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CULTURAL RESOURCES SURVEY OF THE SMALL BOAT HARBOR
PROJECT AT LAKE OF THE WOODS MARROAD MINNESOTA(U)
BEMIDJI STATE UNIV MN A P BREW ET AL. 01 NOV 77

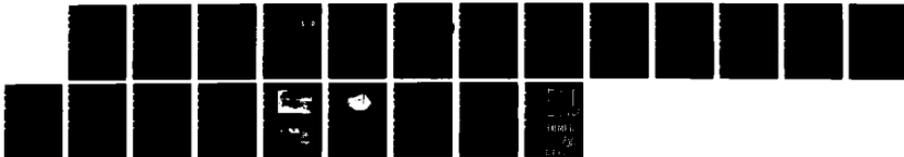
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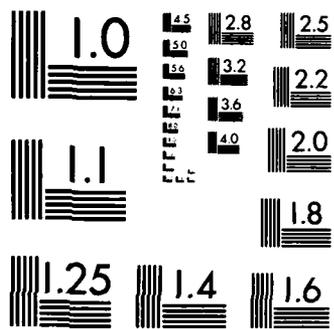
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FINAL REPORT

CULTURAL RESOURCES SURVEY OF THE SMALL BOAT HARBOR PROJECT
AT LAKE OF THE WOODS, WARROAD, MINNESOTA

Project Director: Alan P. Brew, Associate Professor of
Anthropology
Institution: Bemidji State University
Report Authors: Alan P. Brew and William J. Yourd
Contracting Agency: U.S. Army Corps of Engineers, St. Paul
District
Contract Number: DACW37-77-M-1859
Date: November 1, 1977

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Introduction

This document constitutes the final report of the project defined in Contract No. DACW37-77-M-1859 between the U.S. Army Corps of Engineers, St. Paul District and Bemidji State University as a "cultural resources survey of the small boat harbor project at Lake of the Woods, Warroad, Minnesota." With acceptance of this report, the contractual obligations of Bemidji State University are met.

The Locality

Historic and archaeological records contain reports of three cultural loci on the north side of the mouth of the Warroad River, that is, along the shore of Lake of the Woods. These sites are as follows: (1) an Indian village of 24 families (Trygg Map, Sheet 22, 1967 ed.; Survey General's Offices Map, 1896); (2) an American Fur Company post, circa 1820; and (3) a historic Indian cemetery, listed as 21-RO-9 in the Archaeological Site Files of the Department of Anthropology, University of Minnesota.

A field investigation of several proposed dredging areas and spoil-dump sites conducted in this locale by the authors earlier this year did not locate any of these sites but did raise the possibility that the village site could have been situated in the present Lakeview Park, which is maintained by the City of Warroad. This possibility and the historical records constituted the justification for a detailed cultural resources survey of the area prior to construction of a channel and

associated recreational facilities.

Scope of Work

Under a contract from the St. Paul District, U.S. Army Corps of Engineers, Bemidji State University conducted a cultural resources survey of Lakeview Park and nearby areas which will be affected by any of several proposed construction programs. The survey was designed to determine the presence or absence of prehistoric and/or historic cultural materials within these areas by the following means: (1) review of existing references and of archaeological data from the local area; (2) archaeological testing of the proposed channel area ("Alternate D") and adjacent areas, such as the proposed swimming pool; and (3) brief field inspection of proposed disposal sites for "Alternative A."

Because the archaeological testing produced essentially negative results, considerable effort was devoted to interviewing local informants. The data obtained from them support the negative assessment and will be presented below. Although the negative conclusions are reasonably well supported, the nature of the testing was such (see below) that no absolute statement of "no effect" can be made. Therefore, this report will include a recommendation of action to be taken by the Corps of Engineers to assure appropriate and adequate consideration of cultural resources.

Methodology

The research design included the following three components:

(1) archaeological shovel-test sampling of the major construction zones; (2) brief field inspection of proposed spoil-dump sites; and (3) interviews of local informants. The negative results of the first and second phases gave increased importance to the third.

The areas of highest priority in the field investigation were the proposed channel and the adjacent land which may be affected by substantial landscaping and the construction of a swimming pool. Three lines of shovel tests were excavated in these areas (Fig. 1). A line (Plate I) of nine pits at 25 m. intervals was laid out with a dumpy level along the approximate center of the proposed inland channel. This line sampled about 42% of the total length of the channel. Extension of the line was deemed inappropriate because the area to the east is paved and is used heavily and the area to the west is occupied by an operating sewage treatment plant and its lagoons. The area to the north of the line is lakeshore lowland. Two lines of pits were excavated in the swimming pool area; the first (Plate II) consisted of six pits, the second, of two.

The circular shovel pits were 0.5 to 0.7 m. in diameter and, with two exceptions, ranged from 0.65 to 1.65 m. in depth, averaging 1.2 m. In two pits (L1-5 and L2-4) large stone or concrete blocks were encountered near the surface. Additional excavation and probing indicated that these blocks represented artificial filling and no effort was made to dig around or beneath them. The other pits were excavated originally down to a solid peat layer. When excavation of one pit (L2-5) revealed

that recent cultural material lay within this layer, several of the other pits were extended to greater depth. Thus, 11 of the 17 pits were excavated into a dark gray sand or clay layer which was interpreted as a natural horizon indicative of underwater deposition (Fig. 2, L1-7, L2-1, and -5).

The fill from the shovel-tests was sorted by hand or trowel. Each pit was profiled, using field methods for determination of particle size, consistency, calcareousness, and other pedological variables. Colors were determined by using the Munsell Soil Color Charts. Although the small diameter of the pits precluded much photography, a picture was taken of the characteristic laminated fill (Plate III). The site map (Fig. 1) was prepared from the Preliminary Channel Plan (Architectural Resources, Inc., Duluth).

A brief field inspection was made of the proposed dumping locations of "Alternative A." A walk-through of the areas west of C.S.A.H. 74 and south of Taylor Road was hampered by forest vegetation or fresh-cut hay but sufficed to indicate that no surface indications of significant pre-modern cultural materials were present. Because the disposal area north of Taylor Road had been plowed recently, a more thorough inspection was possible. The southeast quarter of that area was examined at 10 m. intervals and pre-modern cultural materials were not found.

The negative results of the shovel-tests, together with the complex and initially-confusing nature of the stratigraphy, led to a considerable effort to interview local informants. Discussions of (1) the history of the area, (2) the dredging

operations and other activities which resulted in the filling of Lakeview Park, (3) collecting prehistoric artifacts in the vicinity, and (4) the location of the Indian village and cemetery were held with four men who ranged in age from the late 60's to 80 or so and who were life-long or long-term residents of the area. Although these interviews were informal, questions were related to specific factors (e.g., the laminated fill noted during excavation) and notes were taken in progress.

Excavations - Stratigraphy

The 15 deep shovel-test pits revealed a complex stratigraphy, consisting of several different types of artificial fills (Fig. 2), and produced a limited amount of cultural material, most of which is of late historic vintage (Table I). Although the sampling procedure provided adequate horizontal coverage of the project area, the considerable amount of artificial fill, which reached depths of up to 1.45 m. (4.76 ft.), precluded extensive vertical coverage.

The stratigraphy (Fig. 2) consists almost entirely of artificial fills which appear in three main types, as follows: (1) an upper layer, varying in thickness from 7 to 56 cm., of sand and gravel, containing occasional pieces of brick and some glass, metal, and leather objects; (2) deposits of laminated muck, peat, and sand, 10 to 70 cm. thick, varying in the amount of sand present; and (3) pure peat deposits, 20 to 80 cm. thick, which contain some historic and prehistoric artifacts. In four pits, a layer of sawdust and wood chips 15 to 20 cm. thick underlies the gravel fill. The sawdust is fresh and dry and has undergone no decomposition. Informants' statements

indicate that both the Marvin Window Company and an earlier sawmill used a portion of the park area as a dump.

Initially, the laminated layer and the peat were interpreted as natural, lake-shore-margin deposits, but the discovery of a 2 cm. thick layer of late historic bottle glass in the peat at a depth of 115 to 117 cm. (Fig. 2, L2-5) contradicted that finding. When some of the completed pits were extended to greater depths, other historic objects, including some clay-pigeon fragments, were found in the peat (Table I). Although these later finds could be discounted as representing downward migration, the glass layer in Pit 2-5 was of such thickness, consistency, and quantity that it could be interpreted only as a deposition in situ.

The problem presented by the latter interpretation was resolved through the aid of Peter Harder of Warroad. Mr. Harder reported that "37 or more years ago" he had worked on the dredging project which had resulted in the filling of Lakeview Park. The project entailed the pumping of "muck" from the river channel into the park area, behind a dike. The material was pumped through one-foot diameter pipes in such a fashion that large quantities of essentially pure organic matter were incorporated in the fill. Mr. Harder stated that bullheads and other fish were sucked through the pipes. Occasional replacements of the pipes, variations in the rate of flow through them, and differences in topography in the lowland area account for the laminated fill which appears in most profiles (Plate III). The basal deposit, which was reached in 11 of the 15 pits, varies in texture from sand to clay and in color from light

olive gray (5Y 6/2) to black (5Y 2.5/1). The material appears to be a gleyed marl deposited in a lake-bottom environment. One slightly water-worn prehistoric ceramic fragment occurred near the top of the marl at a depth of 1.4 m. in Pit 1-3. The presence of occasional prehistoric artifacts in the river and lake-bottom materials was noted by the authors during the earlier work in May, 1977, and can be attributed to either off-shore refuse disposal or erosion from an on-shore location.

In summary, the test-excavations in Lakeview Park indicate that the present elevated terrain there is the result of intentional filling during the last 40 years. The majority of this fill was derived from pump-dredging of the Warroad River channel, while later filling consisted of dumping of sawmill waste. Eventually, sand and gravel were placed in the park to create a baseball field (informant's report).

At some time prior to filling, the area had been under water. The excavations produced no evidence of a prehistoric or early historic dry-land surface in the proposed project area. Because of the thickness of the artificial fill, however, the vertical sampling procedure was sufficiently limited to preclude an absolute statement that no such surface existed.

Excavations - Artifacts

The artifacts from the excavations in Lakeview Park (Table I) are predominantly of late historic or early modern vintage and, with one exception, were recovered from contexts which have been interpreted as artificial fill. Most of the finds were of an individual or scattered nature. The only two "concentrations"

occurred as follows: (1) six fragments from two clay pigeons, indistinguishable in shape and style from the current type, which were recovered from Pit 1-3 at a depth of 80 cm., 25 cm. below the top of a solid peat layer; and (2) 47 pieces of bottle and jar glass and one metal can fragment found in Pit 2-5 at a depth of 115 to 117 cm., 20 cm. below the top of a peat layer. The latter concentration can be described best as a "carpet" and definitely represents a primary deposit. None of the glass appears to be of a significantly greater age than that suggested for the filling of the park area (ca. 1930).

Of the four prehistoric objects recovered (Table I), only one came from the basal sand, which is the only "natural" layer encountered in the excavations. This specimen is a cord-wrapped-paddle-impressed sherd which was recovered at a depth of 1.4 m. in Pit 1-3. The other specimens, all from near the top of the peat layer, or ca. 79 cm. below the surface, in Pit 2-6, were a small sherd and two pieces of mammalian long bone, one of which was cut and/or ground on one end. These specimens indicate that prehistoric activities occurred in the vicinity but they are not sufficient to warrant designation of the area as a site (see above).

In summary, the preponderance of the artifactual evidence is consistent with the interpretation that the park area has been subjected to considerable artificial filling. The historic artifacts can be attributed to accidental disposal (knife scabbard, see Table I), dumping of sawmill waste (sawdust and wood chips), refuse disposal (glass in Pit 2-5), and recreational use

of the area (clay pigeons). The few prehistoric artifacts came from contexts which represent both the artificial filling and accidental inclusion in lake-bottom sediments.

Excavations - Summary

Neither stratigraphic nor artifactual evidence indicate that significant cultural materials are present in the project area. The stratigraphy is composed of up to 1.45 m. of artificial fill and the basal natural stratum represents underwater deposition. The only concentration of artifacts is a refuse deposit of an early-modern date.

Interviews

Because the information gained from shovel-testing was limited and confusing, several long-term residents of the Warroad area were interviewed. In addition to Mr. Harder (see above), the informants were as follows: (1) John LaChappelle, manager of the Morey Fish Company fishery; (2) George Johnston, a commercial fisherman and an amateur collector of Indian materials; and (3) A.J. Landby, who has lived in the area since 1899. These informants provided considerable data about cultural activities in the Lakeview Park vicinity.

According to Mr. Harder, the historic Indian village was probably in the park area, but south of MacKenzie Road (Fig. 1) and extending onto the Cal's Motel property. Mr. Johnston reported that in his youth he found "lots" of pottery on the river shore where the Cal's Resort dock is located today. The presence of this pottery would suggest that a prehistoric

component existed at the village location. Johnston stated further that the portion of the park for which construction is proposed was low, swampy land in the past and that he does not know of any artifacts' being found there.

The Indian cemetery was reported, by Johnston, to have been between the present Morey fishery building and the Warroad Airways office and, by LaChappelle, to have been on the site of the latter structure. According to Johnston, the cemetery, which included grave houses, was bulldozed away "some time ago."

These informants' reports indicate that no significant cultural materials are present in the proposed construction area and that the Indian cemetery and village cited in various sources are unlikely to exist in an undisturbed condition. The former site apparently has been eradicated entirely and the latter has been disturbed, if not destroyed, by construction south of MacKenzie Road.

Conclusions

Archaeological shovel-testing and statements collected from local informants indicate that no significant cultural materials exist in the proposed construction area of "Alternative D." This negative statement, however, can be made with only 90% confidence because of the considerable amount of recent artificial fill which overlies the area. The thickness of the fill prevented adequate sampling by the method available (shovel-testing).

No new information was obtained about the location of the American Fur Company post. New data pertaining to the historic

(and prehistoric) Indian village and the cemetery indicate that they both were located beyond the limits of the proposed construction zone and that they have suffered considerable damage, if not total destruction.

A brief field inspection of a portion of the disposal areas proposed in "Alternative A" did not produce evidence of pre-modern cultural activities. Therefore, the archaeological potential of these areas is believed to be minimal to non-existent.

Recommendation

Because the negative assessment of the archaeological potential of the "Alternate D" construction zone cannot be offered with absolute certainty, the authors recommend that an archaeologist be on the scene during those portions of the project which involve excavation within the park area. This action will assure adequate protection of any cultural resources which may underlie the artificial fill and lake-bottom sediments.



Plate I. Looking northwest along Line 1. Line extends 200 m. from Pit L1-1 (foreground, with sod replaced) toward northeast corner of sewage treatment plant (in distance).



Plate II. Looking southeast along Line 2. Line extends 125 m. from Pit L2-1 (foreground, with sod replaced) toward northwest corner of trading post (in distance).

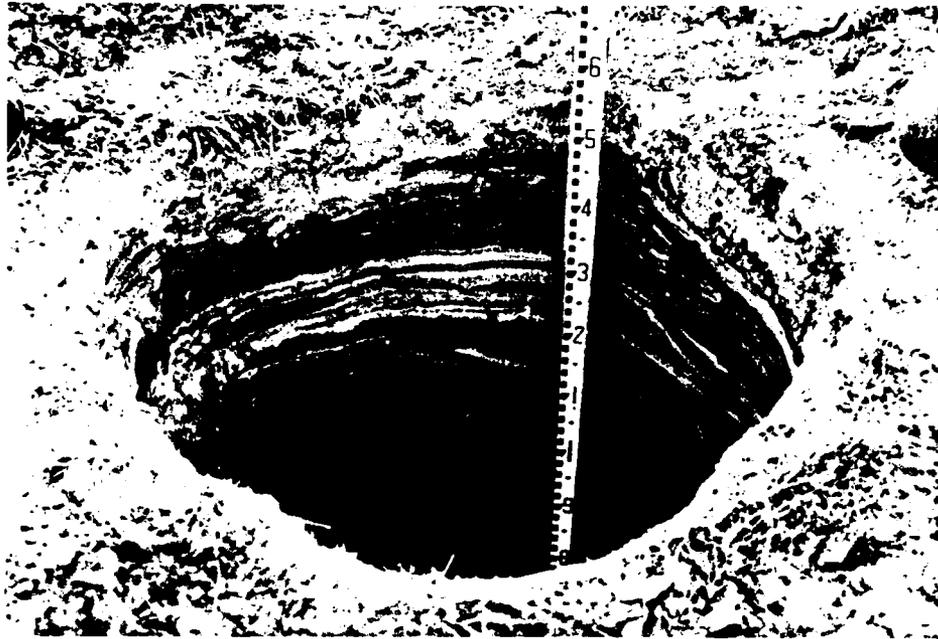


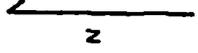
Plate III. Upper .6m of Pit L1-3 showing characteristic profile of laminated artificial fill produced by pump-dredging of Warroad River channel, circa 1930.

Table I. Descriptive and Provenience Data re Artifacts Recovered

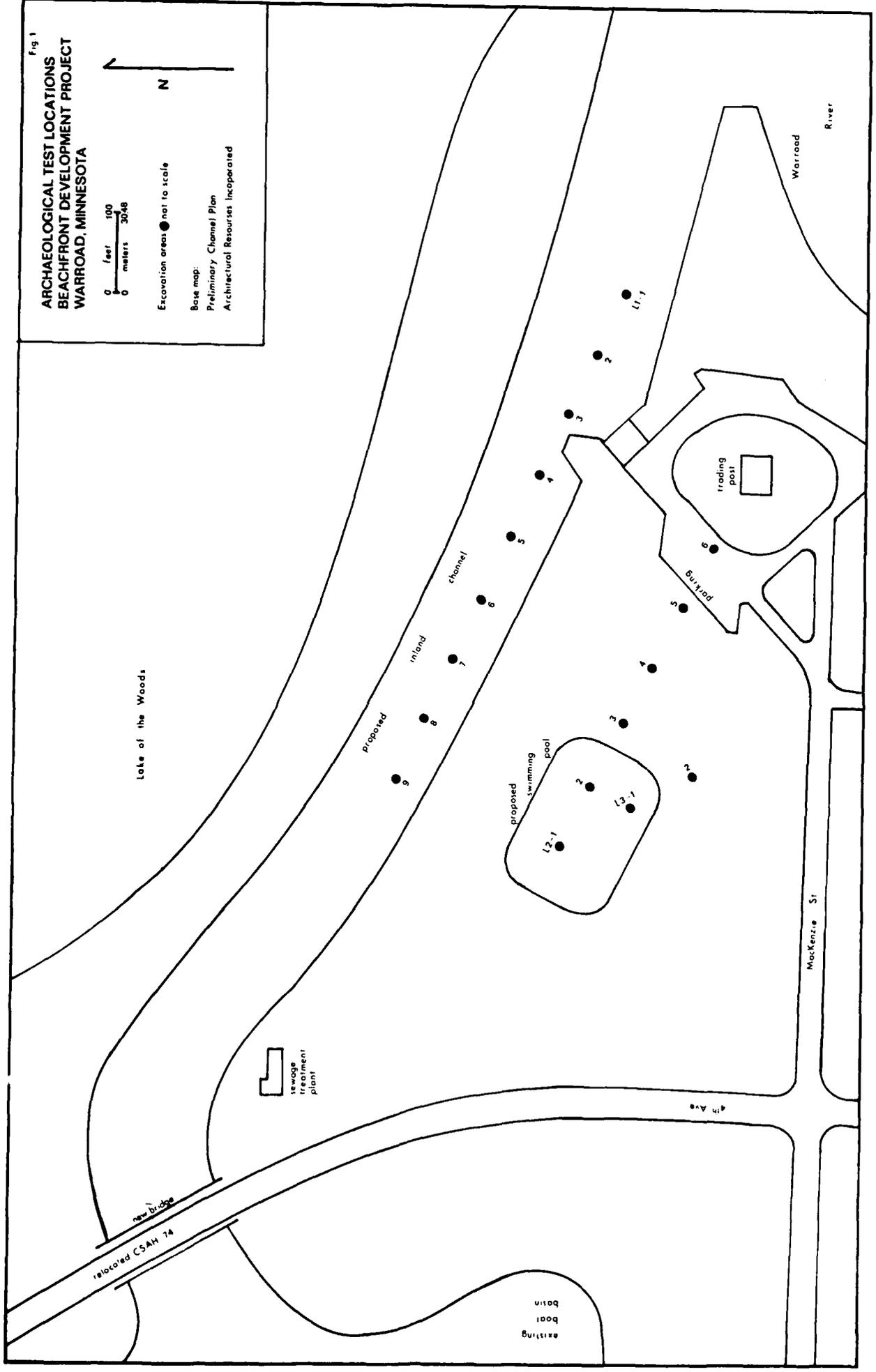
<u>Artifact</u>	<u>Pit No.</u>	<u>Depth (in cm.)</u>	<u>Layer</u>	<u>Description</u>
sherd	1-3	140	blue-gray sand	cord-wrapped-paddle impressed, grit temper, 3.25 x 2.5 cm.
bone	2-6	ca. 79	lower peat	grit temper, 1.63 x 1.24 cm.
	2-6	ca. 79	lower peat	long-bone fragment, large mammal, 8.41 x 1.64 cm.
	2-6	ca. 79	lower peat	shaft fragment, cut to taper at one end, 5.13 x 1.18 cm.
leather	1-8	22	gravel fill	knife sheaf, from old logger's mitten, hand- stitched, 18.6 x 6.1 cm.
metal	2-6	ca. 15	gravel fill	strap door handle fragment, 20.0 x 3.45 cm.
	2-5	117	lower peat	can bottom? frags, probably one can, 5 pieces
ceramic	1-3	ca. 80	peat	clay pigeon frags (6), 2 represented, modern style
	1-8	37-42	sawdust	clear glass (2), no discoloration but 1 is burned
glass	1-9	78	peat	clear glass (4), jar?, no discoloration
	2-5	117	peat	clear glass (34), jar &/or bottle, plain no discoloration
"	"	"	"	clear (1) jar or bottle base
"	"	"	"	clear (4) jar or bottle glass with raised lettering &/or decoration
"	"	"	"	blue jar glass (1)
"	"	"	"	black bottle glass (6)
"	"	"	"	black bottle neck & lip(1), seamed neck and collar, cap-type, beer bottle?, collar: ext. diam. 2.64, int. diam. 1.55 cm., small portion of gold paper label still attached

Fig 1
ARCHAEOLOGICAL TEST LOCATIONS
BEACHFRONT DEVELOPMENT PROJECT
WARROAD, MINNESOTA

0 feet 100
 0 meters 304.8



Excavation areas ● not to scale
 Base map:
 Preliminary Channel Plan
 Architectural Resources Incorporated



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