AD-A164 352 CULTURAL RESOURCE MONITORING AT THE HENNY LANGER SITE (21CA58) GULL LAKE CASS COUNTY MINNESOTA(U) CORPS OF ENGINEERS ST PAUL MN ST PAUL DISTRICT B WITHROW 1/1

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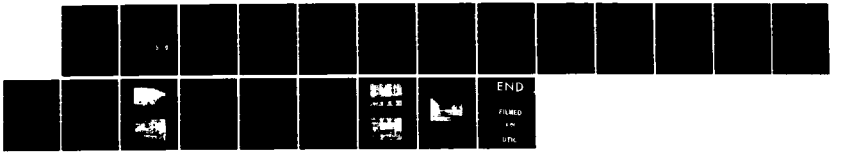

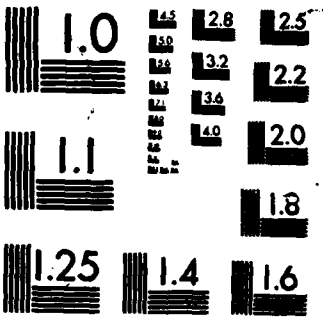

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20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

In June, 1983, the Corps began construction of a recreation area on the east side of Gull Lake, consisting of a road and parking area, boat ramp, beach, restroom/change house, and public well. During construction, surface collections were made, but no significant concentrations of cultural material were noted. The type and distribution of cultural material found was not inconsistent with previous reports at the Langer Site. No further on-site monitoring is recommended.

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CULTURAL RESOURCE MONITORING AT THE HENNY LANGER SITE (21CA58)

GULL LAKE, CASS COUNTY, MINNESOTA

Prepared by Barbara Withrow

U.S. Army Corps of Engineers
St. Paul District

August 25, 1983

INTRODUCTION

Gull Lake is located in Cass and Crow Wing Counties of north central Minnesota. The south end of the lake is approximately 10 miles north and west of the city of Brainerd. In June 1983, the Corps of Engineers, St. Paul District, began construction of a recreation area on the east side of Gull Lake approximately one-fourth mile west of the Corps of Engineers dam located on the Gull River at the lake's outlet. The recreation area will be located in Sections 17 and 20, T. 132 N., R. 29 W., on a peninsula extending northward into Gull Lake (see figure 1 and photograph 1). It will consist of a road and parking area, boat ramp, recreational beach, restroom/change house facility, and public well (see figure 2).

A prehistoric archeological site, the Henry Langer Site (21CA58), was recorded on the peninsula in 1973 by Christy Caine of the University of Minnesota (see figure 1). The site was excavated in June and July 1974 by Christy Caine and in July and August 1974 by Thomas Neumann of the University of Minnesota (Caine 1974; Neumann 1975). No clear vertical stratigraphy was present at the site but Caine (1974) recognized at least four different cultural components in the lithic and ceramic artifacts recovered. These components represented the Archaic, Middle Woodland, Late Woodland, and Mississippian Traditions and ranged in date from 5000 to 1000 B.C. for Archaic to A.D. 1000 to 1700 for Mississippian (Johnson 1978). Neumann proposed that the Langer Site was an "ephemeral camp" or "canoe landing" on the changing shoreline of Gull Lake repeatedly occupied over a period of hundreds of years by different groups of prehistoric people (Neumann 1975:85-91). Both Caine (1974:25) and Neumann (1975:87-88) suggested that the Langer Site may have been associated in some way with the Gull Lake Mounds (21CA37) located just east of the Gull Lake Dam in the present Corps of Engineers campground (see figure 1). The mounds were excavated in 1969 by Alan Kutchera of the University of Minnesota, and two Woodland components were recognized (Johnson 1971). Caine recommended that two portions of the Langer Site be protected from any future disturbance (Caine 1974:25-26)(see figure 2), and these areas were marked before any work on the recreation area commenced in 1983.

FIELD METHODS AND RESULTS

Two archeologists from the Corps of Engineers, St. Paul District, were present at the Langer Site on June 20-24 and June 28-29, 1983. When archeologists arrived on June 20, the boundaries of the two protected site areas as well as the boundaries of the road, parking area, boat ramp, beach, and restroom/change house had been marked with stakes and flagging tape. A dirt road proceeded west from the dam maintenance building across the base of the peninsula. Some trees had been cut and brush removed on either side of the dirt road, but most of the area was still covered with deciduous trees and moderate forest undergrowth. Beginning on June 21, Corps of Engineers archeologists monitored construction of the road, parking area, boat ramp, and beach and placed several shovel tests on the proposed locations of the restroom/change house and well. Following is a description of each area monitored or shovel tested, the field methods employed for that area, and the results of the field work.

Road (see photograph 2)

The recreation area road will intersect County Highway 126 southeast of the dam maintenance building (see figure 2) and proceed northwest to meet the existing dirt road near the southeast "corner" of the peninsula. At the base of the peninsula, the road widens into the main parking area (discussed separately below) and then continues on the west side of the parking area to become part of the boat ramp (discussed separately below). From June 21-29, 1983, the road was cleared of trees, stumps were pulled, and the ground surface was bulldozed and graded. Considerable earth moving activity took place, particularly south and southeast of the dam maintenance building where the road was cut through previously undisturbed ground. Before actual road construction commenced, 26 units along the preexisting dirt road were marked and numbered with flagging tape (see figure 2). With the exception of "Area 1", each unit was 15 m wide and extended from the lakeshore on the north to the 1220 foot contour on the south. These units were intended to provide provenience for any surface finds or subsurface features noted in the road or other parts of the project area. Archeologists observed construction of the road and made surface collections when feasible. No cultural features were noted, but some cultural material was collected from the road surface. This material included a chert thumb scraper and one quartz flake from Unit 5 and one piece of quartz shatter from Unit 9. (Basic descriptions of all cultural material recovered can be found in tables 1 and 2). It should be emphasized that the numbered "provenience" units indicate only where cultural material was collected after earth moving activity and not necessarily where it originated.

Parking Area

The future parking area consists of two parts. The main parking area is located along the base of the peninsula from the road on the east to the boat ramp on the west (see figure 2) and incorporates the existing dirt road. The overflow parking area is located north of the main parking lot and will be constructed on top of the southern one-third of the protected site area of the main terrace. The space between the south boundary of the protected site/overflow parking area and the north boundary of the main parking area will consist of a relatively undisturbed strip of trees and other vegetation. The overflow parking area will be connected to the main parking area at its east and west ends (only the northern boundary of the overflow parking area is shown on figure 2).

Main Parking Area (see photograph 3)

Construction of the main parking area, like that of the road, involved tree and stump removal, bulldozing, and grading. Earth moving activity was observed and surface collections made when possible. Again, no cultural features were noted, but surface finds were made. Four flakes and four pieces of shatter were collected from Unit 17, one modified flake and one core fragment from Unit 18, and one flake, one piece of shatter, and one core fragment from Unit 19 (see table 1).

Overflow Parking Area (see photograph 4)

Since the overflow parking area was to be placed over a portion of the protected site, construction methods were designed to avoid subsurface disturbance. Trees were removed but stumps were left in place and simply sawed off at ground level with a stump cutter. This

machine removed the soil 20 to 25 cm around the perimeter of each stump to a depth of approximately 15 cm, and the tires of the stump cutter and the tractor which pulled it left some shallow ruts in the ground surface. Unfortunately, frequent rain made the soil soft and easily disturbed. Each exposed area was examined for cultural material and evidence of subsurface features; one quartz flake was found in Unit 20. After stump cutting, a 12-inch layer of sand was spread over the ground surface. Work on the overflow parking area was not observed further, but plans were to cover the sand with a layer of gravel and clay and then with asphalt.

Boat Ramp (see photograph 5)

The future boat ramp is located at the west end of the main parking area (see figure 2). Construction of the boat ramp involved tree and stump removal, heavy bulldozing, and grading. No features were observed and no cultural material was collected from the boat ramp area. As indicated on figure 2, a second boat ramp was originally planned on the northeast side of the peninsula but was later omitted.

Beach

The recreational beach will be constructed along the northwest shore of the peninsula (see figure 2) and will include one of the two protected site areas. Brush was removed from the beach and entire lower terrace, but no other work was carried out in June 1983. When the beach is ultimately constructed, sand will simply be deposited on the lakeshore and in the water. Little to no ground disturbance should occur, but small machinery will move over most of the shore area. A portion of the lakeshore at the northeast end of the protected beach area was crushed into the water, and two muddy ruts were left exposed when a vehicle was used to cut brush. No cultural material was observed here.

Restroom/Change House

The restroom/change house will be a small building measuring approximately 5.5 m by 5.5 m and located on the west edge of the main terrace (see figure 2). A pit toilet will be excavated beneath the building. No construction of the restroom took place in June 1983, but its location had been marked. Nine shovel tests (see figure 3) were excavated in and on the perimeter of the future restroom. Each test was excavated to an average depth of 40 cm, and all soil was screened through a 1/4-inch mesh screen. Soil profiles were drawn for each shovel test (see Shovel Test Profile Form), and the typical soil profile consisted of a 10 to 15 cm layer of humus and black sandy loam followed by 25 to 30 cm of brown, very sandy loam underlain by brown sand. Cultural material was recovered from six of the nine shovel tests (see tables 1 and 2) and consisted of one modified flake, twenty flakes, and twelve pieces of shatter. No evidence of cultural features was noted.

Well

Initially, it was suggested that the well could be placed near the restroom on the west edge of the main terrace. This location was designated as the "West Well" and was marked 45 m south and 30 m west of the site datum used

by Caine and Neumann (see figure 2). Three test pits were placed in the vicinity - the first 2 m due west of the west well, the second 3 m due west of the west well location, and the third 3 m west and 3 m north of the west well. Excavation methods were identical to those used at the restroom/change house location, and soil profiles were similar (see Shovel Test Profile Form). Test Pit 1 yielded no cultural material, but one bodysherd was recovered from Test Pit 2, and two bodysherds and one piece of shatter from Test Pit 3 (see tables 1 and 2). Test Pit 3 was placed on the west edge of a small earth mound measuring 3.5 m in length (east-west), 2.5 m in width (north-south), and 36 cm in height. Although the mound somewhat resembled a small burial mound, the soil profile in Test Pit 3 showed no evidence of the soil mixing that would be expected in an artificially constructed mound. It is unlikely that an unrecorded burial mound exists at the Langer Site, and the small hump is more likely a tree fall or other natural feature.

After three shovel tests had been excavated at the west well location, it was decided to move the location of the well to a point 16 m east of the datum on the lower terrace (see figure 2). This location was designated the "East Well" and a point 4.6 m due east of the well was marked as the future location of a pressure tank (see figure 4). Nine shovel tests were excavated in the vicinity of the east well and pressure tank (see figure 4). Cultural material was recovered from six of the nine tests and consisted of two pieces of shatter from Test 1, four flakes from Test 2, one flake from Test 3, one bodysherd and two flakes from Test 6, one flake from Test 8, and two pieces of shatter from Test 9 (see tables 1 and 2). Again, excavation methods were identical to those used at the restroom/change house and soil profiles were similar.

SUMMARY AND CONCLUSIONS

Corps of Engineers archeologists were present at the Langer Site during construction of the Gull Lake Recreation Area in June 1983. Construction of the road, parking area, boat ramp, and beach was observed and surface collections were made. In addition, 21 shovel tests were made at the future locations of the well and restroom/change house. A small sample of cultural material was recovered from 14 of the shovel tests and from the surface of the road and parking area. No significant concentrations of cultural material were noted and no cultural features were seen. With the exception of four bodysherds, one scraper, two modified flakes, and two core fragments, the cultural material recovered consisted of lithic debris. With the possible exception of two net impressed bodysherds (Anfinson 1979:45-50; Caine 1974:12-13; Johnson 1971:52-53; Neumann 1975:37-41), no diagnostic artifacts were recovered. The type and distribution of cultural material found are not inconsistent with those noted by Caine and Neumann when the Langer Site was excavated, but little information can really be obtained from the small, undiagnostic sample, some of which was collected from the surface of disturbed areas.

Even though cultural material was recovered at the proposed locations of the restroom/change house and well, it is recommended that the construction of these facilities proceed as planned. Shovel testing indicated no significant concentrations of cultural material or evidence of features, and scattered

cultural material similar to that found in these locations probably exists almost everywhere on the peninsula and in the vicinity. Concerted efforts have been made, in both the planning and construction stages, to protect portions of the Langer Site from any disturbance and to minimize disturbance in other parts of the site. Those involved in construction activities are aware of the site and its significance and will report any cultural finds to the Corps of Engineers. No further on-site monitoring is recommended.

LOCATION OF SHOVEL TESTS

Site of proposed restroom/change house, Henry Langer site (21CA58), Gull Lake, Minnesota, June 22, 1983.

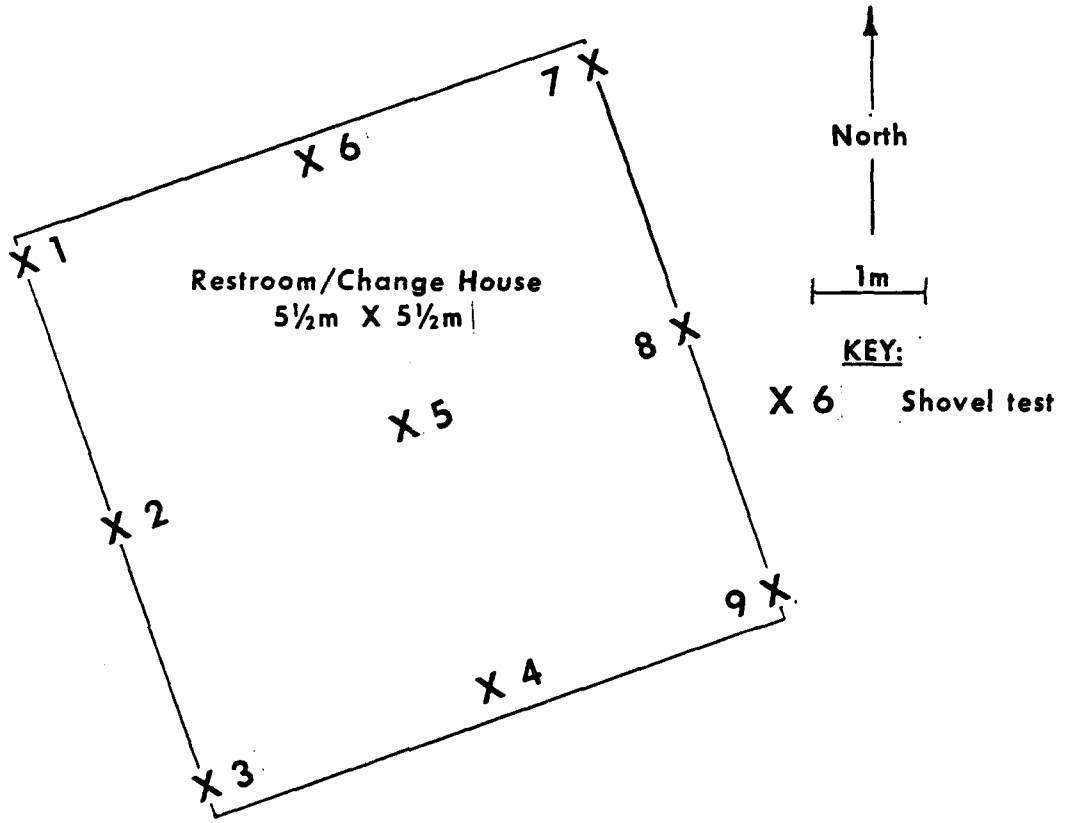

Figure 3

LOCATION OF SHOVEL TESTS

Site of proposed well & pressure tank, Henry Langer site (21CA58), Gull Lake, Minnesota, June 23, 1983.

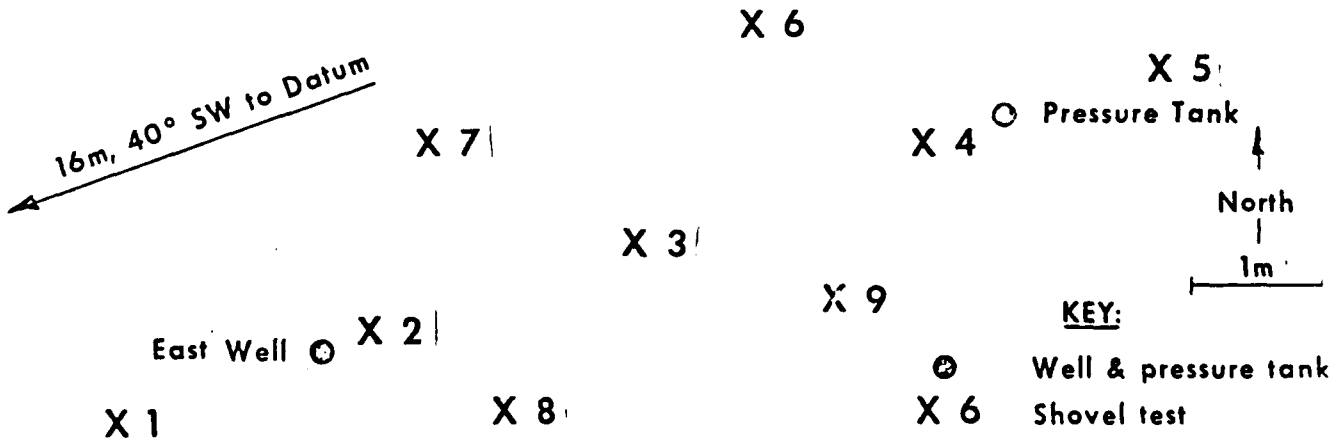

Figure 4

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Johnson, Elden
1971 Excavations at the Gull Lake Dam. Minnesota Archaeologist 31(2):44-69.

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Neumann, Thomas W.
1975 A Study of 21 CA 58: An Analysis of a Multi-Component Middle Woodland Site on the Shores of Prehistoric Lake Gayashi. Master's thesis, University of Minnesota, Minneapolis.

LOCATION OF PROJECT AREA, 21CA37 AND 21CA58

Adapted from United States Geological Survey 7.5 Minute Series, Gull Lake Quadrangle.

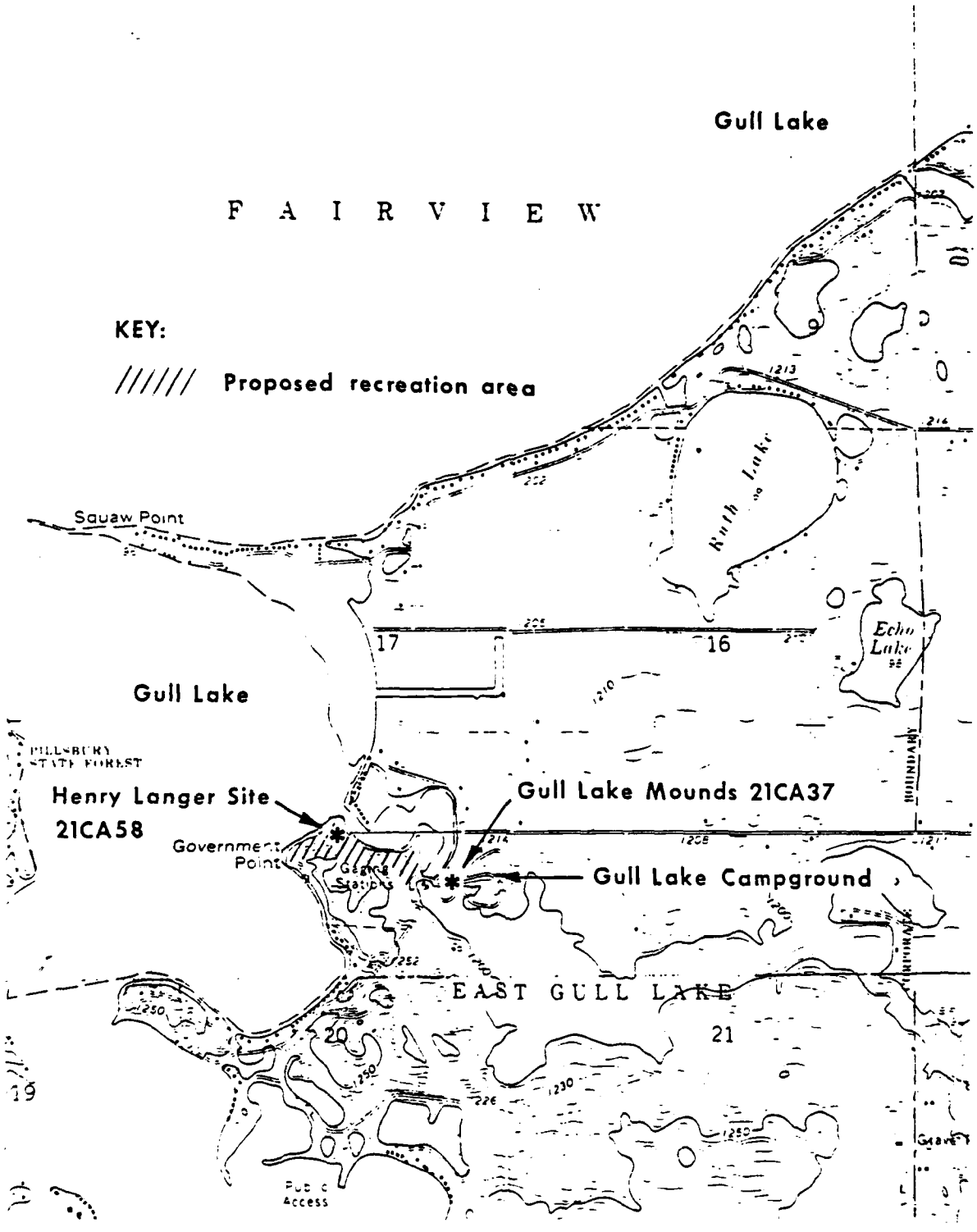


Figure 1

PROJECT AREA

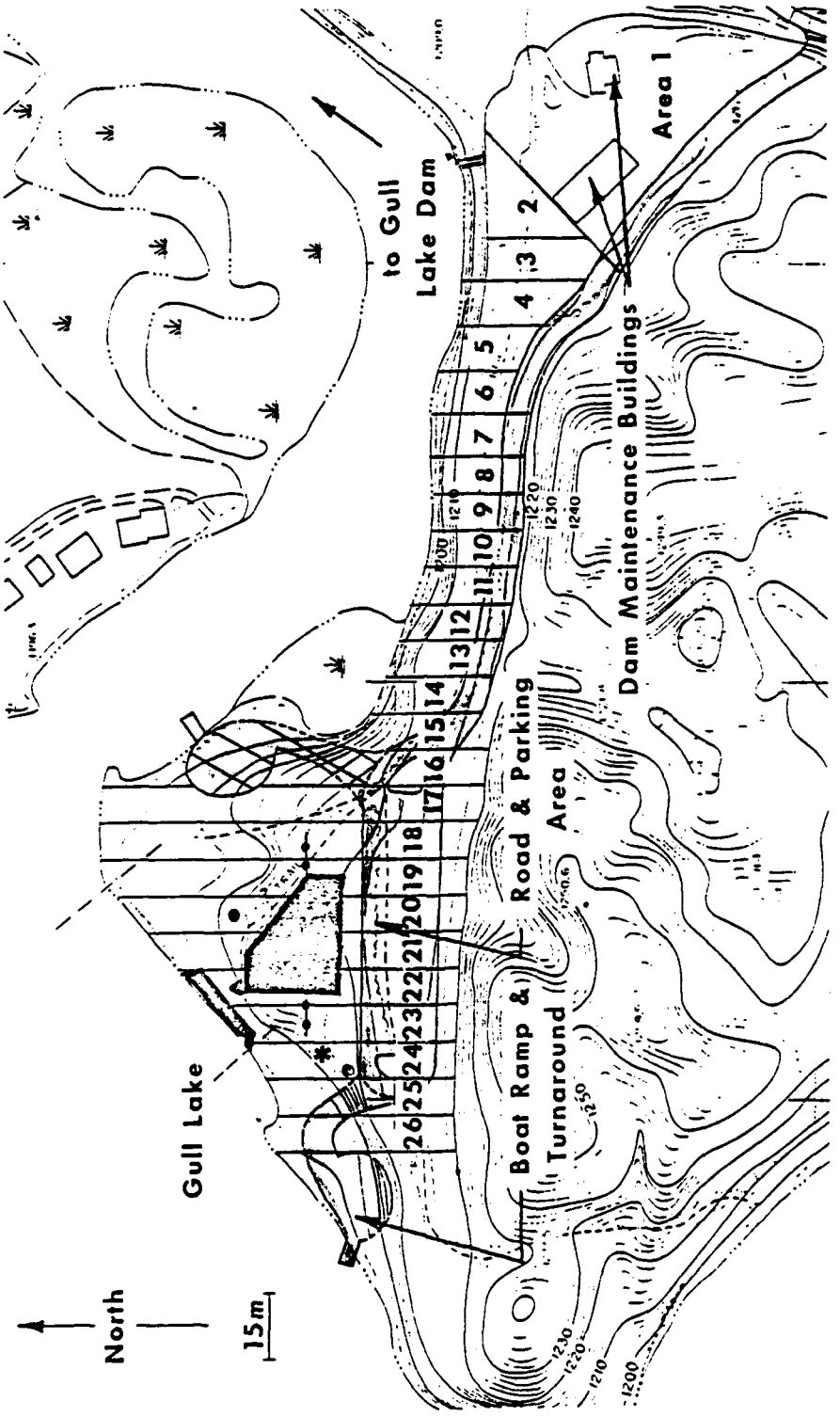


Figure 2

Table #1: Lithic Artifacts Recovered at 21CA 58 During Site Monitoring, June 1983

Location	Unit/Test	Description	Raw Material	Length	Width	Weight
Surface	Unit 5	thumb scraper	chert	2.50 cm	2.03 cm	4.80 g
		flake	quartz	2.07 cm	1.87 cm	.97 g
Surface	Unit 9	shatter	quartz			.64 g
Surface	Unit 17	flake	TRSS*	2.07 cm	2.03 cm	1.54 g
		flake	chert	3.47 cm	3.14 cm	10.34 g
		flake	quartz	2.78 cm	1.50 cm	2.07 g
		flake	quartz	1.50 cm	.96 cm	.32 g
		shatter	quartz			3.05 g
		shatter	quartz			1.13 g
		shatter	quartz			18.08 g
		shatter	quartz			9.16 g
Surface	Unit 18	modified flake	shatter	3.43 cm	2.13 cm	3.48 g
		core fragment	agate	3.98 cm	3.09 cm	24.08 g
Surface	Unit 19	core fragment	quartz	2.91 cm	2.83 cm	24.32 g
		flake	quartz	.98 cm	.67 cm	.16 g
		shatter	quartz			2.09 g
Surface	Unit 20	flake	quartz	3.90 cm	3.12 cm	20.61 g
Restroom	Test 3	flake	chert	.79 cm	.53 cm	.08 g
Restroom	Test 5	modified flake	brown chalcedony	.23 cm	1.61 cm	1.41 g
		flake	quartzite	1.39 cm	.65 cm	.22 g
		flake	quartz	1.37 cm	1.15 cm	.51 g
		flake	quartz	1.06 cm	.50 cm	.13 g
		flake	jasper	1.27 cm	1.24 cm	.84 g
		shatter	TRSS			1.03 g
		shatter	quartz			.34 g
Restroom	Test 6	flake	quartz	1.16 cm	.60 cm	.13 g
		shatter	quartz			.26 g
		shatter	quartz			.95 g

*TRSS - Tongue River Silicified Segments

Location	Unit/Test	Description	Raw Material	Length	Width	Weight
Restroom	Test 7	flake	chert	1.88 cm	1.77 cm	1.93 g
		flake	basalt	1.72 cm	1.34 cm	.70 g
		flake	chert	1.25 cm	.79 cm	.12 g
		flake	quartz	.86 cm	.71 cm	.16 g
		flake	basalt	1.18 cm	.86 cm	.21 g
		shatter	quartz			.37 g
		shatter	TRSS			.34 g
Restroom	Test 8	flake	quartz	2.07 cm	1.50 cm	1.59 g
		flake	chert	.60 cm	.50 cm	.04 g
		flake	quartz	.76 cm	.63 cm	.06 g
		flake	TRSS	1.18 cm	1.07 cm	.31 g
		shatter	quartz			.57 g
		shatter	quartz			.17 g
		shatter	TRSS			.61 g
		shatter	TRSS			.24 g
Restroom	Test 9	flake	quartz	1.05 cm	.53 cm	.12 g
		flake	quartz	1.22 cm	.92 cm	.18 g
		flake	quartzite	.80 cm	.72 cm	.10 g
		flake	chert	1.57 cm	.74 cm	.21 g
		flake	jasper	1.94 cm	1.22 cm	.50 g
		shatter	quartz			4.46 g
		shatter	quartz			1.97 g
West Well	Test 3	shatter	quartz			1.21 g
East Well	Test 1	shatter	TRSS			2.6 g
		shatter	chert			1.89 g
	Test 2	flake	TRSS	2.3 cm	2.20 cm	2.26 g
		flake	quartz	1.36 cm	1.26 cm	.58 g
		flake	TRSS	1.22 cm	.74 cm	.12 g
		flake	quartz	1.30 cm	.70 cm	.14 g
East Well	Test 3	flake	TRSS	2.31 cm	2.22 cm	2.05 g
East Well	Test 6	flake	chert	2.84 cm	2.00 cm	3.29 g
		flake	TRSS	1.40 cm	.89 cm	.23 g
East Well	Test 8	flake	TRSS	2.51 cm	.87 cm	2.33 g
East Well	Test 9	shatter	TRSS			.88 g
		shatter	TRSS			6.17 g

Table #2: Ceramic Artifacts Recovered at 21CA 58 During Site Monitoring, June 1983

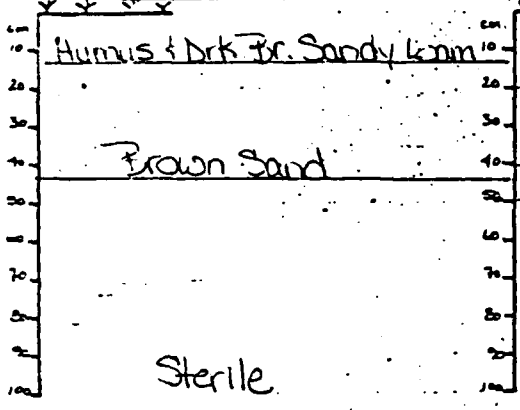
Location	Unit/Test	Description	Temper	Surface	Length	Width	Thickness
East Well	Test 6	bodysherd	grit & sand	net impressed	3.91 cm	1.72 cm	.35 cm
West Well	Test 2	bodysherd	grit & sand	cord marked	2.80 cm	2.08 cm	.20 cm
West Well	Test 3	bodysherd	grit & sand	net impressed	4.97 cm	4.01 cm	.90 cm
		bodysherd	grit & sand	plain	1.90 cm	1.84 cm	broken

Photograph 1: Looking SW toward Henny Langer Site from NE side of Gull Lake outlet

Photograph 2: Recreation Area Road looking east toward Gull Lake Dam.

Location: Gull Lake-W. Wel

Test # 1 Loc. _____



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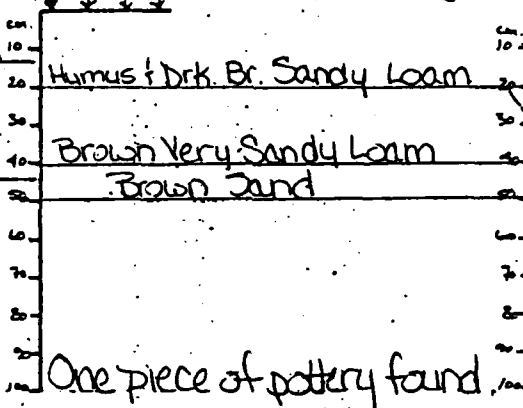
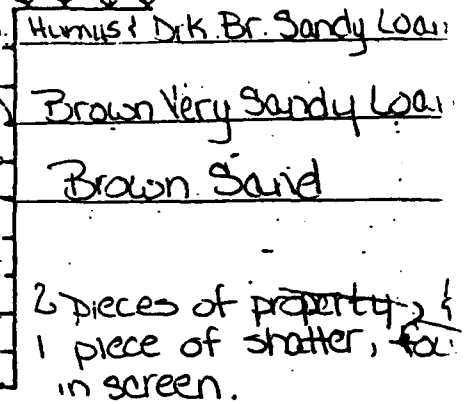


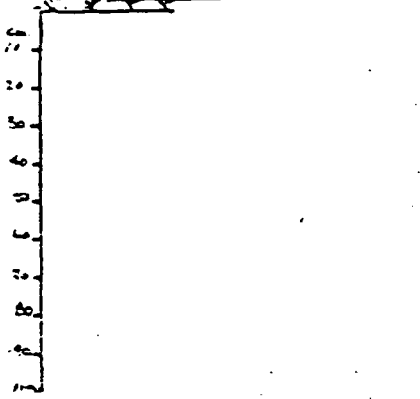
One piece of pottery found.

Test# 3 Loc. _____



2 pieces of property & 1 piece of shatter, found in screen.

Test# _____ Loc. _____



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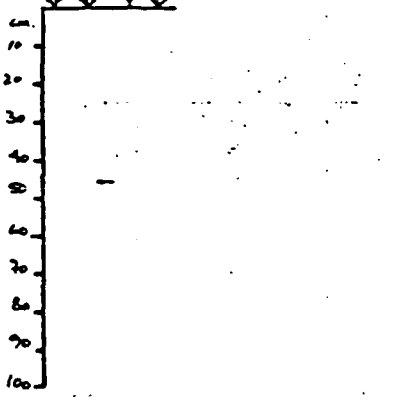

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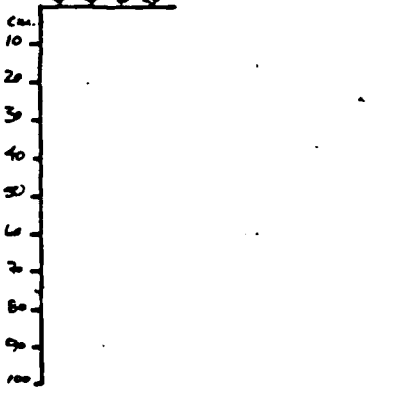

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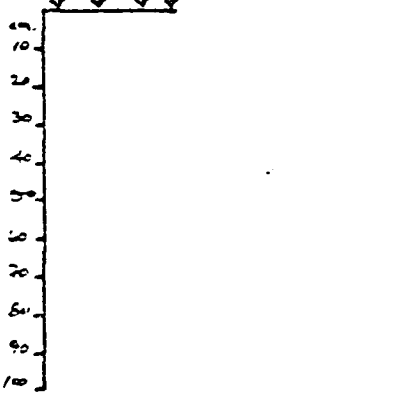

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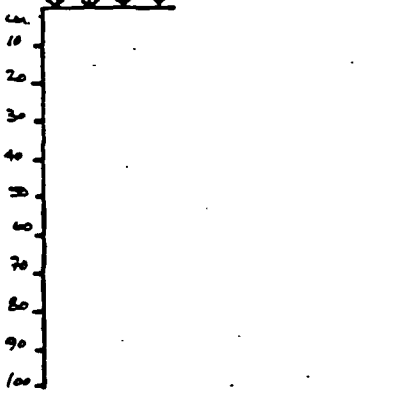

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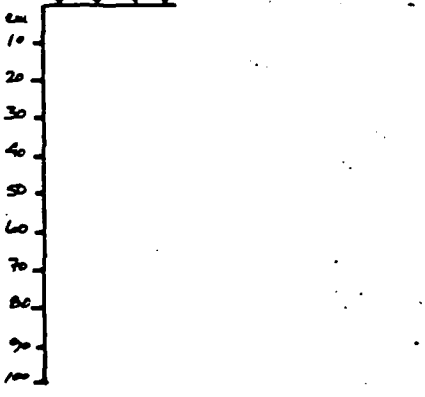

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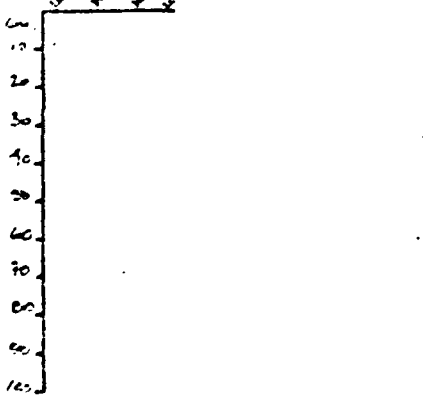

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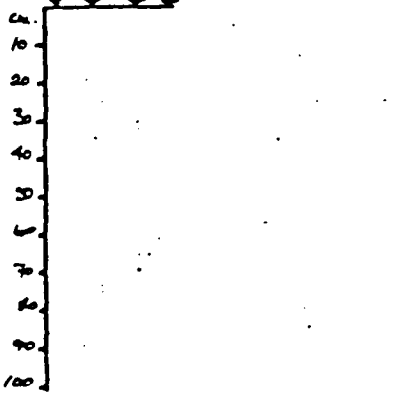

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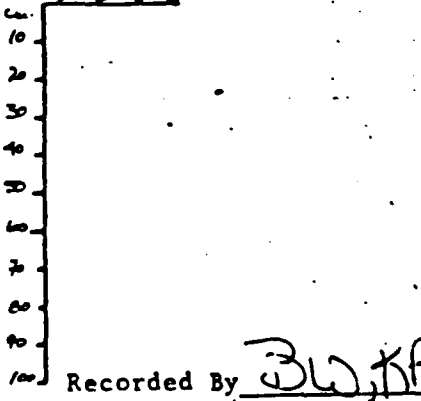
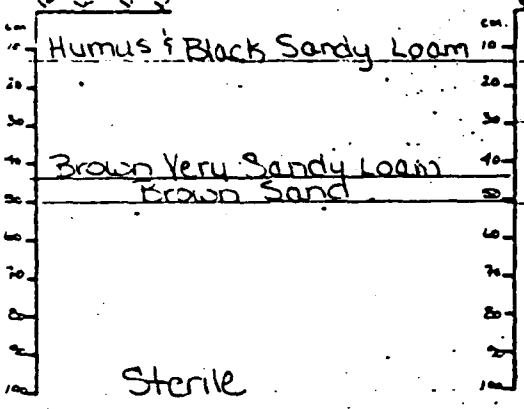


Recorded By BLW, KR

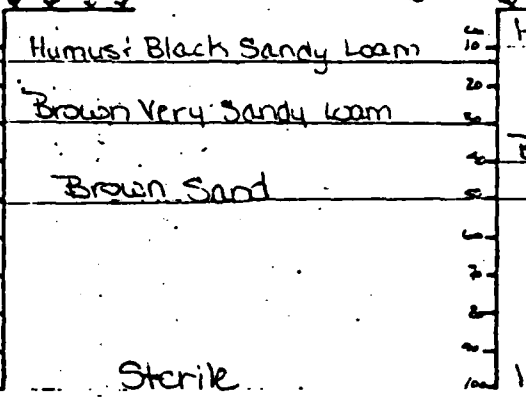
Location Gull Lake - Restrov

Test # 1 Loc. NW corner



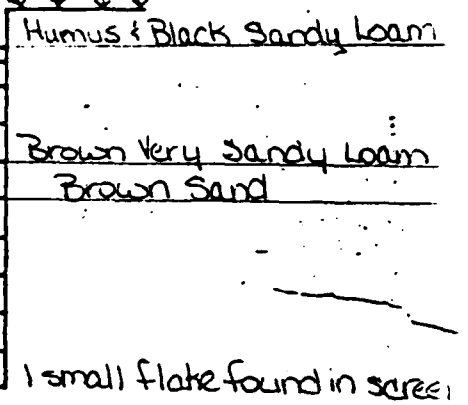
Sterile

Test# 2 Loc. W-middle



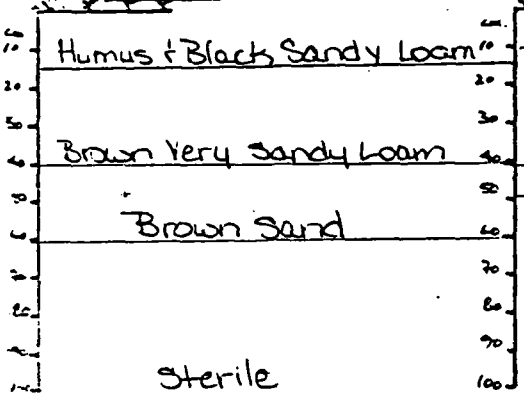
Sterile

Test# 3 Loc. SW-corner



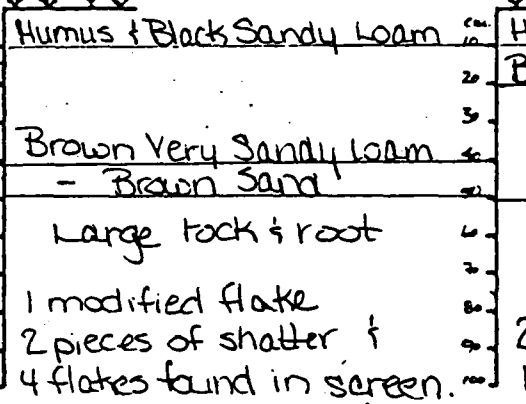
1 small flake found in screen

Test# 4 Loc. S-middle



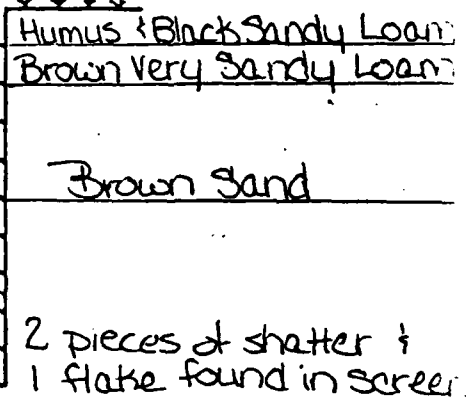
Sterile

Test# 5 Loc. Center



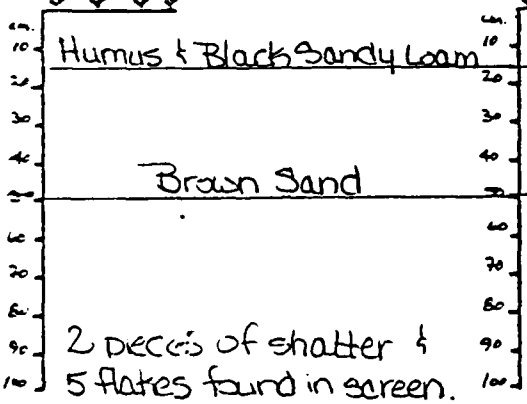
Large rock & root
1 modified flake
2 pieces of shatter &
4 flakes found in screen.

Test# 6 Loc. N-middle



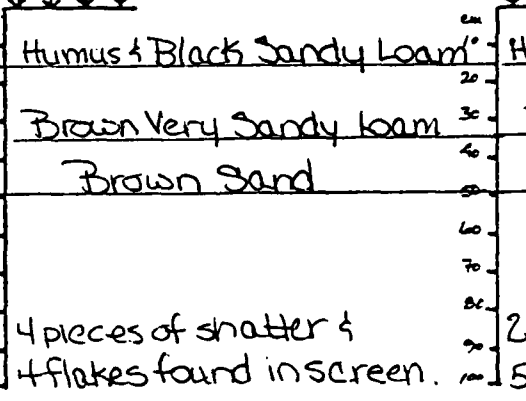
2 pieces of shatter &
1 flake found in screen

Test# 7 Loc. NE-top



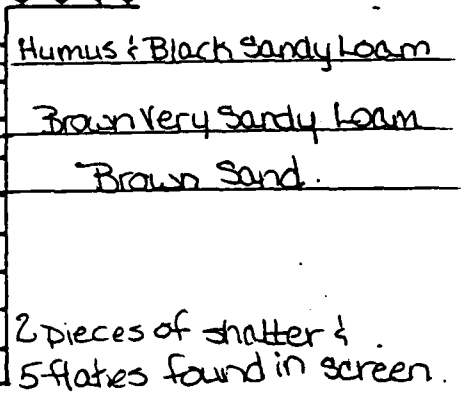
2 pieces of shatter &
5 flakes found in screen.

Test# 8 Loc. E-middle



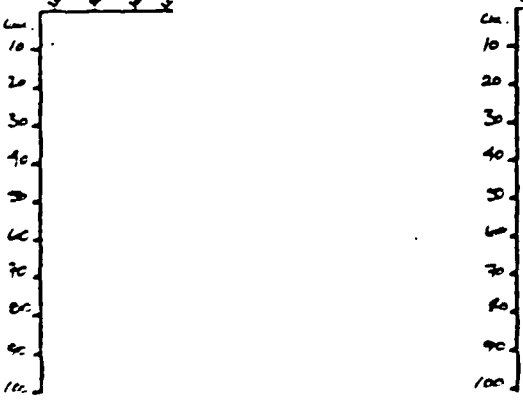
4 pieces of shatter &
4 flakes found in screen.

Test# 9 Loc. SE-corner

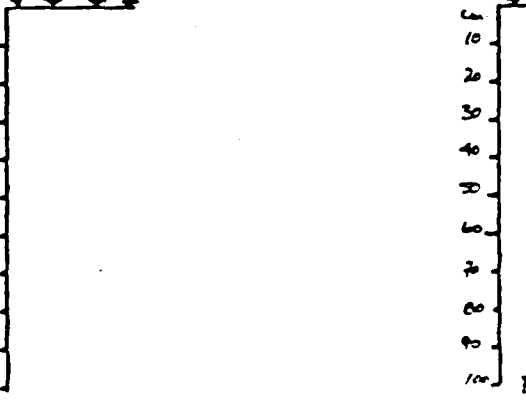


2 pieces of shatter &
5 flakes found in screen.

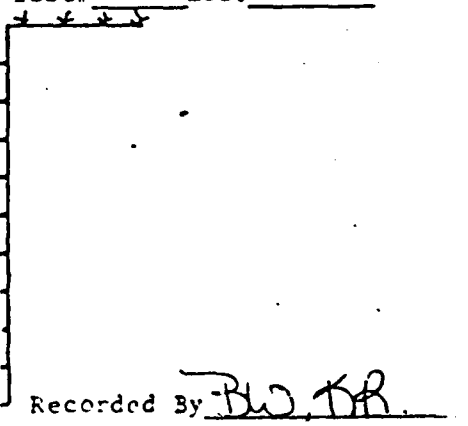
Test# _____ Loc. _____



Test# _____ Loc. _____



Test# _____ Loc. _____



Recorded By BLD, KR

Location: Gull Lake-East

Test# 1 Loc. W-1½m

- Humus & Drk. Br. Sandy Loam
- Brown Very Sand Loam
- Brown Sand

2 pieces of shatter found in screen.

Test# 2 Loc. W-stake

- Humus & Drk. Br. Sandy Loam
- Brown Sand

4 flakes found in screen.

Test# 3 Loc. 2.3m -ce[illegible]

- Humus & Drk. Br. Sandy Loa[illegible]
- Brown Sand

1 flake found in scree[illegible]

Test# 4 Loc. E-stake

- Humus & Drk. Br. Sandy Loam
- Brown Very Sandy Loam
- Brown Sand

Sterile

Test# 5 Loc. 1½m E of E stake

- Humus & Drk. Sandy Loam
- Brown Very Sandy Loam
- Brown Sand

Sterile

Test# 6 Loc. NE-middle

- Humus & Drk. Br. Sandy Loam
- Brown Very Sandy Loam
- Brown Sand

1 piece of pottery & 2 flakes found in screen.

Test# 7 Loc. NW-middle

- Humus & Drk. Br. Sandy Loam
- Brown Very Sandy Loam
- Brown Sand

Big tree root

Sterile

Test# 8 Loc. SE-middle

- Humus & Drk Br. Sandy Loam
- Brown Sand

1 flake found in screen.

Test# 9 Loc. SW-middle

- Humus & Drk. Br. Sandy Loam
- Brown Very Sandy Loam
- Brown Sand

2 pieces of shatter found in screen.

Test# ____ Loc. ________

Test# ____ Loc. ________

Test# ____ Loc. ________

Recorded By BW, KR

Photograph 3: Road & Main Parking Area looking N toward protected site area

Photograph 4: Overflow parking area being covered with sand

Photograph 5: Boat ramp

END

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3-86

DTIC