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101-Phase I Archaeological Assessment of Two Parcels Totaling 375 Acres in the Gourdneck State Game Area, Sections 19 and 20, Portage Township, Kalamazoo County, Michigan

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WESTERN MICHIGAN UNIVERSITY

REPORT OF INVESTIGATIONS NO. 101

1992

PHASE I ARCHAEOLOGICAL ASSESSMENT OF TWO PARCELS TOTALING 375 ACRES IN THE GOURDNECK STATE GAME AREA, SECTIONS 19 AND 20, PORTAGE TOWNSHIP, KALAMAZOO COUNTY, MICHIGAN

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INTRODUCTION:

Pursuant to the establishment of a cooperative agreement between the Michigan Department of Natural Resources and Western Michigan University (with the project period beginning 24 Jan 92 and extending through 30 Apr 92) authorizing a Phase I archaeological study of two parcels aggregating 375 acres of the Gourdneck State Game Area, Portage Township, Kalamazoo County, Michigan, archaeologists in the Department of Anthropology initiated a literature, documents, and site file search and between 2 Mar-10 Apr conducted on-site evaluation of the project area in order to determine whether any potentially significant resources were present. There follows a report of our program of research, together with recommendations based upon our findings.

PROJECT PERSONNEL:

Principal Investigator - Dr. William M. Cremin, Professor of Anthropology, Western Michigan University

Project Supervisor - Mr. Timothy D. Knapp, M.A. in Anthropology, WMU

Field Assistants - Mr. Daniel B. Goatley, M.A. Candidate in Anthropology, WMU

- Mr. Lars Svendsen, B.A. in Anthropology, WMU

- Mr. Greg Brubaker, B.A. in Anthropology, WMU

DESCRIPTION OF THE PROJECT AREA:

The research area of this study consists of two parcels of land totaling 375 acres (152 ha) in Sections 19 and 20 of Portage Township, Kalamazoo County, Michigan. More specifically, the eastern parcel (Area A) borders Hampton Lake on the east and extends from Portage Creek in a northerly direction to Centre Avenue, including most of the western half of Section 20 within its limits. The western parcel (Area B) lies northwest of the lake and includes within its boundaries the small stream and adjacent marshlands that feed this standing body of water. It is bounded on the west by the access road paralleling US-131 and on the north by Centre Avenue. This parcel includes most of the central portion of the W 1/2 and the SW 1/4 of the NE 1/4 and NW 1/4 of the SE 1/4 of Section 19 (Figure 1).

The study area is notable for its undulating topography. The uplands overlook small pockets of wetland and the complex of stream-lake-marsh which comprises the headwaters of Portage Creek, a major tributary of the Kalamazoo River. Formerly, the Upper Portage Creek drainage supported what Hodler et al. (1981) call "undifferentiated wetland", areas which are today shown on topographic maps as wetlands, but for which Government Land Office survey data are insufficient to precisely categorize. In all probability, however, elements of cat-tail and bulrush marshes, open bog, and wetter sedge meadows, together with thickets of dogwood, willow, and/or alder and patches of shrub-carr, occupied portions of the study area at the time of settlement. Uplands formerly supported oak savanna, with white oak dominating and small numbers of yellow oak, pignut hickory, shagbark hickory, black oak and bur oak occurring throughout

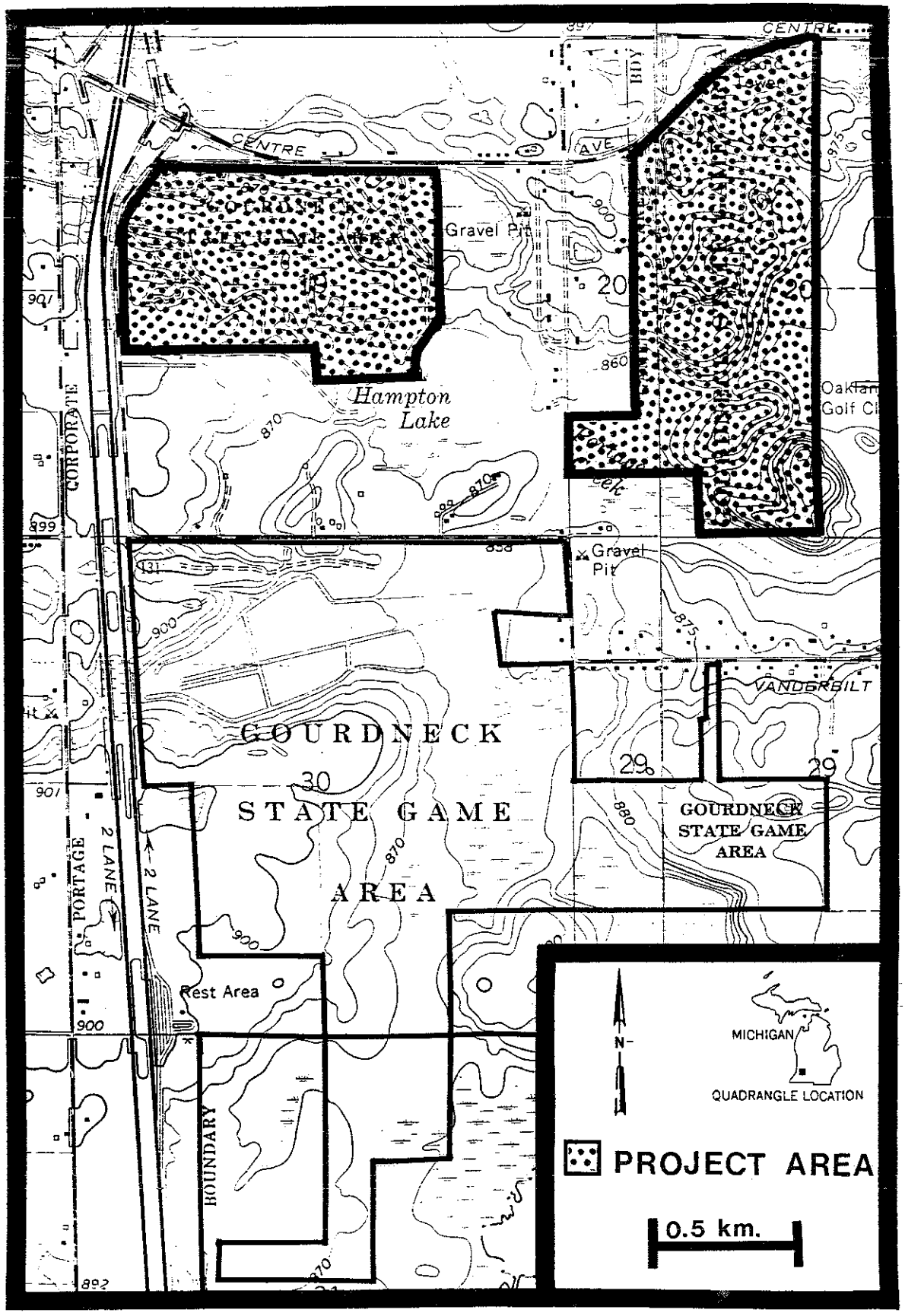

Fig. 1: Gourdneck State Game Area Project.

(Hodler et al. 1981).

Today, the project area is further characterized by a number of roads and parking lots permitting hunters to access this portion of the Gourdneck State Game Area on a seasonal basis. Vehicular traffic has rendered roads and parking areas free of vegetation for the most part, but elsewhere surface visibility seldom exceeds 2-3%. Other aspects of the project area description are incorporated into the discussion of survey procedures below.

ARCHAEOLOGICAL RESEARCH AND RESOURCES IN THE PROJECT:

A very thorough review of the literature and documents and examination of the site files maintained by the Bureau of History, Department of State (Barbara Mead, personal communication) and those files here in our department strongly suggest that the area under consideration has never received prior archaeological attention. Nor has a single archaeological site been recorded for the project or the immediate area around it. However, while some standard references (Durant 1880; Hinsdale 1931) stand silent, it is perhaps noteworthy that Garland (Baldwin-Garland 1973), who inventoried prehistoric sites in the Kalamazoo River Valley and conducted numerous collector interviews while so doing, elected to designate the Portage Creek drainage as an "archaeologically sensitive zone" on the basis of information available to her two decades ago. More recently, Cremin and De Fant (1987) have reported a single reference to a possible garden bed(s) on Dry Prairie in northwest Portage Township. This native grassland lies a short distance to the north of the study area. However, they (1987:133) question whether this garden bed site is properly associated with

this prairie, opting rather to identify it with 20KZ49, a well known garden bed(s) on the farm of J.T. Cobb in Section 7 of Schoolcraft Township near the northeast corner of Prairie Ronde.

SURVEY FIELD PROCEDURES:

The archaeological survey work was conducted between 2 Mar-10 Apr 92 by a crew of experienced student archaeologists under the direct supervision of Timothy Knapp, M.A. The Principal Investigator stood by on an "as needed" basis, visiting the study area only once during the period of fieldwork, but "debriefing" the crew on an almost daily basis.

During the course of fieldwork, two standard data recovery procedures aimed at maximizing the crew's ability to locate archaeological resources were employed. These included shovel testing the two parcels at regular intervals across each landform and performing surface reconnaissance or visual inspection of the ground surface wherever vegetation did not conceal it. Due to the nature of the vegetative cover, the crew only occasionally encountered bare patches of ground. The few locations affording surface visibility included two-track roads, dirt parking areas, trails, and tree falls. Whenever any of these opportunities presented themselves, the crew examined them very intensively.

Due to the paucity of visible ground, the primary survey procedure employed was systematic and intensive shovel testing. This strategy involved excavation of holes approximately 30 cm in diameter extending to a depth sufficient to reach the underlying subsoil. Sediments from each shovel test were carefully examined for any evidence of cultural material and/or soil staining. Since the vast majority of soils occurring across both parcels were of a sandy

nature, our inspection of the sediments was greatly facilitated.

Typically, a soil profile exposed through shovel testing revealed an upper horizon of organically rich humus several centimeters thick. This zone overlay a dark brown to dark yellowish brown loamy sand extending to a depth of between 15-40 cm. Below this zone surveyors observed a light yellowish brown sand extending to an undetermined depth below the surface. In areas currently supporting planted pines, the depth at which the subsoil was encountered was near the shallower end of the range presented above. Areas supporting oak forest tended toward the deeper end.

To maximize potential recovery, several different strategies of shovel test spacing were employed. Determinations of spacing were made on the basis of the crew's knowledge of typical site locations in southwest Michigan. The basic strategy was to test both parcels with shovel tests being spaced at intervals of 20 m along parallel transects spaced 20 m apart, resulting in a 20X20 m grid covering areas so tested. While this strategy alone would have been sufficient to adequately evaluate the study area, in order to enhance our opportunities for locating sites in areas to which we assigned higher probability of their occurrence, the intervals between transects and shovel tests were reduced. The factors considered in determining which interval to use included distance from water, distance from wetlands, landform, slope, and soil drainage. Areas deemed moderately likely to have archaeological sites were evaluated employing a 15 m interval between transects and shovel tests, while those areas affording the highest probability were tested with the interval reduced to 10 m.

Several areas within the limits of each parcel were deemed to be unsuitable for human habitation and were not tested. These

included marshes, poorly drained forested lowlands, and steeply sloped upland depressions. All areas not shovel tested, with the exception of marshes, were at the very least walked over in the course of continuing lines of survey across adjacent areas.

Using the field procedures outlined above, both parcels of land comprising the study area were very thoroughly examined by surveyors.

Eastern Parcel (Area A):

The present vegetation here is characterized by an extensive stand of planted pines in the northwest quarter of the parcel. The northeast portion is marked by relatively open areas with few trees, mostly scattered oaks separating areas featuring denser stands of these same hardwood species. The southern portion of the parcel supports a relatively closed canopy again dominated by trees of this genus.

The majority of the land in very uneven uplands marked by numerous depressions (Figure 2). The northern two-thirds of this parcel, an elevated upland which drops in elevation as one proceeds southward, is located well away from any source of water. This area was shovel tested using a spacing of 20 m. Here, there are also several depressions characterized by steeply sloping margins and poorly drained centers. These depressions were not tested.

In the southern one-third of this parcel two large landforms rise above the surrounding marsh and wet lowlands. The northernmost of these landforms is a rather extensive area which, although forested, is very poorly drained Houghton muck (USDA 1979). This area was walked but not shovel tested. The southernmost landform

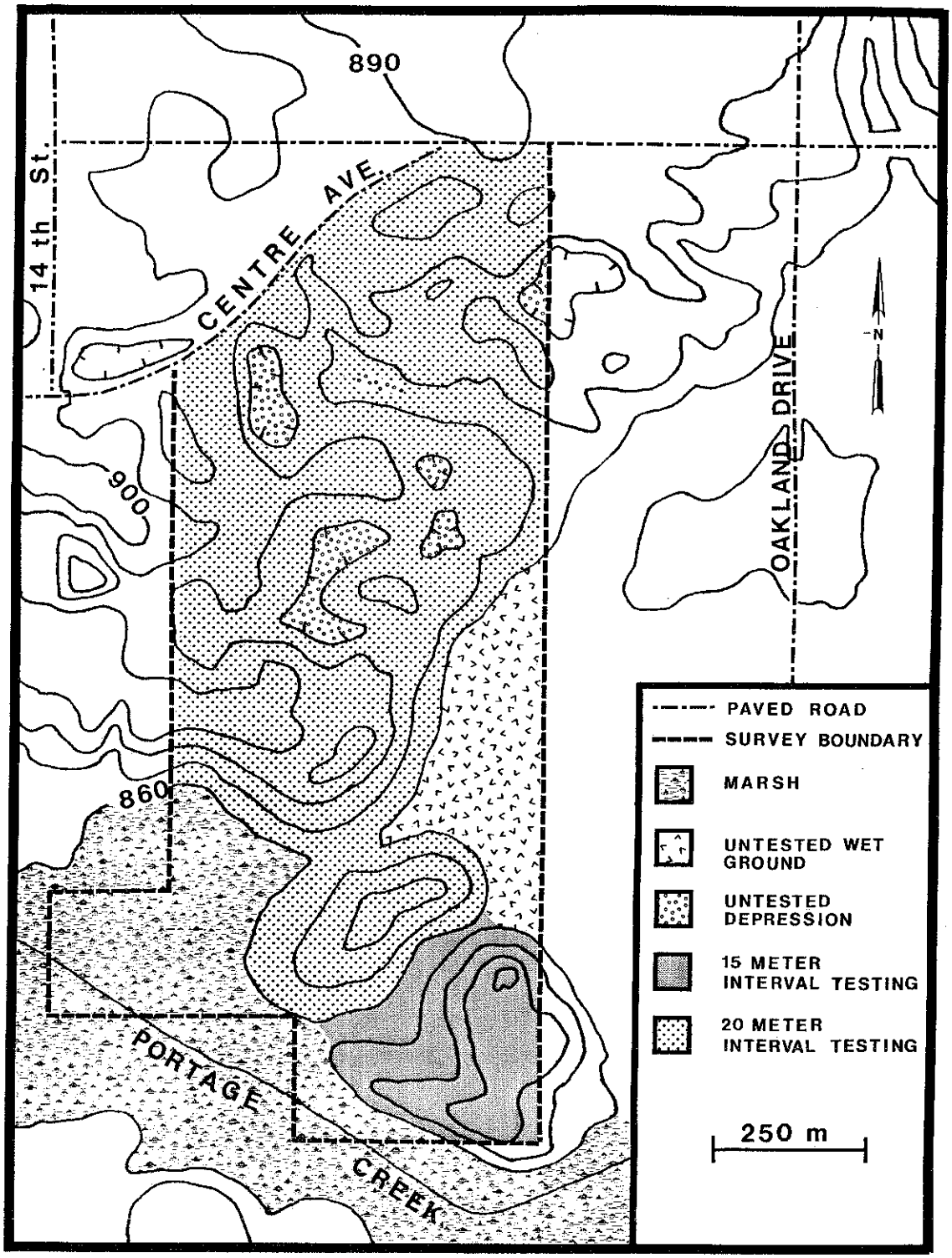

Fig. 2: Parcel A, Gourdneck State Game Area Project.

in the eastern parcel rises dramatically above Portage Creek to the south. Because we felt it moderately likely that an archaeological site(s) might occur here, 15 m spacing between transects and shovel tests was employed to evaluate this landform.

To both the west and south of these landforms is an extensive marsh paralleling the course of the creek. Although portions of the marsh fell within the limits of the survey universe, the crew was unable to evaluate it.

Despite intensive shovel testing of the eastern parcel, no observations of cultural material of any sort were made by the field crew.

Western Parcel (Area B):

Dominating the current vegetative cover in this area of the MDNR project are two rather extensive marshes. The first is in the northeast corner of the parcel and presently supports a significant body of standing water. The more substantial marsh is that surrounding Hampton Lake and the small feeder stream that flows into it from the northwest. The land to the north of this marsh supports large stands of planted pines along both the eastern and northern margins of the parcel. The eastern area is dominated by relatively closed oak forest.

The land to the south of the marsh and the creek which flows through it features two rather large open areas relatively devoid of trees. The first of these is immediately south of the marsh and east of Angling Road. It currently serves as a shotgun range. The other open area is in the southwest corner of the parcel. Between the two open areas south of the marsh, and covering most of the western portion of the parcel, is a large stand of planted

pines. Finally, the eastern portion of the parcel lying south of the marsh supports relatively closed oak forest.

Initial field inspection led the crew to anticipate that this parcel held the greater potential of the two for containing archaeological resources. And for this reason, the entire parcel was surveyed using intervals of either 10 m or 15 m between transects and shovel tests along the lines of survey (Figure 3). On either side of the creek and surrounding Hampton Lake is a well developed marsh community the margins of which we deemed appropriate for the use of the 10 m interval. North of the marsh near where the small creek flows in a southeasterly direction toward the lake, testing by the 10 m interval produced the only site (20KZ276) recorded during the project. This discovery will be presented more fully below.

The majority of the land flanking the marsh on the south was examined by means of 15 m spacing, with a single landform similar in all respects to that producing 20KZ276 receiving more intensive evaluation through application of the 10 m interval. Be that as it may, surveyors observed not a shred of evidence for the presence of an archaeological site in this instance.

In aggregate, a total of 2,718 shovel tests were placed in systematic fashion across the two parcels comprising our survey universe. Our initial testing in the area of the recorded site produced only three positive shovel tests, containing a piece of fire-cracked rock, one chert flake, and one battered cobble. Nonetheless, we elected to return to this location prior to terminating fieldwork and perform some additional shovel testing about the original findspots. This more intensive examination of

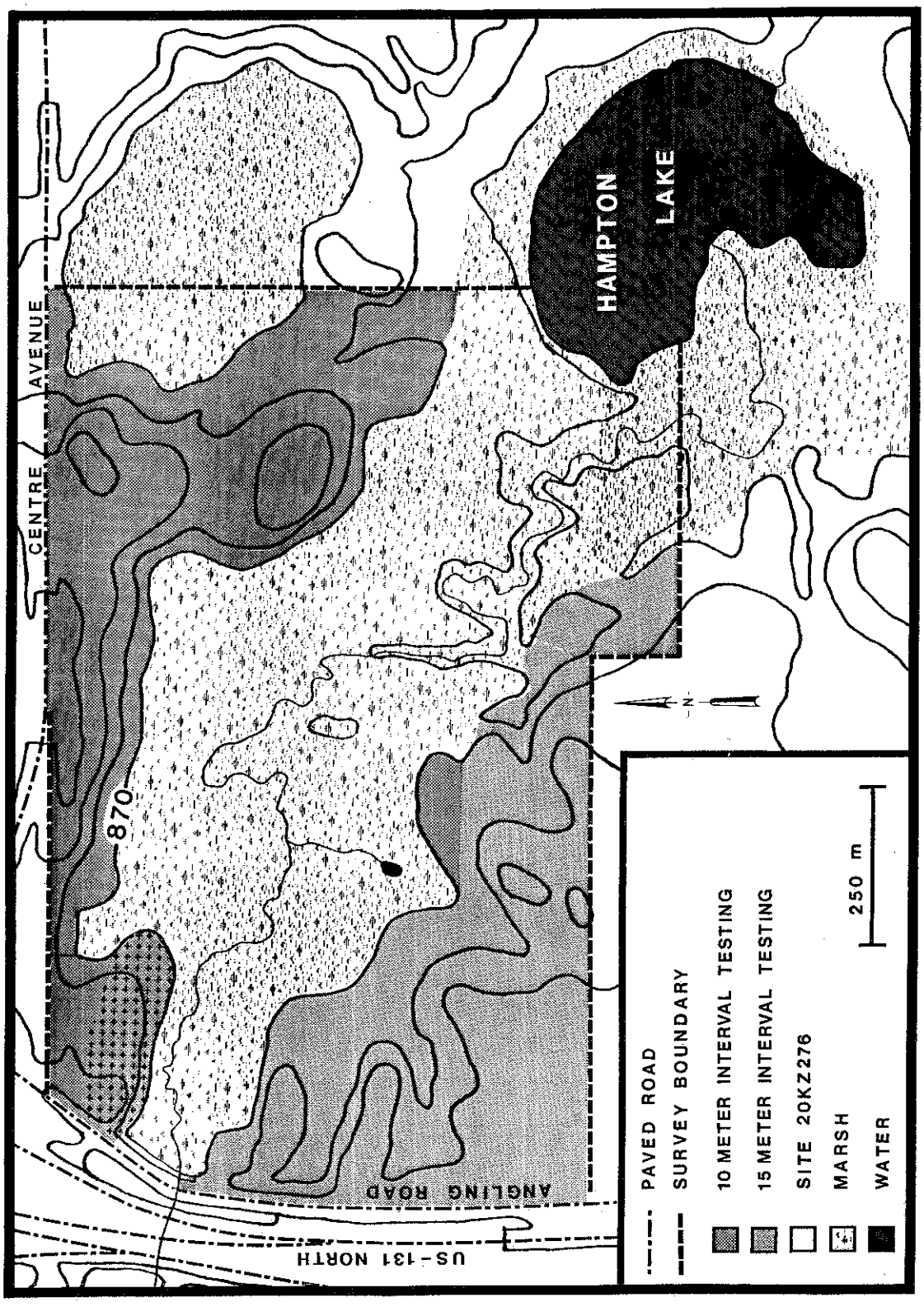

Fig. 3: Parcel B, Gourdneck State Game Area Project.

the site area, by means of 168 additional shovel tests, resulted in the recovery of information considerably strengthening the recommendations provided at the conclusion of this report.

RESULTS OF THE PROGRAM OF PHASE I RESEARCH:

During the course of our on-site evaluation of the MDNR project area, surveyors did record a single archaeological site. The Gourdneck State Game Area site (20KZ276) lies in the NW 1/4, NW 1/4, SE 1/4, NW 1/4 and NE 1/4, NE 1/4, SW 1/4, NW 1/4 of Section 19, Portage Township (T3S R11W). It is bounded on the west by a former dirt parking lot just off Angling Road and immediately north of the marsh. The southern limits are formed by the 870 ft (261 m) contour which marks the edge of a terrace about 2 m above the marsh. The eastern boundary is marked by a small draw that rises out of the marsh and forms the eastern edge of the terrace on which the site lies. The northern limits, while difficult to define at this time, may be precisely defined with additional testing of the site. For the moment, it is perhaps noteworthy that a positive shovel test occurs some 60 m from the edge of the marsh in the western area of the debris scatter. In the eastern area of the site, no positive shovel tests occur north of an east-west running trail about 45 m from the marsh edge. The site is shown in Figure 3.

The former parking lot on the western edge of the site did afford surveyors with excellent surface visibility. Although the debris observed here included much recent trash, chert flakes were also recovered. Skirting the marsh along the southern margin of the site is a small trail that also afforded some surface visibility. This trail and the trail which appears to define the limits of the

site in the eastern area of the debris scatter also produced a few prehistoric items.

Of the 168 shovel tests located in the area of 20KZ276, a total of 16 yielded cultural material. This number, while seemingly low, is actually quite impressive. A major reason for returning to this area of the project prior to terminating fieldwork was to seek to delineate site boundaries and estimate site area. Therefore, a goodly number of these shovel tests certainly fell beyond the limits of the site. Another reason to be encouraged is the impressive quantity and kinds of cultural items retrieved from shovel tests.

On the basis of the distribution of cultural debris across the area that was intensively shovel tested following initial identification of the site, it has been tentatively divided into two portions or areas. While it is entirely possible that we are dealing with two separate site loci, we prefer to record a single site at this time. The eastern portion of the site extends for a distance of at least 60 m along the edge of the marsh and some 45 m back from it. Between this area and that defined as the western portion of the site, the ground dips a little, and for a distance of 60 m we did not recover a single cultural item from shovel tests. The area to the west, bound on the north by the parking lot and on the south by the marsh, shows debris occurring over an area 60 m north-south by 50 m east-west. Of the two portions thus delineated, the eastern is by far the more productive of the two.

Analysis of Cultural Items from 20KZ276:

The Phase I testing of the Gourdneck State Game Area site has resulted in the recovery of a total of four chipped stone tools,

two groundstone implements, and 11 pieces of lithic debitage. Each artifact was given a laboratory number consisting of a set of letters and numbers. The letters (A or B) are associated with the area of the site in which an object was found. The eastern portion is designated by the letter A; the western portion by the letter B. The numbers given to each item are used for identification purposes. The initials "Rd" have been used if an item was found on trails, while "TA" refers to objects from the parking lot or turnaround in Area B.

Point Base:

Artifact A-11 represents a projectile point base made of local Gray-Yellow/White chert. The point is side-notched, straight-based, and exhibits basal thinning, but no basal grinding. Basal width is 2.2 cm, with a tang width of 1.8 cm. Similarities to several types of Late Archaic, Early Woodland, and Late Woodland styles can be noted; however, the fragmentary nature of this specimen precludes assignment to a recognized type.

Biface:

Artifact A-10 represents a large bifacial tool made of argillite. The maximum dimensions are 10.8 cm long, 7.5 cm wide, and 1.4 cm thick, with a weight of 152.8 g. All edges demonstrate flake removal. Only one side of the piece exhibits flake removal on the proximal end, strongly suggestive of hafting. Furthermore, the proximal end of this tool shows indentations on both margins, one of which appears to have been ground, as additional evidence of hafting. The distal end displays some use-wear, resulting in rounding off of the edge. This is not indicative of heavy battering, but rather repeated use. In this regard, the nature of the raw material would have precluded

use in heavy work such as woodworking.

Retouch Flakes:

These are pieces of debitage that exhibit flake scars along their working edge(s). They are presumed to have been removed in order to make a sharper edge or to alter the degree of edge angle. Two flakes from Area B show evidence of retouching.

Artifact B-1 is a probable tool fragment of Burlington chert that may have been subjected to heat treatment. It is unifacial and appears broken at one end and partially broken on the other. A single edge is bifacially retouched without regularity, while another is unifacially worked. The length of this item is 1.5 cm, width is 1.5 cm, and thickness is 0.3 cm, with a weight of 0.9 g.

Artifact B-3 is made of Bayport chert and may represent a fragment of a larger tool. The piece is unifacial both on the body and a single edge which exhibits retouch. The length is 2.1 cm, width is 1.4 cm, and thickness 0.3 cm, with a weight of 1.0 g. Parenthetically, a second utilized edge may be visible on a projection which does not appear to have been modified in order to obtain its shape. Thus, it is possible that this tool served as a graver or represents a fragmented midsection of a tool.

Groundstone Tools:

Artifact A-1 represents a large piece weighing 1026.2 g and exhibiting numerous signs of utilization. Two flat sides of the stone show two different types of use. One is smoothly ground with two areas of pitting, while the second exhibits heavier pitting and battering. One rounded side displays heavy battering that resulted in a fracture and removal of some material.

Artifact A-14 is a groundstone fragment weighing 286.0 g

and exhibiting battering on one end and heavy pitting on one side. It is unclear whether the battering and pitting can be attributed to human use. The crumbly nature of this material may have contributed to these observed attributes. However, it is noteworthy that this object was retrieved from a shovel test, and surveyors did not as a rule find such large cobbles in the ground while conducting the study.

Fire-cracked Rock:

Ten pieces of fractured rock weighing a total of 444.4 g were recovered from shovel tests. All but one of these were found in Area A, and each specimen features the distinctive cracks that typically result from the heating of stones in the context of hearths and firepits.

Lithic Debitage:

Eleven flakes representing evidence of lithic reduction of raw material in the process of manufacturing chipped stone tools were recovered during the Phase I evaluation of 20KZ276. These flakes have been assigned to specific reduction stages on the basis of the following criteria (Clark 1990):

> Decortication flakes are those which retain unmodified rind on more than 30% of the dorsal surface. Flake platforms are usually unprepared. These flakes represent the initial reduction of a cobble or pebble core.
>
> Primary flakes may have up to 30% unmodified rind or cortex on the dorsal surface. Dorsal ridges are pronounced and longitudinal, and most platforms are unprepared. Primary flakes are regarded as a product of initial reduction.
>
> Secondary flakes are characterized by a lack of rind or cortex, although small amounts of unmodified surface may be present on the specimen. The flake scars on the dorsal surface are more complex than on primary debitage. Multiple scars from previous flake detachment are present in the form of both longitudinal and oblique ridges which tend to be less pronounced than on primary flakes. Striking platforms include the entire range of possible conditions. Platform preparation by faceting

and grinding is quite common on such specimens.

Tertiary flakes include debitage exhibiting flat dorsal surfaces. Flake scars are numerous, with flat intervening ridges. Platform preparation is most common in this class.

Fragments are those badly broken flakes which cannot be confidently assigned to any other class of debitage. They tend to be smaller in size and for the most part represent fragments of secondary and tertiary debitage.

Blocks include those items which are angular and lack discernable orientation. There are no platforms or concentric rings of percussion indicative of normal flaking. Thus, blocks are not true flakes. They are an inevitable byproduct of testing and initial reduction caused by the fracturing of stone along frost-planes or other internal flaws in the material. Items of chert that exhibit thermal crazing are not included in this class since they are not produced during the reduction sequence.

The analysis of flakes from the Phase I testing are summarized in Table 1. Included with the stage of reduction for each specimen is the raw material from which it derives. Three exotic raw materials and four local types are in evidence. Exotic materials are those defined as coming from outside the southwest Michigan region. These are not necessarily the result of direct procurement, but rather may reach our area as a result of prehistoric patterns of exchange or trade. The local materials can all be found in local tills and/or streambed deposits and are probably accessed through direct procurement.

Debitage Recovered from 20KZ276

Area/No.	Reduction Stage	Raw Material	Gram Weight
A-Rd 1	decortication	Bayport	4.0
A-Rd 2	primary	Purple	1.4
B-Ta 1	secondary	Gray-Yellow/White	0.5
A-2	secondary	Gray-Yellow/White	0.6
B-Ta 2	secondary	Gray-Yellow/White	0.7
B-Ta 3	secondary	Burlington	0.7
A-2	secondary	Deerlick Creek	1.3
A-Rd 3	tertiary	Gray-Yellow/White	0.1
B-19	tertiary	local pebble chert	0.8
B-5	tertiary	Gray-Yellow/White	0.3
A-4	tertiary	Wyandotte	0.1

Raw Materials:

Each artifact was subjected to identification of the raw material by comparison with synoptic type-set material in the Archaeological Laboratory at WMU. There follows a description of each raw material type represented by specimens in the site assemblage.

> Argillite, unlike chert, is composed largely of nonsilicate materials. Therefore it is neither as hard nor does it possess the flaking qualities of chert (Campbell 1986; Peske 1963). Campbell (1986:24) describes this material as typically greenish to grayish, with a texture ranging from fairly fine to medium. Peske (1963) notes that it is commonly found on sites in southeast Michigan, but is relatively rare in our area. He also associates the use of this material with the period from 7000-4000 B.C. However, Campbell (1983) notes the use of argillite, including one Madison point, during the Upper Mississippian occupation of the Elam site in the Lower Kalamazoo Valley.
>
> Bayport chert is derived from the formation of the same name in an arc across the Saginaw Bay region. This formation outcrops again to the southwest of Bellevue and further west near Grand Rapids. It is characterized by limestone as well as chert nodules. Aboriginal quarrying of this material is usually associated with the Saginaw Bay area. Concentric banding is characteristic of Bayport; these bands are usually a centimeter or less in width. It is often mottled and contains many specks of both darker and lighter colors. This chert ranges from light gray to very dark gray, with the quality seeming to increase as the material becomes darker. Cortex is a creamy white and is of a lower quality chalky material.
>
> Burlington chert is found in the Middle Mississippian age formation of the same name, with major identified source areas occurring in west-central Illinois, southeast Iowa, and northeast Missouri. This material is found in a range of lighter colors, most commonly white to light gray, with a dull to high luster. Some specimens are irregularly mottled. Translucency ranges between one and 3 mm in thichness. The texture is fine to medium, and it exhibits a highly variable fossil content. Burlington is similar to many materials found in glacial tills and along Lake Michigan shorelines, but unlike these local materials it possesses a much higher degree of translucency and luster. Some difficulty occurs when seeking to differentiate local materials from Burlington on a macroscopic level.
>
> Gray-Yellow/White cherts both have a distribution throughout southwest Michigan where they are common constitutents of most glacial till deposits, outwashes, and along the lake shoreline.

Variations of these two cherts overlap to an extent that clear-cut separation is rather difficult; thus these two types are commonly combined (Goatley 1992). Yellow/White is an opaque material that has a dull to medium luster, with a medium grained texture. It is primarily white in color, with some patches, faint banding or streaks of strong brown to brownish-yellow to light gray of varying densities. Cortex is chalky or, in the case of water washed cobbles, exhibits a thin brown surficial layer. Gray/White is medium to fine grained, with a dull to satiny luster, and typically lacks fossil inclusions. The color is predominantly white, with irregular mottling of light gray to gray.

Purple chert is a glacially deposited material, ranging in color from purple and violet to a mottled pale red and light gray to a sandy yellow brown to pale brown. Most of the pieces in our synoptic set are purple with intermittent gray coloration. Textures range from coarse to fine grained, with occasional veins of light blue and white quartz. A chalky cortex similar to other southwest Michigan glacial cherts is present on many specimens; however, most have only a thin patina. Clark (1990: 32) reports Purple chert as the major type in tills occurring near Cassopolis in Cass County, Michigan. Samples of this material have also been obtained from tills in Allegan, Calhoun, Kalamazoo, and Oceana counties as well (Campbell 1986; 1988).

Wyandotte (Cobden) chert is macroscopically homogeneous and appears blue-gray in coloration, with a variety of shades present in concentric bands (especially lighter grays near the core of nodules). This fine grained chert has a satiny to glossy luster and typically exhibits a fairly large concentric banding in a "bullseye" pattern. Wyandotte originates in Harrison and Crawford counties, Indiana and Meade, Hardin, and Breckenridge counties, Kentucky. In these source areas the chert occurs in a single, well-defined stratigraphic interval referred to as the Wyandotte Chert Zone in the upper part of the Fredonia Member of the Ste. Genevieve Limestone Formation (Bassett and Powell 1984).

Ceramics:

Two body sherds were recovered during the Phase I examination of 20KZ276 in shovel tests located approximately 25 m apart along the edge of the marsh in Area A. Both are grit-tempered with an orange paste and exhibit exterior cordmarking as the only observed decoration. Artifact A-12 has a smooth interior and is 0.5 cm thick, while A-6 is so fragmentary as to render interior vessel treatment and wall thickness unclear. These sherds are strongly

suggestive of a Late Woodland temporal placement for the site.

RECOMMENDATIONS:

Having performed a systematic and intensive evaluation of the MDOT project area, we come away with the impression that for the most part there are absolutely no cultural resources to be impacted as a result of the proposed change in land use. The only exception to this is the area delineated as the Goundneck State Game Area site (20KZ276) in the northwest corner of the study area. Here, on the small creek flowing toward Hampton Lake from the northwest, the edge of the marsh flanking the course of the stream evidences prehistoric occupation probably dating to the Late Woodland period.

While we have rather intensively shovel tested the area(s) of cultural debris scatter, this sort of examination leaves much to be desired. We have not been able to determine precise limits of the scatter, but the kinds and quantity of cultural debris retrieved from shovel tests and several areas affording some surface visibility, the site's proximity to the stream, the marsh through which it flows, and the nearby lake, all argue for some additional study of this site to ascertain its potential significance. Because the soil profiles observed in shovel tests along the edge of the terrace above the creek and its adjacent marsh suggest little prior disturbance, it is a strong possibility that archaeological context would be revealed through excavation. Therefore, we strongly recommend that 20KZ276 receive additional attention prior to altering the present land use.

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