaic Period.

Figure E, Plate 1

Provenience: TS 62 (5N, 51E)

The flake scars on this point are large and wide, and pressure flaking is evident along the unmodified lateral edge of the tool. Basal thinning has been achieved by removing long, thin flakes from this portion of the point, and the notches are large and wide. One edge of the tool has been damaged, with subsequent reworking along

the distal portion of one edge being evident. Grinding is quite heavy and present on both the base and in the area of the notches. This point is generally analogous to the Affinis Snyders point description provided by Justice (1987: 204). And, on this basis, an early Middle Woodland temporal placement can be proposed.

Figure F, Plate 1

Provenience: TS 77 (102S, OE)

This specimen appears to be the portion of a blank or preform in the initial stages of reduction. Flake scars are large and deep and are unsystematically distributed over it. It also exhibits a cross-section that is lenticular with sharp angling toward the edges. We have noted fractures at several points along the tool margins, making function/purpose very difficult to ascertain. No temporal placement and/or cultural affiliation can be proposed for this artifact.

Figure G, Plate 1

Provenience: Surface Collection

This projectile point falls within the range of the Raddatz side notched point as described by Justice (1987: 67-69). Although it is fractured just above the shoulders, the base and notching morphology are distinctive enough to permit typological assessment. Thinning has been achieved through removal of wide, parallel flakes from the base and blade margins. The deep notches evidence removal of large concentric flakes, followed by application of pressure flaking for minor modification. Grinding is heavy along the entire base, with less substantial grinding noted in the notches. The Raddatz side notched point can be assigned a Middle Archaic temporal placement.

Figure H, Plate 1

Provenience: Surface Collection

This hafted scraper on Upper Mercer chert has been significantly

reworked. The hafting element is small and thin, with numerous small retouch flake scars. Grinding is totally absent. The blade margins exhibit large retouch flake scars, with the edges achieving their final form through application of fine pressure flaking. There is a considerable amount of use wear on the distal portion of the blade edge. Due to the massive reworking on this implement, definite temporal placement and/or cultural affiliation cannot be proposed. However, the remnant notch and base morphology might be construed to reflect this tool's having begun its useful life as a Snyders corner notched projectile point of Middle Woodland affiliation.

Figure I, Plate 1

Provenience: Surface Collection

This small flake of Burlington chert has been retouched to produce a thumbnail scraper. The working edge has been formed through the application of a series of purposeful blows along the distal margin. There is no evidence of secondary retouch and reuse of this tool.

Figure J, Plate 1

Provenience: Surface Collection

This blank or preform of Burlington chert shows laterally distributed flake scars, with small thinning flakes having been subsequently removed along the tool margins. There are several deep fissures in this piece of chert which probably contributed to the decision to discard it. No temporal placement or cultural affiliation can be proposed for this artifact.

Figure K, Plate 1

Provenience: Surface Collection in northeast area where testing
was subsequently undertaken on this site

This is a preform of Deer Lick Creek chert that appears to have

been virtually complete when discarded. A large flake was the material upon which this implement was begun. The detached side evidences very little modification, but the opposite side shows removal of large and fairly long, lateral thinning flakes, with small sharpening flakes having been removed from a few areas of the blade edges. The proximal end of the object is primarily chert cortex. Little can be positively offered regarding its temporal placement and/or cultural affiliation. However, given its overall size and morphology, it is tempting to suggest that the final product derived from this blank might well have become a Late Woodland Madison point.

Figure L, Plate 1

Provenience: Surface Collection in the northeast area

This corner notched point is also fabricated on Deer Lick Creek chert. Initial thinning flakes are large and broad, with subsequent sharpening produced through the removal of fine flakes by pressure flaking. One edge shows evidence of resharpening resulting in a bevelled blade margin. The cross-section is quite thin and lenticular. Heavy grinding is present on both the base and in the area of the notches. The morphology of this specimen is such that an Affinis Snyders designation seems most appropriate (Justice 1987: 204). Thus, an early Middle Woodland temporal placement can be proposed for this artifact.

Figure M, Plate 1

Provenience: Surface Collection

This is the distal portion of a blank of Deer Lick Creek chert. The flake scars are large and broad across the faces of the specimen, with finer flake removal being evident along either edge. The cross-section is plano-convex. Neither a temporal placement nor cultural

affiliation can be proposed for this artifact.

Figure N, Plate 1

Provenience: Surface Collection

This rather finely made projectile point of Attica chert is missing one barb, reflecting damage prior to its having been found by survey team members. Small but wide thinning flakes have been removed from both faces, and sharpening through well controlled pressure flaking along blade margins is also evident. Basal grinding is present, albeit slight. Except for the absence of serration, attributes in evidence suggest that this specimen has analogs in the Early Archaic Kirk Corner Notched Cluster as described by Justice (1987: 71-78). It would appear to be most similar to the Palmer corner notched point within this type cluster, and since southern Michigan is the northern boundary for this point we might regard the Walters 1 specimen as a nonserrated variant of the Palmer type.

Figure O, Plate 1

Provenience: Walters 2 (20SJ151)

This projectile point represents the isolated occurrence of a cultural item in the same field as Walters 1, but clearly spatially separated from it. Thus, we regard this findspot as representing a discrete site occupying a slight knoll in the SE 1/4, SE 1/4, SW 1/4, SE 1/4 of Section 22, Colon Township. The specimen is a stemmed point of Bayport chert evidencing a flaking pattern wherein all shaping has been achieved by removal of small thinning flakes along the blade margins, at the shoulders, and on the stem. Grinding is absent from the point. No temporal placement and/or cultural affiliation can be posited for this artifact.

Cupp 5

Figure A, Plate 2

Provenience: TS 53, Level 1 (47S, 17E)

Little can be said about this worked flake derived from local till chert. It is characterized by a series of small resharpener flakes that have been detached through pressure flaking along one edge. All indications are that it represents a tool of expedience; it was probably used once and discarded.

Figure B, Plate 2

Provenience: TS 70 (17S, 20W)

This flake of an unidentified chert exhibits retouch along two edges, creating a good cutting edge with a sharp barbed hook. The retouching appears to have been accomplished by a combination of well directed strikes or blows with a percussor and modest pressure flaking. As was the case above, this expedient creation is not diagnostic and rather represents the rapid fabrication of a tool suitable for an immediate purpose and subsequent discard.

Figure C, Plate 2

Provenience: TS 106, Level 2 (ON, 10E)

Again, this object is a flake exhibiting marginal retouch resulting in the creation of a unifacial scraper. Sharpening was achieved through the removal of flakes so as to create a steep angle above a blunt edge. This object is also lacking in diagnostic characteristics pertaining to its temporal placement and/or cultural affiliation.

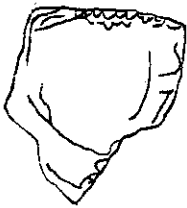
Figure D, Plate 2

Provenience: TS 106, Level 2 (ON, 10E)

This biface stem is lacking all diagnostic elements, thus making it impossible to identify it. Flaking is rather crude and angular; perhaps

Plate 2: artifacts from the Cupp 5 site.

**CUPP SITE
20SJ104**



A



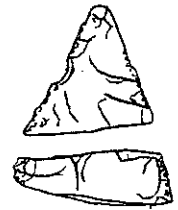
B



C



D



E



F

Scale: 1:1

the object was broken prior to completion of the reduction process, and it was rejected or discarded by the knapper.

Figure E, Plate 2

Provenience: TS 114 (3S, 22W)

The blade or distal portion of this projectile point was broken during excavation. The tool has been fabricated on Burlington chert. The blade margins are quite straight, and flake scars are broad and flat. Pressure flaking is evident in the removal of microflakes from both edges; they remain remarkably sharp to the touch. In the absence of the hafting element it is impossible to comment further on this reasonably well made artifact.

Figure F, Plate 2

Provenience: Surface Collection

This is a crudely made projectile point, probably of Bayport chert. Shoulders are pronounced, and although the hafting element is not present in its entirety, it is safe to assume that it represents a stemmed specimen. Flake scars are both wide and deep, with most radiating out from the blade midline. The cross-section is plano-convex. Identification of the source material has been made difficult by the fact that more than 90% of this tool retains rough cortex-like material over the surface, representing a poor selection of material on which to make this point. Nothing about this specimen provides a clue as to its temporal placement and/or cultural affiliation.

Lithic and Ceramic Debris

Walters 1

Of the lithic debitage recovered from 20SJ144 and listed in Table 1, only 44.8% could be identified as to source. The remaining materials falls in the category of "local gravels-exotic", defined

by Clark (1984: 51) as "locally derived chert pebbles and cobbles" that were observed to be quite common on all sites recorded in the US-31 County Freeway project in the Lower St. Joseph River Valley of Berrien County, Michigan.

A total of 39.6% of all lithic debitage can be assigned to a nonlocal source. The most abundant of the nonlocal material is Burlington chert, constituting 20.1% of all debitage and 44.8% of the lithic pieces from an identified source. Although all stages of lithic reduction appear to be represented in the assemblage, the predominant flaking debris is derived from the secondary stage in the reduction process.

The second most abundant identified chert type is Bayport. This material comprises 9.3% of the total lithic debris count and 20.7% of all identified exotic pieces. Again, all stages in the lithic reduction process are represented in the assemblage. It is possibly noteworthy that the percentage attributed to Bayport chert is somewhat higher than is generally the case for recorded sites in the southwest Michigan area (Ehlers and Humphrey 1944, cited in Clark 1984: 57). This observation might be explained by positing that the occupants of this site were interacting more intensively with people in the Saginaw area than is generally presumed to be the case in prehistory. Or, alternatively, it is possible that the site's residents were accessing the Bayport chert outcrops that have been reported for the Grand Rapids area.

It would also appear that the residents of Walters 1 relied little on the better quality cherts occurring in southwest Michigan. Deer Lick Creek and Purple chert comprise only 0.9% and 0.3% of all lithic debris and 2.1% and 0.7% of identified cherts, respectively. The main source for the former near South Haven, Michigan is only about 100 km

northwest of this site. Purple chert would appear to be present in glacial till deposits throughout much of southwest Michigan and especially prominent in the area of Cassopolis, Michigan (Clark 1984: 52). The very low percentages noted for these good quality local cherts suggest either a strong desire on the part of the site's residents for exotic cherts or difficulty in acquisition of good materials available regionally.

The remaining identifiable materials from Walters 1 in decreasing frequency of occurrence are: quartzite, Onondaga chert, Upper Mercer chert, Norwood chert, Indiana hornstone, Flint Ridge chert, and Kettlepoint chert. The range of source areas from which the Walters 1 residents derived their raw material suggests connections, if only indirect, with peoples throughout the Great Lakes-Riverine area.

With respect to production, and as previously noted for several of the aforementioned chert types, all stages of lithic reduction are in evidence in the debitage from 20SJ144. Be that as it may, there does seem to be an emphasis on secondary reduction, with flakes of this stage accounting for 37.7% of the total lithic debris count. Flake fragments, aggregating 32.2% by count, constitute the next most abundant category. A reason for the strong presence of fragments in the debitage could be our inability to clearly determine the reduction stage due to the very small size of many pieces of debitage. Clark (1984: 20) has noted that for the most part flake fragments in the US-31 Freeway Corridor project lithic assemblage represent fragments of secondary and tertiary flakes. Perhaps the assignment of so many specimens to the category of fragments explains why flakes identified as representing the tertiary stage of reduction account for only 8.6% of lithic pieces from this site.

While primary flakes make up 20.7% of all debitage, only 4.2% are from exotic cherts. The remaining pieces are derived from local till materials. Reduction blocks comprise an insignificant 0.6% of the total lithic debris count. A picture of lithic resource procurement emerges at Walters 1 in which extensive use of exotic materials, perhaps typically arriving at the site in semiprocessed form, is augmented by fortuitous collection of local glacial cobbles. It certainly would appear that the full range of the lithic reduction process can be more frequently associated with local than exotic cherts represented in this lithic assemblage.

The ceramics recovered from 20SJ144 are few and very fragmentary. The single sherdlet from Test Square 2 is grit-tempered with no discernable decoration. The color is a light brown throughout this specimen. No cultural affiliation can be posited, and the temporal placement is simply "Woodland". The three sherds from Test Square 62 are shell-tempered, and all are uniformly black in color. Again, no decoration is in evidence. But, clearly, Upper Mississippian affiliation can be suggested; temporal placement for this component most probably post dates A.D. 1050.

Cupp 5

Lithic debris from this site is not as abundant as at Walters 1, nor is it as varied with respect to source. Of the total Cupp 5 assemblage, 54.0% could be identified as to material. Exotic cherts aggregate 30.7%. The remaining pieces of lithic debitage can be classified as "local gravels-exotic".

The most commonly used material was quartzite. Our Phase II investigation only served to confirm the impressions of the 1986 survey team with respect to the relative abundance of this material

at 20SJ104. Quartzite flakes recovered during testing of the site aggregate 23.4% of all lithic debitage and 43.2% of all identified flakes. Although no tools fabricated from this material were found, flakes of quartzite represent every stage in the lithic reduction process. The predominance of quartzite might reflect its occurrence in cobble form along river's edge on the eastern periphery of the site. During occasional forays to the river by members of the crew, sizeable cobbles of quartzite were frequently observed.

The next most abundant material found here is Burlington chert. This material makes up 39.2% of the identified chippage and 21.2% of all lithic debitage. Again, all stages of the reduction process are represented in the assemblage, but predominance can, like at 20SJ144, be assigned to secondary and tertiary lithic debris. Tool production from initially reduced and imported blanks is the most likely scenario with respect to our observations on this chert type.

The remaining identifiable chert pieces comprise only 9.4% of the total count and include (in decreasing frequency of occurrence): Bayport chert, Upper Mercer chert, Deer Lick Creek chert, Indiana hornstone, Norwood chert, and Cobden chert. When this lithic material is compared with the assemblage from Walters 1, it appears that the occupation(s) of Cupp 5 is more restricted either in terms of time or interaction with the "outside world". Unfortunately, a definitive statement regarding the correctness of either interpretation is not possible in light of the paucity of information recovered.

The two fragments of prehistoric pottery from this site came from a single provenience, Test Square 2. Both are grit-tempered and a light brownish tan in color. Cord marking is visible on one specimen, but nothing about either sherd is so distinctive as to permit specific

temporal placement or assignment of cultural affiliation.

Feature Contents

As previously noted, troweling and sifting of the fill from Feature 1 at Cupp 5 produced only a single valve of a freshwater mussel. However, two 12 l flotation samples were collected from this pit for subsequent processing in the laboratory at WMU. The contents of these samples may be summarized as follows:

Soil Zone A

- 1.45 g of unidentified wood charcoal
- 1 unidentified carbonized seed
- 8 unidentified microflakes of chert

Soil Zone D

- 1.15 g of unidentified wood charcoal
- 1 piece of fire-cracked rock
- 5 microflakes of quartzite
- 2 microflakes of Indiana hornstone
- 3 microflakes of unidentified chert

While the recovery of the remains of a freshwater mussel from deep within the pit is suggestive of this pit having functioned as a facility for steaming clams or, alternatively, as a "cooker" for the thermal pretreatment of raw material as part of the lithic reduction process, there is little in the way of solid evidence to support either interpretation. We simply do not know how this deep basin-shaped pit functioned in the context of the activities undertaken by the people who occupied this site.

INTERPRETATIONS AND CONCLUSIONS

When we commenced this Phase II investigation almost one year ago, we might well have anticipated that this section of our report on the Walters 1 and Cupp 5 sites would not only be the most challenging to prepare but also the most valuable aspect of our program of research. But, such is not the case! Rather, given the intensity of our study on the one hand, and the paucity of information derived from our field work on the other, we can only conclude that our impressions of the potential significance of these sites upon their discovery in 1986 were incorrect.

Although diagnostic implements ranging from an Early Archaic Palmer corner-notched point to a Late Woodland Madison point at Walters 1 have permitted us to expand upon the original assessment of this site's apparent age, findings at Cupp 5 have not been as helpful. In the general absence of new diagnostic items, we are only able to firm up the Middle Woodland temporal placement given this site following examination of the 1986 survey material.

Thus, while we are able to argue for undeniable prehistoric presence at both sites and can present rather precise estimates of site limits derived from the distribution of surface debris in the cultivated portions of these sites, as well as the recovery of some cultural material from test squares and/or shovel tests located in those portions of each site not presently under cultivation, evidence for stratigraphy and preserved archaeological context (i.e site integrity) has everywhere eluded us save for the single pit feature identified at Cupp 5.

How is the discrepancy between our expectations and our Phase II observations to be explained? Certainly, we stand behind the

"high priority" assignment given to the sites in the Phase I report (Cremin and Quattrin 1987). These are two of only 10 sites that really stood out among the more than four score new sites that we reported following conclusion of the Phase I study. And they were most notable in terms of their spatial extent and both the kinds and quantities of data recovered during reconnaissance level survey of the cultivated portions of the Walters and Cupp properties. Moreover, their locations especially peaked our interest, particularly in light of their proximity to major watercourses in the study area, providing enhanced opportunities for the exploitation of aquatic and riparian resources, as well as facilitating transportation and communication, and also their nearness to several former mound groups referenced in the 19th century literature.

Yet, what we interpreted to be comparatively rich data sets in 1986 have proven in 1987 to be poor indicators of what lay beneath the surface of the ground! In the final analysis, we must now conclude that Walters 1 and Cupp 5 are "plow zone" sites; sites lacking the integrity (i.e. stratigraphy and preserved archaeological context) necessary to make a case for either site being eligible for listing in the National Register of Historic Places.

RECOMMENDATIONS FOR FUTURE RESEARCH AND MANAGEMENT OF CULTURAL RESOURCES

Like so many other sites located in areas of southwest Michigan where we have conducted Phase I programs of reconnaissance level survey over the years, Walters 1 (20SJ144) and Cupp 5 (20SJ104) have been significantly impacted by intensive cultivation practices over an extended period of time. While such land use has certainly aided our discovery of sites, and usually augments the recovery of a sample of cultural debris most useful in assessing a site's potential for further study, plowing can over time be as destructive of archaeological resources as the more dramatic landscape altering activities confronting the researcher concerned with the conservation of the archaeological data base. To be sure, this will not always be the case. Many sites that we have located in farmland have proven, when investigated further, to possess valuable contextual information below the depth to which the plow has penetrated. Others, like the two sites that are the subject of this report, have not! And based on our prior experience, together with those observations derived from our Phase II study and reported herein, we are reasonably convinced that what these two sites may have once had to offer in the way of potentially significant information is not more.

With respect to future research, if not specifically the likes of Walters 1 and Cupp 5, but with other sites occurring in land under cultivation, we do not propose to ignore and/or abandon the study of farmland in our Phase I programs of research. Rather, we will now incorporate in our reconnaissance or walk-over survey work some application of minimal testing on those sites yielding comparatively interesting surface data. This experience has taught us that prior

to submitting a proposal for Phase II intensive reconnaissance level survey for purposes of determining a site's eligibility for listing in the National Register of Historic Places, it is essential that the archaeologist have more than surface information available to make such an assessment. There must be reasonable evidence, secured through modest excavation efforts, of preserved site integrity before more intensive Phase II research is proposed.

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CATALOG OF ARTIFACTUAL MATERIALS FROM THE WALTERS 1 AND CUPP 5 SITES

Tables 1 and 2 which follow catalog all of the cultural material recovered from the two sites during our Phase II investigations. The catalogued items, together with log books, excavation unit and feature forms, and the photographic record of our field activities, have been deposited in the archaeological collections maintained by the WMU Department of Anthropology in Moore Hall on the campus in Kalamazoo, Michigan.

TABLE 1: CULTURAL MATERIAL FROM THE WALTERS 1 SITE.

Contents of the Surface Collection

1-projectile point of Attica chert	1-primary flake of Norwood chert
1-projectile point of Upper Mercer chert	1-secondary flake of Norwood chert
1-unidentified projectile point	3-flakes of Norwood chert
1-Snyders point of an unknown chert	1-flake of Onondaga chert
1-bifacially worked piece of Burlington chert	4-primary flakes of quartzite
1-blank of Deer Lick Creek chert	4-secondary flakes of quartzite
1-blank of Burlington chert	2-quartzite flakes
1-blank of an unknown chert	1-flake of Upper Mercer chert
1-thumbnail scraper of Burlington chert	1-unidentified chert core
1-secondary flake of Attica chert	1-unidentified chert block
1-flake of Attica chert	6-unidentified decortication flakes
2-primary flakes of Bayport chert	20-unidentified primary flakes
7-secondary flakes of Bayport chert	6-unidentified secondary flakes
3-flakes of Bayport chert	5-unidentified tertiary flakes
4-primary flakes of Burlington chert	11-unidentified flakes
12-secondary flakes of Burlington chert	
1-tertiary flake of Burlington chert	
4-flakes of Burlington chert	
1-blocky flake of Deer Lick Creek chert	
1-secondary flake of Indiana hornstone	

Contents of Shovel Tests

1-secondary flake of Onondaga chert
 1-flake of Onondaga chert
 1-primary flake of quartzite
 1-unidentified primary flake
 1-unidentified tertiary flake

Contents of Excavation Units

<u>Test Unit # / Coordinates</u>	<u>Material Recovered</u>	<u>Unit Screened?</u>
1 / 85N, 69E	2-secondary flakes of Burlington chert 1-flake of Burlington chert 1-flake of Kettlepoint chert 3-unidentified secondary flakes 2-unidentified tertiary flakes 3-unidentified flakes	Yes
2 / 122N, 108E	1-flake of Burlington chert 1-flake of Indiana hornstone 1-primary flake of quartzite 1-unidentified chert core 1-unidentified decortication flake 1-unidentified secondary flake	Yes

TABLE 1, p. 2

	1-unidentified tertiary flake 4-unidentified flakes 1-prehistoric potsherd	
3 / 96N, 79E	3-unidentified secondary flakes	Yes
4 / 122N, 96E	-no cultural material	No
5 / 122N, 100E	-no cultural material	No
6 / 86N, 74E	-no cultural material	No
7 / 91N, 78E	1-secondary flake of Burlington chert	No
8 / 81N, 79E	-no cultural material	No
9 / 86N, 82E	-no cultural material	No
10 / 86N, 85E	-no cultural material	No
11 / 114N, 96E	-no cultural material	No
12 / 127N, 100E	1-primary flake of Deer Lick Creek chert 1-secondary flake of Purple chert 1-unidentified secondary flake	No
13 / 91N, 76E	1-unidentified secondary flake	No
14 / 77N, 79E	-no cultural material	No
15 / 129N, 100E	1-unidentified decortication flake 1-unidentified secondary flake	Yes
16 / 86N, 56E	3-unidentified primary flakes 5-unidentified secondary flakes 1-unidentified tertiary flakes 1-unidentified flakes	Yes
17 / 86N, 62E	-no cultural material	No
18 / 78N, 74E	-no cultural material	No
19 / 68N, 69E	-no cultural material	No
20 / 74N, 68E	1-secondary flake of Burlington chert 1-secondary flake of quartzite 1-unidentified primary flake 3-unidentified flakes	Yes
21 / 127N, 105E	1-base of a tool of Burlington chert	No
22 / 110N, 96E	-no cultural material	No
23 / 68N, 74E	-no cultural material	No

TABLE 1, p. 3

24 / 127N, 109E	-no cultural material	No
25 / 127N, 102E	-no cultural material	No
26 / 78N, 59E	1-unidentified decortication flake	No
27 / 78N, 54E	1-secondary flake of Bayport chert 1-secondary flake of Burlington chert 4-unidentified primary flakes 5-unidentified secondary flakes 8-unidentified flakes	Yes
28 / 96N, 85E	-no cultural material	No
29 / 96N, 84E	1-secondary flake of Burlington chert	No
30 / 127N, 97E	1-secondary flake of Bayport chert 1-flake of Burlington chert 1-unidentified tertiary flake 1-unidentified flake	Yes
31 / 68N, 58E	1-secondary flake of Bayport chert 1-tertiary flake of Bayport chert 1-secondary flake of Burlington chert 3-flakes of Burlington chert 1-flake of Flint Ridge chert 1-secondary flake of Indiana hornstone 2-unidentified primary flakes 7-unidentified secondary flakes 2-unidentified flakes	Yes
32 / 113N, 79E	-no cultural material	No
33 / 143N, 79E	-no cultural material	No
34 / 96N, 68E	-no cultural material	No
35 / 96N, 74E	-no cultural material	No
36 / 68N, 63E	2-unidentified flakes	No
37 / 68N, 54E	-no cultural material	No
38 / 133N, 84E	-no cultural material	No
39 / 133N, 89E	1-secondary flake of Burlington chert	No
40 / 121N, 79E	-no cultural material	No
41 / 116N, 79E	-no cultural material	No
42 / 106N, 79E	1-secondary flake of Burlington chert	No
43 / 127N, 107E	1-secondary flake of Bayport chert 3-unidentified secondary flakes 1-unidentified flake	Yes

TABLE 1, p. 4

44 / 106N, 76E	-no cultural material	No
45 / 106N, 82E	-no cultural material	No
46 / 135N, 83E	-no cultural material	No
47 / 122N, 73E	-no cultural material	No
48 / 122N, 69E	3-unidentified primary flakes 2-unidentified secondary flakes	Yes
49 / 122N, 85E	-no cultural material	No
50 / 122N, 89E	-no cultural material	No
51 / 122N, 93E	1-unidentified primary flake	No
52 / 122N, 79E	2-unidentified flakes	No
53 / 135N, 93E	1-secondary flake of Flint Ridge chert	No
54 / 135N, 98E	-no cultural material	No
55 / 135N, 103E	1-primary flake of Kettlepoint chert	No
56 / 135N, 113E	-no cultural material	No
57 / 135N, 108E	1-projectile point base of an unidentified chert 1-unidentified tertiary flakes 2-unidentified flakes	Yes
58 / 38S, 100E	1-Madison point 1-projectile point base of an unidentified material 3-secondary flakes of Bayport chert 2-tertiary flakes of Bayport chert 1-flake of Bayport chert 2-primary flakes of Burlington chert 3-secondary flakes of Burlington chert 4-flakes of Burlington chert 1-decortication flake of quartzite 2-secondary flakes of quartzite 1-secondary flake of Upper Mercer chert 1-unidentified decortication flake 3-unidentified primary flakes 3-unidentified secondary flakes 4-unidentified tertiary flakes 5-unidentified flakes	Yes
59 / 5N, 60E	1-secondary flake of Onondaga chert 2-unidentified flakes	Yes

TABLE 1, p. 5

60 / ON, 60E	1-primary flake of Attica chert 3-flakes of Burlington chert 1-tertiary flake of Flint Ridge chert 1-tertiary flake of Indiana hornstone 3-secondary flakes of Upper Mercer chert 1-unidentified flake	Yes
61 / 5N, 55E	1-unidentified secondary flake	No
62 / 5N, 51E	1-projectile point of an unknown chert 3-secondary flakes of Burlington chert 2-flakes of Burlington chert 1-tertiary flake of Onondaga chert 1-flake of Onondaga chert 1-unidentified decortication flake 5-unidentified primary flakes 5-unidentified secondary flakes 3-unidentified flakes 3-prehistoric potsherds	Yes
63 / 5N, 45E	1-primary flake of Bayport chert 2-tertiary flakes of Burlington chert 1-unidentified flake	No
64 / 38S, 107E	-no cultural material	No
65 / 38S, 111E	-no cultural material	No
66 / 12N, 59E	1-unidentified flake	No
67 / 12N, 55E	-no cultural material	No
68 / 38S, 118E	1-secondary flake of Burlington chert	No
69 / 49S, 100E	1-unidentified primary flake	No
70 / 106S, 0E	-no cultural material	No
71 / 104S, 0E	-no cultural material	No
72 / 12N, 51E	-no cultural material	No
73 / 12N, 45E	-no cultural material	No
74 / 12N, 40E	-no cultural material	No
75 / 12N, 35E	1-flake of Bayport chert 1-primary flake of Burlington chert 1-unidentified primary flake 6-unidentified secondary flakes 1-unidentified tertiary flake 5-unidentified flakes	Yes
76 / 12N, 30E	-no cultural material	No

TABLE 1, p. 6

77 / 102S, 0E	1-preform of an unidentified material 1-primary flake of Burlington chert 2-unidentified flakes	Yes
78 / 12N, 25E	-no cultural material	No
79 / 12N, 20E	1-unidentified flake	No
80 / 12N, 15E	1-tertiary flake of Bayport chert 4-unidentified secondary flake 1-unidentified tertiary flake 3-unidentified flakes	Yes
81 / 38S, 11W	-no cultural material	No
82 / 38S, 16W	-no cultural material	No
83 / 58S, 49W	1-primary flake of Bayport chert 1-secondary flake of Bayport chert 2-flakes of Bayport chert 3-unidentified flakes	Yes
84 / 58S, 54W	-no cultural material	No
85 / 58S, 58W	-no cultural material	No
86 / 52S, 49W	-no cultural material	No
87 / 49S, 49W	-no cultural material	No
88 / 58S, 44W	-no cultural material	No
89 / 58S, 39W	1-secondary flake of Burlington chert	No

TABLE 2: CULTURAL MATERIAL FROM THE CUPP 5 SITE.

Contents of the Surface Collection

1-projectile point of an unidentified chert	7-secondary flakes of quartzite
1-hammerstone	4-flakes of quartzite
1-secondary flake of Burlington chert	1-secondary flake of Upper Mercer chert
3-flakes of Burlington chert	6-unidentified primary flakes
1-secondary flake of Deer Lick Creek chert	8-unidentified flakes
1-secondary flake of Norwood chert	3-thick grit-tempered potsherds
2-primary flakes of quartzite	6-historic ceramic pieces

Contents of Excavation Units

<u>Test Unit # /</u> <u>Coordinates</u>	<u>Material Recovered</u>	<u>Unit Screened?</u>
1 / 30N, 25W	-no cultural material	Yes
2 / 30N, 4W	1-primary flake of quartzite	Yes
3 / 30N, 50W	1-flake of Burlington chert	Yes
4 / 25N, 50W	-no cultural material	No
5 / 20N, 50W	-no cultural material	No
6 / 15N, 50W	1-primary flake of quartzite	Yes
7 / 25N, 25W	-no cultural material	No
8 / 20N, 25W	-no cultural material	No
9 / 15N, 25W	-no cultural material	Yes
10 / 25N, 4W	1-unidentified secondary flake	No
11 / 20N, 4W	-no cultural material	No
12 / 10N, 50W	-no cultural material	No
13 / 5N, 50W	-no cultural material	No
14 / 10N, 25W	-no cultural material	No
15 / 5N, 25W	-no cultural material	No
16 / 15N, 4W	1-decortication flake of quartzite	Yes
17 / 5N, 4W	-no cultural material	No
18 / 10N, 4W	-no cultural material	No

TABLE 2, p. 2

19 / 0N, 25W	-no cultural material	Yes
20 / 5S, 25W	-no cultural material	No
21 / 10S, 25W	-no cultural material	No
22 / 0N, 50W	1-tool fragment (tip or distal portion) of an unidentified chert 1-unidentified flake	Yes
23 / 5S, 4W	-no cultural material	Yes
24 / 10.5S, 24.5W	1-unidentified secondary flake	No
25 / 15S, 25W	1-flake of Burlington chert	Yes
26 / 5S, 50W	-no cultural material	No
27 / 10S, 50W	-no cultural material	No
28 / 15S, 50W	1-flake of quartzite	Yes
29 / 10S; 4W	-no cultural material	No
30 / 20S, 50W	1-primary flake of quartzite	No
31 / 25S, 50W	-no cultural material	No
32 / 35S, 50W	1-unidentified secondary flake 1-unidentified flake	No
33 / 35S, 50W	-no cultural material	No
34 / 40S, 50W	-no cultural material	No
35 / 45S, 50W	-no cultural material	Yes
36 / 50S, 50W	-no cultural material	No
37 / 15S, 4W	-no cultural material	No
38 / 20S, 25W	-no cultural material	No
39 / 25S, 25W	-no cultural material	No
40 / 30S, 25W	1-secondary flake of Burlington chert 1-decortication flake of quartzite 1-flake of quartzite	Yes
41 / 20S, 4W	2-unidentified primary flakes	Yes
42 / 35S, 25W	-no cultural material	No
43 / 40S, 25W	-no cultural material	No

TABLE 2, p. 3

44 / 45S, 25W	1-decortication flake of quartzite 1-unidentified secondary flake	No
45 / 50S, 25W	-no cultural material	No
46 / 25S, 4W	-no cultural material	No
47 / 30S, 4W	-no cultural material	No
48 / 40S, 4W	1-secondary flake of quartzite	No
49 / 45S, 4W	-no cultural material	No
50 / 35S, 4W	2-tertiary flakes of Burlington chert 1-flake of Burlington chert 1-secondary flake of Norwood chert 1-flake of quartzite 1-unidentified flake	Yes
51 / 50S, 4W	5-secondary flakes of Burlington chert 1-tertiary flake of Burlington chert 1-flake of quartzite 2-unidentified secondary flakes 1-unidentified flake	Yes
52 / 44S, 13E	<u>Level 1</u> 2-unidentified tertiary flakes	Yes
	<u>Level 2</u> 1-tertiary flake of Burlington chert 1-unidentified tertiary flake	Yes
53 / 47S, 17E	<u>Level 1</u> 1-uniface of Bayport chert 1-tertiary flake of Indiana hornstone 1-flake of Indiana hornstone	Yes
	<u>Level 2</u> 1-core of Burlington chert 3-tertiary flakes of Burlington chert	Yes
	<u>Level 3</u> 1-secondary flake of Bayport chert 1-flake of Bayport chert 1-unidentified core 1-unidentified primary flake 1-unidentified secondary flake	Yes
	<u>Level 4</u> -no cultural material	Yes
54 / 39S, 13E	<u>Level 1</u> 1-primary flake of Burlington chert 1-flake of Burlington chert 1-unidentified tertiary flake	Yes
	<u>Level 2</u> -no cultural material	Yes

TABLE 2, p. 4

55 / 10S, 22W	-no cultural material	No
56 / 10S, 19W	-no cultural material	No
57 / 10S, 28W	-no cultural material	No
58 / 10S, 31W	-no cultural material	No
59 / 10S, 34W	1-tertiary flake of Burlington chert	Yes
60 / 13S, 25W	-no cultural material	No
61 / 7S, 25W	-no cultural material	No
62 / 7S, 22W	-no cultural material	No
63 / 15S, 30W	-no cultural material	No
64 / 13S, 22W	-no cultural material	No
65 / 13S, 19W	-no cultural material	No
66 / 7S, 29W	-no cultural material	No
67 / 7S, 32W	-no cultural material	No
68 / 15N, 6W	-no cultural material	No
69 / 15N, 8W	-no cultural material	No
70 / 17S, 20W	1-bifacially worked flake of Kettlepoint chert 1-unidentified secondary flake	Yes
71 / 0N, 29W	-no cultural material	No
72 / 0N, 32W	-no cultural material	Yes
73 / 12N, 6W	-no cultural material	No
74 / 17S, 23W	-no cultural material	No
75 / 15N, 11W	-no cultural material	No
76 / 10S, 16W	1-unidentified secondary flake 1-unidentified flake	Yes
77 / 55S, 4W	-no prehistoric material, but historic ceramics and one button were found	No
78 / 60S, 4W	-no cultural material	No
79 / 65S, 4W	-historic ceramics, only	Yes

TABLE 2, p. 5

80 / 70S, 4W	-historic ceramic and glass fragments	No
81 / 7S, 4W	-historic ceramics, only	No
82 / 80S, 4W	-no cultural material	Yes
83 / 85S, 4W	-historic ceramics, only	No
84 / 90S, 4W	-historic ceramics, only	No
85 / 50N, 50W	-no cultural material	Yes
86 / 45N, 25W	2-unidentified primary flakes 1-unidentified tertiary flake	Yes
87 / 40N, 25W	3-unidentified flakes	Yes
88 / 40N, 19W	1-quartzite decortication flake	Yes
89 / 30N, 20W	-no cultural material	No
90 / 30N, 15W	-no cultural material	No
91 / 30N, 10W	-no cultural material	No
92 / 40N, 15W	-no cultural material	No
93 / 40N, 10W	-no cultural material	No
94 / 25N, 15W	1-primary flake of quartzite 2-unidentified secondary flakes 2-unidentified flakes	Yes
95 / 40N, 4W	-no cultural material	No
96 / 20N, 10W	-no cultural material	No
97 / 0N, 5E	<u>Level 1</u> 1-unidentified flake	Yes
	<u>Level 2</u> 2-potsherds	Yes
	<u>Level 3</u> -no cultural material	Yes
98 / 25N, 20W	-no cultural material	No
99 / 161N, 15W	-no cultural material	Yes
100 / 141N, 4W	-no cultural material	Yes
101 / 0N, 10W	2-flakes of quartzite 2-unidentified primary flakes -historic ceramics	Yes

TABLE 2, p. 6

102 / ON, 7W	1-tertiary flake of Burlington chert 3-unidentified tertiary flakes	No
103 / ON, 13W	-no cultural material	No
104 / ON, 16W	-no cultural material	Yes
105 / ON, 19W	-no cultural material	No
106 / ON, 10E	<u>Level 1</u> 1-unidentified flake	Yes
	<u>Level 2</u> 1-uniface fabricated on an unknown chert	Yes
	<u>Level 3</u> 1-flake of Cobden chert from southern Illinois 1-flake of Deer Lick Creek chert	Yes
	<u>Level 4</u> -no cultural material	Yes
107 / ON, 22W	-no cultural material	No
108 / 3N, 10E	<u>Level 1</u> -no cultural material	Yes
	<u>Level 2</u> -no cultural material	Yes
	<u>Level 3</u> 1-primary flake of Burlington chert 2-flakes of Burlington chert 1-unidentified secondary flake -glass fragment	Yes
	<u>Level 4</u> -no cultural material	Yes
	<u>Northwest Extension</u> 1-unidentified decortication flake 1-unidentified primary flake	Yes
109 / 3S, 7W	-no cultural material	No
110 / 3S, 10W	1-quartzite decortication flake	Yes
111 / 3S, 13W	-no cultural material	No
112 / 3S, 16W	-no cultural material	No
113 / 3S, 19W	-no cultural material	No
114 / 3S, 22W	1-projectile point of Burlington chert	Yes
	1-primary flake of quartzite	
	1-secondary flake of quartzite	
	1-tertiary flake of quartzite	

TABLE 2, p. 7

115 / 3S, 25W	-no cultural material	No
116 / 17N, 2E	<u>Level 1</u> -no cultural material	Yes
	<u>Level 2</u> 1-Flake of Upper Mercer chert	Yes
	<u>Level 3</u> 1-Flake of Upper Mercer chert	Yes
	<u>Level 4</u> -no cultural material	Yes
117 / 17N, 10E	-no cultural material	No
118 / 22N, 9E	-no cultural material	No
119 / 7N, 5E	<u>Level 1</u> -historic glass, only	Yes
	<u>Level 2</u> -no cultural material	Yes
	<u>Level 3</u> -no cultural material	Yes
120 / 12N, 4E	-no cultural material	No
121 / 20N, 13E	<u>Level 1</u> -no cultural material	Yes
	<u>Level 2</u> -no cultural material	Yes
	<u>Level 3</u> -no cultural material	Yes
122 / 6S, 7W	-no cultural material	No
123 / 6S, 10W	-no cultural material	No
124 / 6S, 13W	1-unidentified flake	Yes
125 / 9S, 7W	-historic glass, only	Yes
126 / 6S, 16W	-no cultural material	No
127 / 6S, 19W	-no cultural material	No
128 / 9S, 10W	-no cultural material	No
129 / 9S, 13W	-no cultural material	No
130 / 12S, 7W	-no cultural material	No
131 / 12S, 10W	2-unidentified secondary flakes	Yes

TABLE 2, p. 8

132 / 12S, 13W	1-unidentified primary flake	No
133 / 12S, 16W	-no cultural material	No
134 / 16S, 7W	-historic glass, only	No
135 / 15S, 10E	-no cultural material	No
136 / 15S, 13W	-no cultural material	Yes
137 / 15S, 16W	-no cultural material	No
138 / 15S, 19W	-no cultural material	No
