

An Archaeological Survey: Shoreline of Lake Darling and Proposed Burlington Dam

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Flood Control Project Area, Upper Souris River, North Dakota

Kent N. Good

Richard A. Fox

Contributions by Michele Nicolai

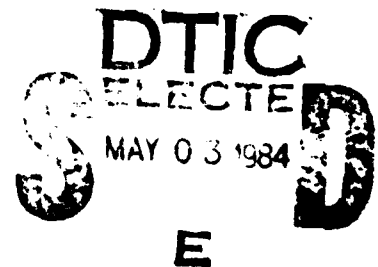
**Department of Anthropology and Archaeology
University of North Dakota
Grand Forks, North Dakota 58202**

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Final Report for Period September 1977 - June 1978

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St. Paul District
St. Paul, Minnesota 55101**



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period are located predominately in the Northern Floodplain Forest. Plains Nomadic occupants probably used both the Floodplain Forest and Terrace Grasslands. Cultural material analyses suggest that ceramic components with a preponderance of Swan River chert lithic debitage are Plains Village manifestations. Non-ceramic manifestations with an abundance of Knife River flint debitage appear to represent Plains Nomadic cultural types. Both cultural components co-existed in the Upper Souris Valley throughout Woodland times.

The 1977 survey points out two facts. First, much of the archaeological resources were irretrievably lost after the construction of Lake Darling in the 1930's. Secondly, a significant body of data remains which must be investigated thoroughly and be mitigated on a basis equal with other project considerations. Most individual site recommendations are based on the assumption that the proposed Burlington Dam will adversely affect the known sites.

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PROPOSED BURLINGTON DAM

Flood Control Project Area, Upper Souris River, North Dakota

Kent N. Good
Richard A. Fox

Department of Anthropology and Archaeology
University of North Dakota
Grand Forks, North Dakota 58202

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Fred Schneider

ABSTRACT

Under the conditions set forth in U.S. Army Corps of Engineers, St. Paul District, Contract # DACW37-77-C-0128, the Department of Anthropology and Archaeology, University of North Dakota conducted an archaeological survey of the proposed Burlington Dam Flood Control Project acreage. Forty-eight archaeological sites were identified during the 1977 survey.

The project acreage was surveyed according to pre-conceived priorities. Priority one was Area 1 (Lake Darling area); the acreage downstream from Lake Darling dam to the proposed Burlington Dam site was second in priority. These two were intensively surveyed by a pedestrian visual inspection. The third priority area, from the head of Lake Darling to the Canadian border, was spot-checked only.

These areas maintain five general eco-zones. Prehistoric human adaptations favored the Northern Floodplain Forest, Terrace Grasslands, and Upland Prairie eco-zones. Plains Village manifestations from the Woodland time period are located predominantly in the Northern Floodplain Forest. Plains Nomadic occupants probably used both the Floodplain Forest and the Terrace Grasslands.

Cultural material analyses suggest that ceramic components with a preponderance of Swan River chert lithic debitage are Plains Village manifestations. Non-ceramic manifestations with an abundance of Knife River flint debitage appear to represent Plains Nomadic cultural types. Both cultural components co-existed in the Upper Souris Valley throughout Woodland times. The two types of lithic materials indicate influences (diffusion, trade, and/or migration) from the south near the Knife River flint quarries and from the north in Southwestern Manitoba where Swan River chert occurs locally.

The 1977 survey points out two facts. First, much of the archaeological resources were irretrievably lost after the construction of Lake Darling in the 1930's. Secondly, despite the earlier unwise cultural resource management, a significant body of data remains. This data must be investigated thoroughly and be mitigated on a basis equal with other project considerations. To this end, an extensive survey, mapping and testing program has been recommended. Testing in uncultivated, grass obscured areas where there are no apparent surface cultural indications is also necessary. Most individual site recommendations are based on the assumption that the proposed Burlington Dam will adversely affect the known sites. Should qualified Corps of Engineers personnel determine that particular sites will not be affected, then our recommendations need not be implemented. Avoidance, where possible, will effectively insure the most desirable alternative, that of preservation. However, it is apparent that a significant number of sites will eventually be disturbed or destroyed. These must be further evaluated in order to assess NRHP significance and/or potential for preservation or salvage. Historical research and recommendations are part of the requirements of this contract but will be included under separate cover.

ACKNOWLEDGEMENTS

We gratefully acknowledge the cooperation of the U.S. Army Corps of Engineers, St. Paul District, for their concern for our cultural resources and the financial support. Personnel at the Upper Souris Wildlife Refuge were more than accomodating. Without their cooperation, significant archaeological resources could not have been identified and evaluated.

Under trying circumstances, the individual landowners were graciously cooperative in granting us permission to inspect their lands. Most of all, we are deeply grateful to them.

One of the lasting benefits of our profession is the chance to meet people and make new friends. The cordial acceptance of our crew by residents in Mohall, the Mouse River Park and other communities was appreciated. Special thanks go to Beth and Delbert Johnson, Oakley, Elvin, Roland and Pat DeLong, Archie McTaggert, Joel Sandeen, Mr. and Mrs. Richie Johnson and Lloyd Nygard and the other residents of the valley.

Michele Nicolai typed the draft and Colleen Schweigert typed the final copy of this report.

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INTRODUCTION

Purpose of Study

During the fall of 1977, the Department of Anthropology and Archaeology, University of North Dakota, contracted with the U.S. Army Corps of Engineers, St. Paul District, for a cultural resource study of the proposed Burlington Dam acreage within the Souris River Valley, Ward and Renville Counties, North Dakota. The Souris River is also known as the Mouse River. The work was conducted under the terms of Contract Number DACW37-77-C-0128.

The purpose of the study was to provide the Corps of Engineers with an inventory of the cultural resources located within the project area, to provide an analysis of the significance of each resource within a local, regional and/or national context and to provide recommendations concerning mitigative options (including National Register of Historic Places significance, where possible, destruction, testing, salvage excavation or preservation). Professional goals were incorporated into the study on a basis equal to cultural resource management considerations. As a result, it is anticipated that the analyses and conclusions contained herein can serve as a working model for future investigations into the archaeology of the Souris Loop area.

The Study Area

The Burlington Dam project area (Figures 1 and 3) include acreage from the proposed dam site two miles north of Burlington, North Dakota (NE $\frac{1}{4}$ of Section 26, Township 156 North, Range 83 West),

northerly along the Souris River Valley to the Canadian border. Pursuant to the contractual agreement, the entire project area was apportioned into three parcels and, for archaeological investigative purposes, assigned differing priorities. The historical/architectural survey methods and analyses are to be implemented at a later date under the same contract number.

The highest priority survey acreage, Area 1 (Figures 1 and 3), included the design pool area along the shorelines of Lake Darling and associated construction, road, levee and borrow areas. Specifically, we conducted an intensive survey from the Lake Darling shoreline to elevation 1620 feet MSL, from Dam No. 83 northerly to the river crossing three miles east of Tolley, North Dakota (SE $\frac{1}{4}$ of Section 25, Township 161 North, Range 86 West). Additional areas surveyed included fill and borrow areas in the SW $\frac{1}{4}$ of Section 19 and extending into the NW $\frac{1}{4}$ of Section 30; in the east half of Section 30 and extending into the SW $\frac{1}{4}$ of Section 29; and in the SE $\frac{1}{4}$ of Section 29, the SW $\frac{1}{4}$ of Section 28 and the NW $\frac{1}{4}$ of Section 33, all in Township 160 North, Range 85 West. We also inspected numerous bluffs and terraces above elevation 1620 feet that seemed likely to be endangered by erosional activity from higher water levels. We found several sites within this context. The total number of archaeological sites discovered in Area 1 numbered twenty-three.

Acreage within the Burlington Reservoir from the proposed dam site (NE $\frac{1}{4}$ of Section 26, Township 156 North, Range 83 West) to Dam No. 83 is designated as Area 2 (Figures 1 and 3). We performed an intensive survey of this area from the Souris River to elevation 1620

feet, excluding marsh areas. As in Area 1, we investigated land above elevation 1620 feet potentially susceptible to shoreline erosion. Other areas surveyed included borrow areas in the NW $\frac{1}{4}$ of Section 6, Township 157 North, Range 84 West; NW $\frac{1}{4}$ of Section 26, Township 156 North, Range 83 West; and in the NW $\frac{1}{4}$ of Section 25, Township 156 North, Range 83 West.

We discovered eleven archaeological sites in Area 2. This smaller inventory (less than one-half the site inventory of a predominantly inundated Area 1) is apparently due to floodplain soil types which do not support agricultural activities. As a consequence, much of the acreage has not been cultivated and remains in trees or native grass cover. This phenomenon, coupled with undistributed flood deposits and numerous marshes, has effectively obscured indications of suspected sites. A high incidence of sites on cultivated acreage in Area 3 supports this supposition.

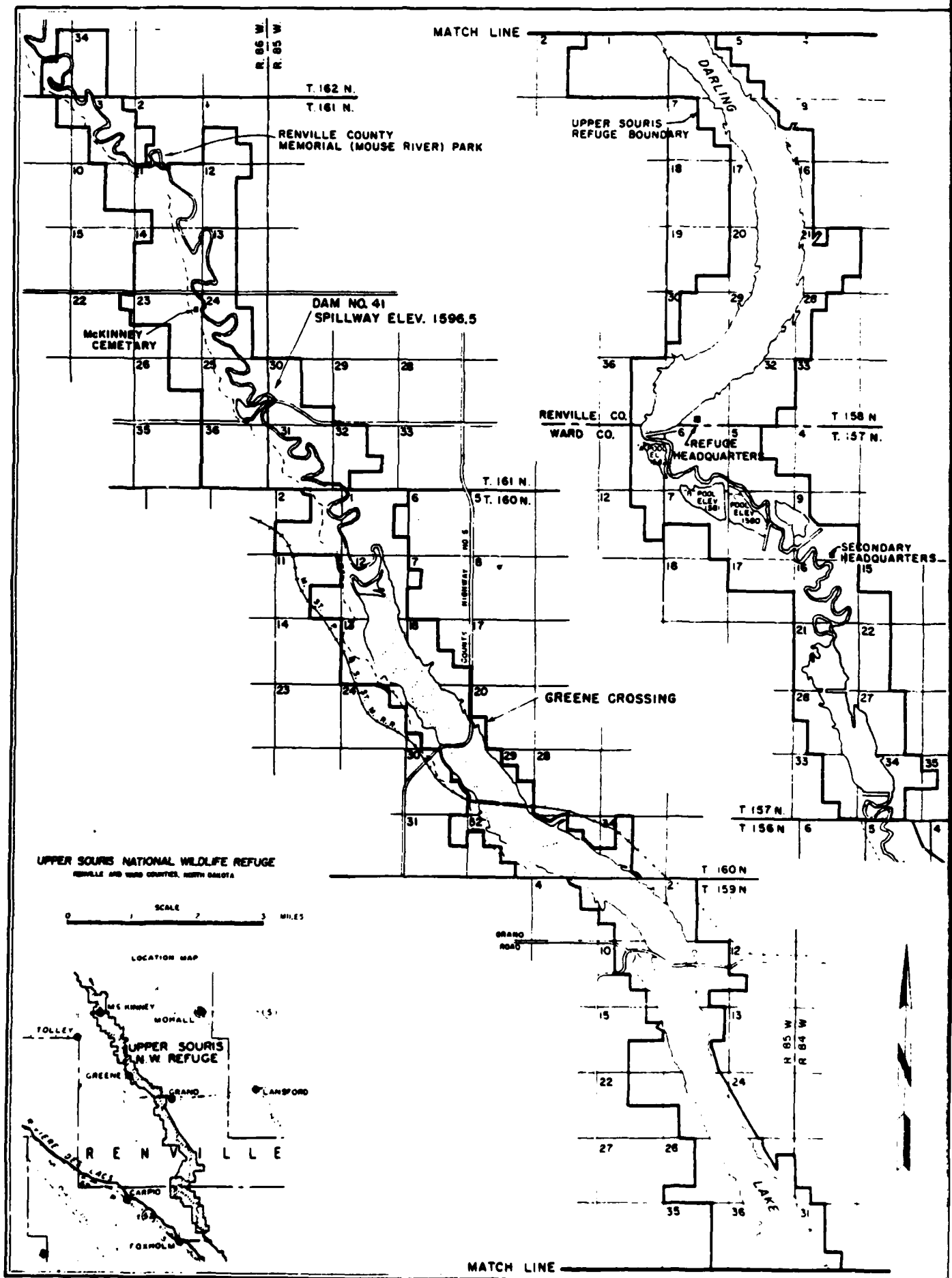
In a 1975 reconnaissance level survey for the U.S. Army Corps of Engineers, Franke (1975) located eight archaeological sites within or in the vicinity of Area 2. Of these, only two lay between the water level and elevation 1620 feet; the others are situated above elevation 1620 feet. None are in the floodplain.

Area 3, the lowest priority acreage, extends from the river crossing (SE $\frac{1}{4}$ of Section 25, Township 156 North, Range 86 West) northerly along the Souris River Valley to the Canadian border and includes the proposed reservoir pool area (Figure 1). The southern portion of this acreage was spot-checked only on a random basis. The investigation was confined to the floodplain and is not considered sufficient for even a

Figure 1

General Overview

Upper Souris Wildlife Refuge



reconnaissance level survey. We located six archaeological sites in Area 3.

We also intensively surveyed the proposed Des Lacs diversion tunnel right-of-way extending from the common intersection of Sections 4, 5, 8, and 9, Township 156 North, Range 86 West, exactly true southwest to the Des Lacs River. We examined a 300 meter wide corridor across the upland divide and the area between the proposed diversion dam on the Des Lacs River and the tunnel inlet. Cultural resources were absent in both of these areas. However, there is an archaeological site (32WD404) located at the proposed tunnel outlet on the Souris River.

Theoretical Orientation

This study analyzes the prehistoric cultural exploitation of the Upper Souris Valley through the examination of relationships between archaeological remains and ecological zones. Through the use of this model, hypotheses can be formulated regarding change and/or continuity in cultural-ecological associations, particularly economic exploitation, through time.

In the study area there are a variety of archaeological site types found in association with five eco-zone systems (Figure 2). Site types are established by inferring behavior from ceramic, stone and faunal assemblages and site features. Each site can be assigned to a specific eco-zone; some of these sites can be dated through the use of relative dating techniques. By simple comparative methods, it is possible to examine regularities, if any, between eco-zones and site types for any given archaeological time period. Cultural processes through time can

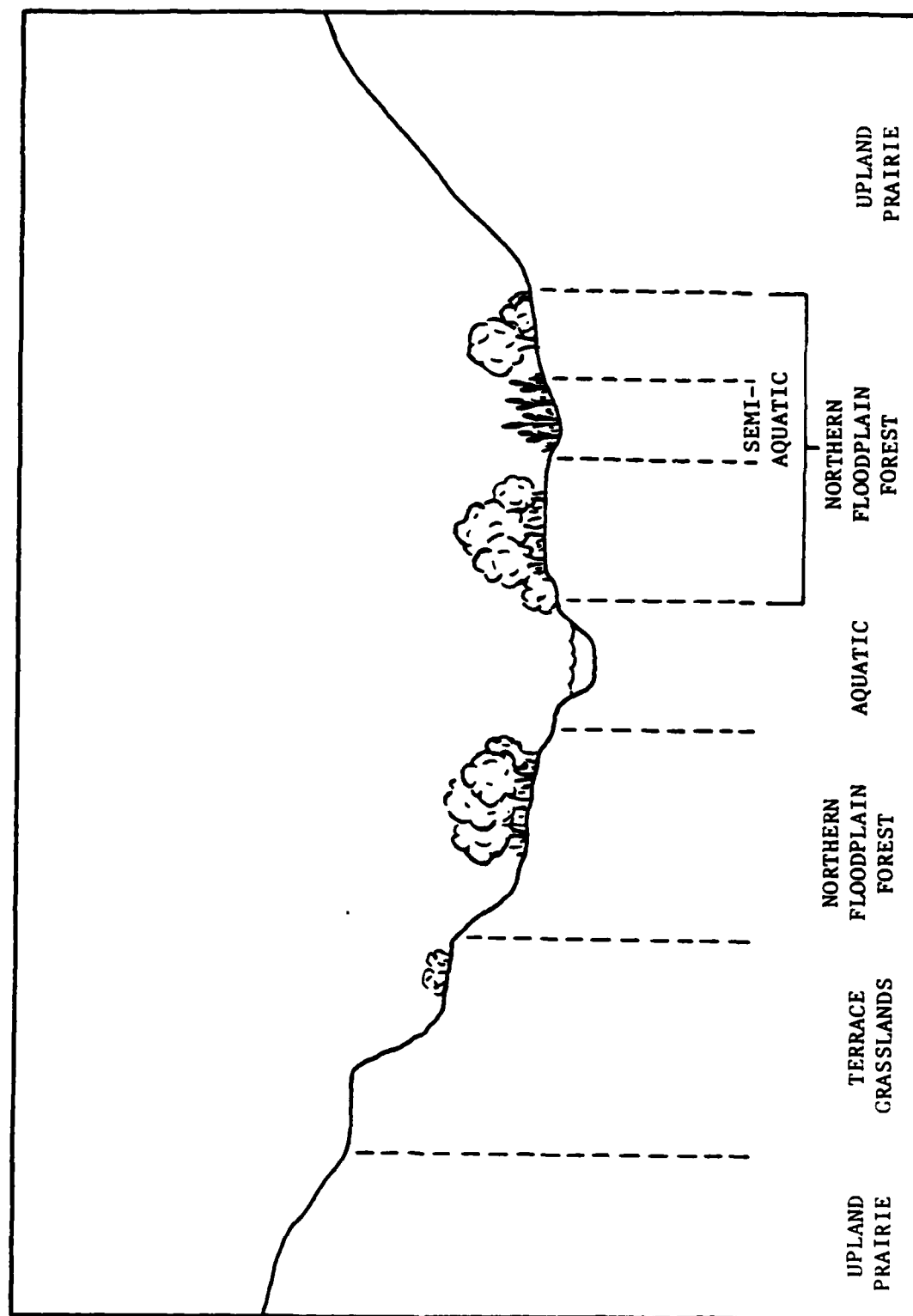


Figure 2 . ECO-ZONE SCHEMATIC OF UPPER SOURIS RIVER VALLEY, WARD AND RENVILLE COUNTIES, N.D.

then be postulated.

Survey Methodology

The survey of the proposed Burlington Dam project area commenced on September 16, 1977, and continued until field operations were completed on November 18, 1977. The field crew consisted of Richard A. Fox, Jr., and Kent W. Good, co-field directors, and William Dore and John Kjos, field assistants. Fred Schneider served as Principal Investigator. For the first month of the field season, a competent amateur, Bob Gardner, assisted the field crew.

Prior to entering the field, we initiated a thorough records and literature search designed to identify known sites and/or site leads and to become familiar with the regional archaeology and physiographic setting. These investigations enabled us to prepare and implement the following survey methods:

Area 1: We investigated this area of highest priority first. Visual inspection of the land surface began September 16, 1977, and was completed on October 15, 1977, with a total of 125 man days expended. Each work day varied in length from eight to ten hours. The low water level of Lake Darling facilitated the shoreline inspections and allowed us to complete Area 1 more quickly than expected. It was not necessary to use a boat.

The intensive survey of the Lake Darling area commenced at Dam No. 83 and proceeded northerly along the east bank, then continued downstream on the west bank. One man walked the shoreline inspecting the cutbanks, shoreline and exposed lake bottom; four others were spaced along the terraces and mid-slopes (up to elevation 1620 feet) at

approximately 5 meter intervals. Often the rough terrain would not allow maintenance of a close interval, but this was invariably on steep slopes where human activity appeared unlikely.

The low water level of Lake Darling permitted inspection of some areas normally inundated. This resulted in the location of several site areas containing a variety of cultural debris. In some instances, it is not known whether these represent actual sites or are the result of wave action depositing materials along the shoreline.

Most of the Area 1 acreage is within the Upper Souris Wildlife Refuge where native vegetation is maintained. Many areas, particularly the terraces, are heavily overgrown with tall grasses. The probability exists that surface remnants of some archaeological sites are totally obscured by the vegetation; others, such as tipi ring sites, are readily discernible because of the stone features. Shovel testing in these areas was not feasible because of the enormous amounts of time required and the desire to leave the Refuge undisturbed until an approved testing plan can be agreed upon.

Other areas intensively surveyed included prominent hilltops, terraces, knolls and points of land that, although they were often above elevation 1620 feet, seemed threatened by limnetic erosional processes or slumping. We also examined the gullies and washes that discharge spring run-off waters into the lake. Marsh areas and nesting islands were not examined because of the heavy vegetation cover.

Area 2: Survey operations began on October 24, 1977, and continued through November 12, 1977. We expended 96 man days on this area of second priority. The surface inspection began on the west bank at Dam

No. 83 and progressed southward to the proposed dam site, thence along the road relocation right-of-way to the south edge of Section 26, Township 156 North, Range 83 West. The east bank survey began at the proposed dam site and terminated at Dam No. 83.

Much of the north portion of Area 2 is marshland, particularly from Dam No. 83 to Dam No. 96. Similarly, native grasses and groves of hardwood forests dominate the floodplain acreage from Dam No. 96 to the southern reaches of the study area. Soil types not conducive to agriculture account for this condition. As was the case in Area 1, the maintenance of natural vegetal conditions within the Upper Souris Wildlife Refuge tends to obscure the surface of a substantial amount of Area 2 acreage. The southern terminus of the Refuge is at the conjunction of Townships 157 North and 156 North in Range 84 West.

It was impossible to survey marsh areas. We walked transects across floodplain forest acreage and grassy meadows in an attempt to detect archaeological surface features. Other surface cultural debris, if indeed present, tended to be obscured by the vegetation. Usually one person was assigned to investigate areas of this type. We surveyed cultivated areas and river terraces by spacing investigators at five to ten meter intervals and walking nearly parallel to the river's course. When accessible, we investigated the vertical faces of the river cutbanks. Although scarce in Area 2, oxbows under cultivation received close scrutiny. Terraces above elevation 1620 feet were inspected when we concluded that they might be susceptible to reservoir erosion. Seasonal run-off tributaries were surveyed up to elevation 1620 feet.

Area 3: This acreage was designated as the lowest priority. Two teams of two investigators each selected areas in the floodplain thought to be likely spots for prehistoric habitation. Generally, these areas were located in oxbows under cultivation. The unexpected lack of archaeological sites on similar acreage (oxbows not cultivated because of adverse soil types) in Area 2 prompted this spot-check strategy. The discovery of a high incidence of sites located on or near the plowed fields that we inspected in Area 3 tends to support our conclusion that additional sites do exist along the Area 2 floodplain, but are obscured by heavy vegetal growth. Not incidentally, the floodplain soil types in Area 3 are generally well suited for crop cultivation. The agricultural activities have exposed floodplain sites that might otherwise remain obscured.

We were able to spend only a portion of the last week in the field spot checking Area 3. As a consequence, we did not investigate project lands above Section 36, Township 163 North, Range 87 West. To reiterate, the lands investigated were selected on a random spot check basis. Under no circumstances was the Area 3 survey of sufficient intensity to meet the requirements of even a reconnaissance level survey.

Whenever an archaeological site was discovered, a thorough ground search was conducted in order to determine the nature and extent of cultural materials. The sampling procedure included observation of the lithic debitage and collecting materials within lithic types (e.g., percussion flakes, pressure flakes, cores, etc.) and/or material types (e.g., obsidian, chert, etc.), collecting all observed artifacts, recovering faunal remains, if any, and recording cultural features.

North Dakota Cultural Resources Survey forms were utilized to record sites in the field. Color slides and the black and white photographs of each site are noted on the individual site forms and filed in the Anthropology and Archaeology Department records. All sites were assigned Smithsonian Trinomial site numbers and common names. Maps utilized in the field were United States Geological Survey 7.5' Topographical quadrangle maps Burlington (1948), Carpio, N.E. (1949), Grano (1949), Grano, S.W. (1949), Greene (1949), Tolley (1948), Mouse River Park (1949), Mouse River Park, N.E. (1949), and Mouse River Park, N.W. (1949).

AREA DESCRIBED

The Souris River heads near Weyburn, Saskatchewan, Canada, and flows southeasterly into North Dakota (the Upper Souris Loop). After looping to the north (the Lower Souris Loop), the river re-enters Canada above Westhope, North Dakota, and eventually discharges into the Assiniboine River near Treesbank, Manitoba. The entire river valley in North Dakota, called the "Souris Loop", is approximately 338 kilometers long. The complex meander system within the valley has resulted in a 579 kilometer long river channel.

The Souris River Loop lies wholly within the Western Lake Section of the Central Lowlands physiographic province. Topography is characterized primarily by the Souris drainage system, a gently undulating ground moraine plain and the flat, featureless ancient lake bed of glacial Lake Souris. The loop area is bounded on the west by the Coteau du Missouri, a unit of the Great Plains Province (Lemke 1960:Fig.1,6).

In the study area (the Upper Souris Loop), the valley varies in width from approximately 600 meters at the international boundary to nearly 1500 meters wide just north of Minot, North Dakota. The valley walls are generally quite steep and often terraced. The underfit river meanders in an oversized valley cut into a pre-existing shallow sag by glacial melt waters. The valley north of the confluence of the Des Lacs River is incised to an average depth of 48 meters (Lemke 1960:7). Average stream gradient is about one third meter per kilometer (Lemke 1960:8). Seasonal run-off coulees and gullies along the river's

course are numerous; most enter perpendicular to the valley and are usually less than four to five kilometers long.

The Upper Souris Valley lies in stark contrast to the surrounding upland prairie. The flat floodplain supports stands of hardwood forests along with understory shrubs and grasses. Grassy meadows are interspersed along the river course and comprise most of the floodplain acreage. Today, these meadows, depending on soil type, are chiefly under cultivation. The terraces and steep midslopes maintain mixed prairie grasses and shrubbery. The side coulees are often heavily wooded.

Artificial Lake Darling presently covers much of the valley floor. The dam was constructed in the mid 1930's as part of the Upper Souris National Wildlife Refuge to create and regulate wetland habitats. Several other small dams along the river are utilized to maintain marshes and ponds for wetland wildlife. Prior to the creation of Lake Darling and other wildlife refuge areas, the river meandered much the same as do the free flowing portions today. Portions of the valley floor contained natural ponds (Lemke 1960:7) in earlier times.

Geology

Pleistocene glacial geologic features dominate the Souris Valley and surrounding landscape. Probably all four sub-stages of the Wisconsin glaciation advanced over the Souris loop area, including the Mankato ice (Lemke 1960:1). Except for some Late Cretaceous and Tertiary exposures (Lemke 1960:1), the surface drift from the Mankato advance accounts for most of the topographic salience. Subsurface formations

from the Jurassic, Triassic, Mississippian, Devonian, Silurian and Ordovician periods have been detected in drill cores (Lemke 1960:1). These Mesozoic and Paleozoic era strata are the result of alternating marine submergences and emergences over a period of nearly 500 million years (Hainer 1956). Precambrian deposits underlie the younger strata at depths from the surface of greater than 2400 meters (Lemke 1960:1).

What is now recognized as the Tongue River member of the Fort Union formation comprised the pre-glacial topography in and adjacent to the study area (Schmid 1963). Extensive swamps and abundant flora flourished. With the onset of the last North American ice advance, the Wisconsin glaciation (and in particular, the Mankato sub-stage), glacial drift features began to dominate the topography.

In the Upper Souris area, the surface drift forms a gently undulating ground moraine plain. Eastward in the downstream area (the Lower Loop) lies the ancient lake bed of glacial Lake Souris (Lemke 1960:6). Geologists theorize that a portion of the Souris Valley was formed prior to the Wisconsin glacial stage. However, the existing valley within the study area was cut into the ground moraine plain by glacial melt waters as the Mankato ice receded. Originally, the melt waters discharged through a series of spillways southeastward into glacial Lake Souris. As the ice within the Lower Souris Loop melted, the flow was left unimpeded and the glacial waters drained northward into Canada (Lemke 1960:114-116).

It is suspected that the terrace remnants in the Upper Souris River Valley were formed by glacial melt waters (Lemke 1960:114). These highly permeable terraces, called kame terraces, are a conspicuous geologic

feature in the study area. They are composed primarily of sand and gravel deposits ranging in thickness from a few centimeters to in excess of 15 meters. Carbonate, granite and gneissic rocks occur most commonly in the terraces (Lemke 1960:2). The kame terraces and valley mid-slopes transition at the valley rim into ground moraine that varies in thickness from 15 to 60 meters. The ground moraine is nearly impermeable (Lemke 1960:1).

Within the study area, the valley floor is characterized by Pleistocene and Recent deposits. Alluvial deposits continue to be laid down, but stream gradient and flow has not allowed a significantly large accumulation of riparian alluvium (Lemke 1960:117). Similarly, no appreciable erosion of valley floor glacial deposits has occurred in Recent times. The alluvial deposits consist of clay, silt and sand, some up to nine meters in thickness (Corps of Engineers 1978:23).

Soils

While in the field we became perplexed after discovering very little cultivated acreage within the Area 2 floodplain. Initially, we found this to be particularly strange for October and November when fields are generally lying fallow. Answers to inquiries directed to local farmers soon indicated that much of the Area 2 floodplain was unsuited for cultivation. Subsequent literature research validated these statements. In fact, floodplain soil types below Lake Darling (Area 2) are conspicuously different than those above the lake (Area 3). Areas 1, 2, and 3 are examined north to south.

Area 3: Soils in this area are classified in two categories,

floodplain soils and those soils that occur above the floodplain up to the valley rim. The latter category is subsumed under the Zahl-Max association. This soil association is gently rolling to steep, is well drained and is found on the valley's side slopes. Dominant types are the Zahl-Max loams ranging from nine to sixty percent (9.0% - 60.0%) slope. The parent material is glacial till (USDA 1974:76,78). Because of the steep slopes, Zahl-Max loams are used as pasture (USDA 1977:3). Minor soils in this association include the Svea, Barnes and Renshaw loams. They, too, are derived from glacial till (USDA 1977:1). Their slopes range from one to six percent (1.0% - 6.0%) and they are mostly used for crops (USDA 1977:7,24,26). Another minor soil series, the Sioux loam, occurs on glacial outwash plains but is not good for growing crops (USDA 1977:25).

Floodplain soil types are primarily composed of LaDelle, Ludden and Velva varieties. The LaDelle silty clay loam is most common. Run-off is slow and most areas are used for cultivated crops (USDA 1977:20). Velva loam occurs frequently. Like the LaDelle loams, the Velva loam is suited to all crops commonly grown in Renville County. Some areas in native grass are used for pasture and hay (USDA 1977:30). Ludden silty clay and very wet Ludden silty clay are least frequent in Area 3. The latter is very seldom cultivated because it is too wet. It is better suited to hay and pasture. About one half the Ludden silty clay acreage is cultivated; the remainder is in native woodland and grass (USDA 1977:21).

Area 1: Most of the Area 1 valley floor is presently either inundated by Lake Darling or covered with freshwater marsh. Zahl, Svea, Sioux

and Barnes loams are found at the lake's edge. Formerly these comprised the mid and upper valley slopes. Within the wildlife refuge, these loams support dense stands of native grasses and some wooded areas. A few private parcels are cultivated.

Area 2: Postglacial alluvium dominates the Area 2 floodplain, primarily in the form of Ludden clay and depressed Ludden clay. Some Velva loam does occur. The latter is well suited to crops, grass and trees. Much of it is cultivated (USDA 1974:33). The Ludden clays are not at all suited to cultivation; most of the soil is in grass with a few stands of shrubbery and forest along the river (USDA 1974:20-21). Examination of detailed soil maps (USDA 1974:92ff) of the study area indicates that, excluding freshwater marsh, Ludden clays comprise well over 90% of the Area 2 floodplain. It is not known if this condition existed formerly or if water regulation from Lake Darling has aided Ludden soil development. At any rate, Ludden clays are utilized for pasture or growing hay and are not cultivated.

This condition has serious ramifications on archaeological survey operations designed to identify and evaluate non-renewable cultural resources. Plowed fields facilitate identification of surface sites, usually without seriously altering the assemblage. Only those soils conducive to cultivation are regularly plowed. In this instance, the Ludden clays do not support cultivated crops so are not plowed. They are left in grassy meadows and wooded areas. This makes identification of surface sites on Ludden clays nearly impossible. Equally important, the Ludden clays have developed along the river where shelter, fuel, a reliable water supply and a variety of game animals would have been

available to prehistoric inhabitants. Thus, the probability of the existence of sites in the area might reasonably be expected to be high; yet few, if any, sites were discovered on the Ludden clays. It must be assumed then that sites do exist but are obscured by the growing conditions peculiar to Ludden clays. This assumption is bolstered by the existence of extensive occupation sites in plowed floodplain acreage of Area 3. These soils are generally well suited for cultivation. This matter is discussed further in the "Recommendations" section.

The mid and upper slopes of Area 2 are quite similar to those found in Areas 1 and 3. The soils are well drained loamy soils formed from glacial till. Zahl types occur on the upper slopes, Max soils on lower slopes (USDA 1974:5). Both are primarily used for pasture (USDA 1974:6). The Wabek series occurs occasionally. It is kept in native grasses (USDA 1974:34). Other minor types that have developed from glacial till are Renshaw and Buse-Barnes loams. These two are usually cultivated (USDA 1974:12,28).

Climate

The effects of climate are integral factors in the formation and maintenance of eco-systems. Moisture availability and temperature variations play important roles in soil development. Soil types, in turn, help determine the floral assemblage in the ecological setting.

The study area has a cool, dry-subhumid continental climate complete with long, cold winters, a short, warm growing season and erratic precipitation (USDA 1977:71). Limited, seasonal rainfall has favored the accumulation of organic material in the soil (USDA 1974:82) as have

cool temperatures (USDA 1977:71). Rainfall has not been sufficient to leach the soil of nutrients or cause substantial soil erosion (USDA 1974:82). Alternate periods of freezing and thawing tend to mix soils thereby improving soil conditions (USDA 1977:71).

These conditions have been favorable to the growth of prairie vegetation (USDA 1977:71) along the mid-slopes of the Souris Valley and above. Nearer the floodplain where the effects of rainfall variations are less critical, the climate is favorable to the maintenance of tall grasses and hardwood trees.

Flora

The flora of the Upper Souris Valley is an extension of the eastern deciduous forest (Rudd 1951). From Lautenschlager's (1964:31) observations of the Upper Souris in Ward County, North Dakota, it appears that the dominant vegetation unit within the study area corresponds closely to K  chler's (1964:98) Northern Floodplain Forest (Populus - Salix - Ulmus). Burgess et al. (1973:19) agree and characterize this broadleaf, deciduous forest type as low to tall, open to dense and often with lianas. In an earlier study, Bailey (1926:13) identified Souris Valley vegetation communities as the eastern (humid) division of the Transition Life Zone.

Elements of the Oak Savanna (Quercus - Andropogon) vegetation unit (K  chler 1964:81) are also present in the flood plain forest. Lautenschlager (1964:31) did not encounter bur oak (Q. macrocarpa), a dominant in the Oak Savanna unit, throughout the study area north of Burlington, North Dakota. However, his observations were confined to the river valley within Ward County. It is suspected that this species does occur in and

near the study area, particularly in the wooded coulees. Other Oak Savanna dominants (e.g., big and little bluestem; Andropogon gerardi and A. scoparius) do occur frequently, interspersed throughout the forested areas.

Valley floor vegetation can be analyzed in terms of low bottom and high bottom flora, much in the same manner as reported in Burgess et al. (1973:19). Low bottom species in the study area include American elm (Ulmus americanus), green ash (Fraxinus pennsylvanica), box elder (Acer negundo) and Populus spp. (Lautenschlager 1964:31). Other components of the Kúchler's Northern Floodplain Forest or Oak Savanna identified by Lautenschlager (1964:31) as occurring along the river bottom are black willow (Salix lutea) and western wild rose (Rosa woodsii). High bottom species are recognized by Lautenschlager (1964:26) as occurring in the coulees along river valleys. They also occur along the terraces and midslopes of the Souris Valley. High bottom areas, unlike lower bottoms, are not flooded or eroded by the river. Dominant high bottom species include Agropyron spp., Andropogon spp., and Bouteloua spp.

Some soils in the study area floodplain, particularly in Ward County, are not conducive to cultivation (see Soil section). These low bottom areas, usually in or near oxbows and interspersed throughout forest stands, are dominated by reed grasses (Calamagrostis inexpansa, Calamovilfa longifolia), blue grama (Bouteloua gracilis), prairie cordgrass (Spartina pectinata) and sedges (Carex ssp.) (Corps of Engineers 1978:50, scientific names from Stevens 1963). Other areas have been converted to tame and

TABLE 1

Documented Use of Plants Found
in the Upper Souris River Valley

	Vegetation Zone (1)	Food	Medicine	Dye	Utility or Technology	Source of Information*
<u>Acer negundo</u> (Box Elder)	NFF	X				1p.41; 2pp.49,170; 4p.101
<u>Achillea lanulosa</u> (Western Yarrow)	UP		X			5p.189
<u>Agropyron cristatum</u> (Crested Wheatgrass)	TG	X				1p.7
<u>Agropyron repens</u> (Quack grass)	TG	X				1p.7
<u>Agropyron trachycaulum</u> (Slender Wheatgrass)	NFF TG	X				1p.7
<u>Amelanchier alnifolia</u> (Juneberry)	UP TG	X			X	1p.30; 2p.190; 4p.87; 5p.176
<u>Andropogon furcatus</u> (Big bluestem)	NFF		X			3p.286; 4p.68
<u>Anemone canadensis</u> (Canada Anemone)	NFF		X			2p.167
<u>Astragalus caryocarpus</u> (Ground plum)	UP TG	X	X			1p.36; 2p.170
<u>Campanula rotundifolia</u> (Bluebell)	UP TG		X			3p.288
<u>Cornus stolonifera</u> (Kinnikinnick)	A SA	X	X	X		1p.49; 2pp.181,194; 3p.288; 4p.108; 5p.183

* Citations are: 1) Yanovsky 1936; 2) Yarnell 1964; 3) Densmore 1928;
4) Gilmore 1911 and 1912; and 5) Grinnell 1923.
(1) Refer to page 7.

TABLE 1 --continued

	Vegetation Zone	Food	Medicine	Dye	Utility or Technology	Source of Information
<u>Echinacea angustifolia</u> (Purple Cone Flower)	UP TG		X			5p.188
<u>Fraxinus pennsylvanica</u> (Green Ash)	NFF	X	X		X	1p.52; 2pp.52,191; 4p.108
<u>Geum triflorum</u> (Torch flower)	TG	X	X			1p.32; 2p.169
<u>Oxytropis lamberti</u> (Purple Loco)	UP	X				1p.38; 5p.179
<u>Prunus americana</u> (Wild Plum)	NFF TG	X	X		X	1p.32; 2p.61; 3p.291; 4p.87
<u>Prunus virginiana</u> (Chokecherry)	TG NFF SA	X	X			1p.33; 2pp.61,158; 3p.291; 4p.88; 5p.177
<u>Psoralea argophylla</u> (Silverleaf Scurfpea)	TG UP	X	X			1p.38; 2p.170; 3p.291; 5p.178
<u>Psoralea esculenta</u> (Tipsin)	UP	X				1p.38; 4p.92; 5p.178
<u>Quercus macrocarpa</u> (Bur Oak)	TG NFF	X	X	X		1p.14; 2pp.69,166; 3p.292; 4p.75
<u>Ribes americanum</u> (Wild black Currant)	NFF	X	X			1p.29; 2p.57; 3p.292; 4p.84; 5p.175
<u>Salix spp.</u> (Willow)	NFF A SA		X		X	2p.167; 3p.292; 4p.73
<u>Solidago altissima</u> (Tall Goldenrod)	A SA		X			3p.293; 4p.133
<u>Ulmus americana</u> (American Elm)	NFF		X		X	2pp.167,189; 4p.75
<u>Viburnum lentago</u> (Black Haw)	A SA	X	X			1p.58; 2pp.64,174; 4p.115

provide shelter from the often severe climate and a sanctuary from predators. In turn, animal life is a significant contributor to the soils that support floral communities (USDA 1974:82). Micro-organisms convert organic matter to humus; earthworms and rodents tend to mix the soil. Insects and other animals help maintain a vegetation density complimentary to the land's carrying capacity.

Shelford (1963:118) has characterized this ecological relationship as the floodplain forest biotic community of the grassland biome. Earlier, Bailey (1926:11) assigned the Souris River Valley biota to the Eastern (humid) Transition life zone. Vegetation characteristics of this life zone (and Shelford's forest community) closely resemble the floral communities noted by K  chler (1964) and outlined in the Flora section. This floral assemblage helps provide a suitable habitat for a variety of animals.

Animal influents include a number of smaller mammals. The ground squirrel (Citellus richarsoni) and jack rabbit (Lepus townsendii) often frequent the river bottoms. A variety of rodents (Peromyscus, Microtis) inhabit the area. Predators include the red fox (Vulpes vulpes), the longtailed weasel (Mustela frevata) and coyote (Canis latrans) (Bailey 1926:11,12).

Larger animal dominants that presently inhabit the valley are limited to white-tail deer (Odocoileus virginianus) and pronghorn antelope (Antilocapra americana). Formerly, mule deer (Odocoileus hemionus), elk (Cervus canadensis) and grizzly bear (Ursus horribiles) were common throughout the area (Bailey 1923:33,41,194). Other mammals may have included bighorn sheep (Ovis canadensis), moose (Alces americanus) and

PREVIOUS ARCHAEOLOGY

Little professional archaeological research has been conducted in and around the study area. In 1974 and 1975 the North Dakota State Historical Society conducted a reconnaissance level survey of restricted portions of the Burlington Project to determine the extent and type of resources along the Upper Souris Valley. Eight archaeological sites consisting of three rock cairns, one disturbed burial mound and four rock alignments (three stone circle sites and one petroform) were discovered (Franke 1975) (see Appendix B for site forms). These investigations provided the impetus for conducting a records and literature search and additional reconnaissance as part of the planning for the Burlington Flood Control Project (Schneider 1977). The purpose of the study was to identify sites, objects, structures of interest or importance to local, state, regional and/or national prehistory and history. The study was also designed to provide input for facilitating management of the area's cultural resources. The literature and records search summarized the scholarly knowledge of the region's cultural resources. Historical and paleontological resource considerations are also covered in the report.

One of the major contributions of Schneider's preliminary cultural resource investigation of the Upper Souris River Basin was the identification of over 50 site leads in Ward and Renville Counties. Site leads are:

...those sites which may be lacking a record of their legal description, information as to the type of site, information as to who recorded the site, or may consist only of general comments or observations about

sites or artifacts. Many were taken from historic journals, informants or are the result of poor recordkeeping by archaeologists (Schneider 1977).

All of the site leads identified in Schneider's report were collected by Thad Hecker, an amateur, in 1937 and 1938 for the Works Progress Administration. Table 2 provides legal locations and types of site leads in the study area as determined by Hecker. Sites that are now inundated or covered by marsh are so indicated. This information was determined by comparing Hecker's legal locations with topographical information depicted by respective U.S.G.S. 7.5' topographical maps. Those site leads that might correspond to sites identified in the 1977 intensive survey are also indicated. The other site leads were not confirmed during the intensive survey.

Past experience with similar records indicates that many have faulty legal descriptions, site descriptions and/or site identifications. At times, sites turn out to be natural features rather than mounds, cairns, tipi rings, or petroforms. Many sites have been greatly modified over the past forty years of agricultural and construction activities. In general, the site lead files have proven to be of limited utility (Schneider 1977:11).

Regional Archaeology

As is the case with the study area proper, little professional archaeological research has been conducted within the immediate Upper Souris region. Bauxer (1947) reported on a one-day survey of the Des Lacs River Basin that was sponsored by the Smithsonian Institution River Basin Survey. However, no sites were recorded during this reconnaissance.

TABLE 2

Study Area Site Leads as Recorded by Hecker (1938)

Legal Description	Site Type (as described by Hecker)	Remarks
<u>RENVILLE COUNTY</u>		
T.158N R.84W -NE $\frac{1}{4}$, NW $\frac{1}{4}$ S.6	Campsite	Probably inundated or in marsh
-On line between NW $\frac{1}{4}$ and NE $\frac{1}{4}$, SE $\frac{1}{4}$ S.7	Campsite	
-Center W $\frac{1}{2}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ S.8	Campsite	Probably inundated or in marsh
-SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ S.28	Campsite	
-On line between NW $\frac{1}{4}$ and SW $\frac{1}{4}$, SW $\frac{1}{4}$ S.29	Campsite	Probably inundated or in marsh
T.159N R.84W -NE $\frac{1}{4}$, NW $\frac{1}{4}$ S.31; E $\frac{1}{2}$, NE $\frac{1}{4}$ S.31; SW $\frac{1}{4}$ S.31	Campsite	Probably inundated or in marsh
T.159N R.85W -SW $\frac{1}{4}$ S.2	---	Probably inundated or in marsh
-NW $\frac{1}{4}$, NW $\frac{1}{4}$ S.3	---	Probably inundated or in marsh
T.160N R.85W -NW $\frac{1}{4}$ S.18	---	
-SE $\frac{1}{4}$, SW $\frac{1}{4}$ S.19	---	Possibly associated with 32RV403 or 32RV421
-NE $\frac{1}{4}$, SW $\frac{1}{4}$ S.20	---	
-NE $\frac{1}{4}$ S.31	---	
-N $\frac{1}{2}$, SE $\frac{1}{4}$ S.32	---	Probably inundated or in marsh

TABLE 2 --continued

Legal Description	Site Type (as described by Hecker)	Remarks
<u>RENVILLE COUNTY, Cont.</u>		
T.160N R.85W (Cont.)		
-N $\frac{1}{2}$, NW $\frac{1}{4}$ S.33	---	
-SW $\frac{1}{4}$ S.34	---	Probably inundated or in marsh
T.160N R.86W		
-NW $\frac{1}{4}$, NE $\frac{1}{4}$ S.2	---	
-NE $\frac{1}{4}$, NE $\frac{1}{4}$ S.11	---	
-N $\frac{1}{2}$, SE $\frac{1}{4}$ S.12	---	Probably inundated or in marsh
-NW $\frac{1}{4}$, NE $\frac{1}{4}$ S.13	---	Close to 32RV407 Probably inundated or in marsh
T.161N R.86W		
-W $\frac{1}{2}$, SW $\frac{1}{4}$ S.2	---	
-NW $\frac{1}{4}$ S.3	---	
-NW $\frac{1}{4}$, NW $\frac{1}{4}$ S.11	---	
-S $\frac{1}{2}$, NE $\frac{1}{4}$ S.11	---	
-On line on E $\frac{1}{2}$ of NE $\frac{1}{4}$ and SE $\frac{1}{4}$ S.14	---	
-S $\frac{1}{2}$, SW $\frac{1}{4}$ S.24	---	
-NE $\frac{1}{4}$, NE $\frac{1}{4}$ S.25	---	
-SW $\frac{1}{4}$ S.25	---	
T.162N R.86W		
-SW $\frac{1}{4}$, NE $\frac{1}{4}$ S.6	---	
-NW $\frac{1}{4}$, NW $\frac{1}{4}$ S.17	---	Possibly same as 32RV416
-SE $\frac{1}{4}$ S.17	---	

TABLE 2 --continued

Legal Description	Site Type (as described by Hecker)	Remarks
<u>RENVILLE COUNTY, Cont.</u>		
T.162N R.86W (Cont.)		
-SE $\frac{1}{4}$ S.20	---	
-NE $\frac{1}{4}$ S.33	---	
-SW $\frac{1}{4}$ S.34	---	
T.163N R.87W		
-NW $\frac{1}{4}$, SW $\frac{1}{4}$ S.3	---	
-N $\frac{1}{2}$, NE $\frac{1}{4}$ S.10	---	
-SE $\frac{1}{4}$ S.10	---	
-SW $\frac{1}{4}$, NW $\frac{1}{4}$ S.25	---	
-SE $\frac{1}{4}$ S.25	---	
-NW $\frac{1}{4}$, NW $\frac{1}{4}$ S.36	---	
-S $\frac{1}{2}$, SW $\frac{1}{4}$ S.36	---	
T.164N R.87W		
-SE $\frac{1}{4}$ S.33	---	
<u>WARD COUNTY</u>		
T.156N R.84W		
-SW $\frac{1}{4}$, SW $\frac{1}{4}$ S.5	Habitation	Probably inundated or in marsh
-SW $\frac{1}{4}$, NE $\frac{1}{4}$ S.5	Habitation	Probably inundated or in marsh
-W $\frac{1}{2}$, SE $\frac{1}{4}$ S.5	Habitation	
-On the border between SW $\frac{1}{4}$ S.4 and SE $\frac{1}{4}$ S.5	Habitation	

TABLE 2 --continued

Legal Description	Site Type (as described by Hecker)	Remarks
<u>WARD COUNTY</u> , Cont.		
T.156N R.84W (Cont.)		
-NW $\frac{1}{4}$, NW $\frac{1}{4}$ S.9	Habitation	
-SE $\frac{1}{4}$, SE $\frac{1}{4}$ S.9	Habitation	
-SW $\frac{1}{4}$, SW $\frac{1}{4}$ S.14	Habitation	Possibly part of 32WD107
-SE $\frac{1}{4}$, SE $\frac{1}{4}$ S.15	Habitation	Possibly 32WD403
-On the border be- tween SW $\frac{1}{4}$, SW $\frac{1}{4}$ S.23 and SE $\frac{1}{4}$, SE $\frac{1}{4}$ S.22	Habitation	
-Center SE $\frac{1}{4}$ S.23	Habitation	
-N $\frac{1}{2}$, SE $\frac{1}{4}$ S.26	Habitation	Possibly 32WD404
-W $\frac{1}{2}$, NE $\frac{1}{4}$ S.26	Habitation	
T.157N R.84W		
-S $\frac{1}{2}$, SE $\frac{1}{4}$ S.6	Habitation	Probably inundated or in marsh
-NE $\frac{1}{4}$, SW $\frac{1}{4}$ S.6	Habitation	Probably inundated or in marsh
-W $\frac{1}{2}$, NW $\frac{1}{4}$ S.8	Habitation	Probably inundated or in marsh
-SE $\frac{1}{4}$, NE $\frac{1}{4}$ S.8	Habitation	Probably inundated or in marsh
-S $\frac{1}{2}$, SW $\frac{1}{4}$ S.9	Habitation	Probably inundated or in marsh
-S $\frac{1}{2}$, SW $\frac{1}{4}$ S.16	Habitation	
-E $\frac{1}{2}$, SE $\frac{1}{4}$ S.21	Habitation	Probably inundated or in marsh

TABLE 2 --continued

Legal Description	Site Types (as described by Hecker)	Remarks
<u>WARD COUNTY</u> , Cont.		
T.157N R.84W (Cont.) -SE $\frac{1}{4}$, NE $\frac{1}{4}$ S.21	Habitation	Probably inundated or in marsh
-Center SW $\frac{1}{4}$ S.27	Habitation	Probably inundated or in marsh
-NE $\frac{1}{4}$, NE $\frac{1}{4}$ S.28	Habitation	Probably inundated or in marsh
-NE $\frac{1}{4}$, SE $\frac{1}{4}$ S.28	Habitation	Probably inundated or in marsh
-NE $\frac{1}{4}$, NW $\frac{1}{4}$ S.34	Habitation	Probably inundated or in marsh

Carmichael (1974) surveyed a small portion of the extreme northeast corner of Renville County, but did not record any archaeological sites. Dill (1976) performed a cultural resource survey of a mine area near Velva, North Dakota, discovering one lithic scatter and one historic site. Carmichael's (1975) survey of the Boundary Creek area in Bottineau County also revealed no cultural remains. At the J. Clark Salyer National Wildlife Refuge headquarters near Upham, North Dakota (Fox 1977), a butchering area was discovered. This site is adjacent to the Souris River.

Schneider (1977:11) mentioned that Wood located a Woodland site fourteen miles north of Towner, North Dakota, near the Souris River. An atlatl weight from near Kenmare, North Dakota (Schneider 1977:12) also indicates a Woodland influence in the Souris Basin. Other artifacts from the area include a buffalo effigy of carved stone (found near Carpio, North Dakota) (Schneider 1977:12). Collections of study area farmers indicate a preponderance of Plains Archaic projectile points. As near as can be determined, the majority of the collectors' specimens came from the Upper Souris Valley or immediately adjacent areas. Apparently all of the Paleo-Indian specimens came from the Missouri basin near New Town, North Dakota. We did view a catlinite tablet incised with an anthropomorphic stick figure. This specimen came from 32RV411.

There has been considerably more archaeological research in the Canadian section of the Upper Souris Valley than in the North Dakota expanse. Unfortunately, reports on this work are difficult to obtain

or nonexistent. Recently, a definitive work on the cultural ecology and dynamics of Southwestern Manitoba ceramic prehistory was published (Syms 1977). The work also synthesizes previous archaeological endeavors in the Manitoba study area. Syms utilizes the Co-Influence Sphere Model to evaluate the seasonally fluctuating resource potential throughout a variety of eco-zones and human adaptations to them. The model seeks to shift research away from processual criteria within a small area to resources, ethnohistory, archaeology and subsistence-settlement pattern variation beyond the localized research area. This requires the application of local data to other areas in the Northern Plains and Upper Mississippi.

Cultural Chronology*

Early Man or Paleo-Indian artifacts have been found in North Dakota concentrated primarily west of the Missouri Coteau. The New Town locale approximately 100 miles southwest of the project area has revealed Clovis, Folsom, Plainview, Milnesand, Agate Basin, and Angostura projectile points (Hiller 1942; Haberman and Schneider 1975; Schneider 1975). Similar artifacts are reported from western and southwestern Manitoba (Pettipas 1970, 1975, 1976; Haug 1975; Loveridge 1974). These artifacts usually occur as isolated surface finds. No Paleo-Indian sites have been excavated and no radiocarbon dates have been obtained for this culture in North Dakota and western Manitoba.

*The cultural chronology for the Upper Souris region was previously prepared by Schneider (1977) and is utilized here with some modifications.

The next major cultural-historical period, the Middle Prehistoric or Plains Archaic, dates from circa 3000 B.C. to 1000-500 B.C. The projectile points which serve as horizon markers are the McKean, Duncan, Hanna and Oxbow types. During this period, the habitation of western North Dakota may have reached its greatest extent in terms of the number of sites occupied. This idea is based on the result of limited surveys conducted along the shoreline of Lake Sakakawea (Garrison Reservoir) by Haberman and Schneider (1975) and Leaf (1976), surveys in Dunn and Mercer counties (Fox et al. 1976; Lawrence Loendorf, Personal Communication) and the author's personal observation of artifact collections from western North Dakota. Sites of this period are frequently encountered in adjacent portions of Manitoba (Joyes 1970; Syms 1969, 1970, 1974; Haug 1976; MacNeish and Capes 1958; Vickers 1945) and southern Saskatchewan (Wettlaufer and Mayer-Oakes 1960; Nero and McCorquodale 1958; Blood 1977). In North Dakota, no sites of this period have been excavated and all information is from surface collections.

The next major cultural-historical period is the Woodland Culture. This culture is primarily noted for the appearance of pottery, the construction of large, conical and/or linear-shaped burial mounds, and the projectile point types Pelican Lake, Besant and Avonlea. Within the Souris basin reports by Wood (1962), Neuman (1967), Metcalf and Carlson (1971) indicate the presence of campsites in the North Dakota portion of the Souris basin. Regionally, campsites are reported by Joyes (1967, 1970, 1973); Haug (1976); Hlady (1967); Reeves (1970);

Braddell et al. (1967); Wettlaufer and Mayer-Oakes (1960); Wood (1956, 1959); Johnson (1977); Schneider and Kinney (ms.); and reports of mounds in Manitoba and Saskatchewan by, among others, Montgomery (1910); Capes (1963); and Hanna (1976). Much of the knowledge of Woodland sites in southwestern Manitoba consists of reports of burial mound excavations while all of the knowledge from north-central North Dakota consists of reports of surface collections. It appears that the study locale is at the northwestern limits of the distribution of burial mounds on the Plains; however, it must be remembered that this portion of North Dakota has received little attention from archaeologists and few field investigations have been conducted in northerwestern North Dakota. The only mound (Woodland ?) reported in the North Dakota section of the Souris basin is that reported by Franke (1975) in the Burlington Dam project area.

Following the Woodland Culture are the Plains Village and late Nomadic Equestrian cultures. The Plains Village Culture noted by its characteristic earthlodge dwellings, ceramic styles, and frequent occurrence of fortified villages makes its appearance in North Dakota at about circa A.D. 1200. The late Nomadic Equestrian cultures probably develop somewhat later, perhaps circa A.D. 1650. Some archaeologists feel that these cultures supercede the earlier Woodland Culture, but it may be that the Woodland Culture, in a modified form, continues to co-exist with the Plains Village configuration. Syms (1977:141) tends to favor the latter interpretation and his postulates are employed in the conclusion section of this report. Late Plains nomadic manifestations are placed temporally in the Lake Prehistoric Period of the

Northern Plains.

Historically, the Plains Village and Nomadic cultures terminate in peoples recognized in this region as the Assiniboiné, Chippewa, Dakota, Mandan, Hidatsa, Crow, Cree, and Cheyenne. Cultural materials related to those peoples have not been reported in the North Dakota section of the Souris basin with the possible exception of four rock alignment sites reported by Franke (1975) in the proposed Burlington Dam project area. Archaeological investigations in northern portions of the Garrison Reservoir (Metcalf 1963; Lehmer 1971; Smith 1972; Haberman and Schneider 1975; Malouf 1951, 1963; Muller 1968) and along the Little Knife River (Garrett 1952; Schneider and Kinney ms.) have reported sites and artifacts of these cultures. Surveys and excavations in the Lonetree Reservoir project located approximately 75 miles southwest of the Souris River in Sheridan County, North Dakota, revealed an abundance of late prehistoric nomadic sites (tipi rings) Schneider 1974; Schneider and Treat 1974; Schneider 1976) as well as a late prehistoric bison kill site (Larson 1976). Manitoba Phase sites associated with the Assiniboiné and/or Cree are found in adjacent portions of the Souris basin in southwestern Manitoba (MacNeish 1954; MacNeish and Capes 1958; Joyes 1970).

RESEARCH DESIGN

Brown (1965:4) noted that the formation and maintenance of differing biotic communities within a region is the product of a complex of interactions between all factors of the environment. Thus geologic development, soil associations, topography and climatic influences are important factors that contribute to the formation and maintenance of the biota in and near the study area. These biotic communities are specifically delimited and referred to as eco-zones in this study (Figure 2).

Extensive ecological research has demonstrated that soil influences are often a major factor in the distribution of vegetation (Brown 1965:8). In turn, the soil associations in the study area are strongly influenced by their parent materials, glacial tills. It is believed that these soil associations are major contributing factors in the maintenance of a variety of eco-zones.

The effects of degree of slope, slope exposure and position of slope (Brown 1965:82) are also important topographic features responsible for the maintenance of eco-zones. Within the study area the topography varies greatly from rugged, steep terrain of over sixty meters in relief to flat, alluvial acreage nearer the Souris River. This physiographic variety exerts positive influences on the type and variety of eco-zones present. Degree of slope affects water retention, soil accumulation and heat energy incidence (Brown 1965:83). Exposure, or the direction that the slope faces, influences greatly the amount of solar insolation received by vegetal communities (Brown 1965:88). When viewed in cross-section (Figure 2) plant community types occur at particular elevations throughout the valley. In the study area, this phenomenon is apparently

a product of moisture availability (lower tracts usually receive more than upper slopes) rather than strict altitudinal influences such as those found in alpine environments.

As a result of the interrelationships of climate, moisture availability, soil development and various topographic slope factors, each eco-zone maintains a differing floral assemblage. Today, a variety of faunal species utilize the eco-zones and their flora as natural habitats. The fauna are, in fact, an integral part of the eco-zone concept as they continually interact with the zonal resources. Some faunal species (e.g., semi-aquatic, aquatic) are restricted to one or perhaps two zones, but others cross-cut the entire zonal assemblage. Game animals such as white-tailed deer and antelope frequent all of the valley eco-zones at one time or another during the year. In the past, it is presumed that other game animals (bison, elk, bear, mule deer) exhibited similar seasonal preferences.

Presumably, prehistoric man recognized the advantages of seasonally exploiting the vegetal and faunal resources of a variety of eco-zones throughout the valley as well as those of the prairie ecosystems. These resources not only provided dietary staples and supplements, but also economic and technological necessities. Bone tools, hide for dwellings and clothing, timber for weapons and dwelling superstructures are but a few of the latter needs. In addition and depending on the eco-zone, shelter, water, fuel, open spaces and/or vantage points were readily available. In some instances, the availability of stone suitable for tool making may have been a deciding factor for zonal exploitation. Suffice it to say, prehistoric human behavior was influenced locally

by the unique zonal resources along the Souris Valley. This study attempts to elucidate the relationships between prehistoric occupants and their exploitation of the eco-zone assemblage.

Binford (1964:426) has emphasized the importance of isolating and defining the content, structure and range of a cultural system within its ecological relationships. When articulating cultural systems with ecological relationships, at least four successive steps are necessary. They are:

- 1) isolate the regional environment into specific eco-zones.
- 2) identify and delimit the archaeological record in space and time.
- 3) examine the relationships between the archaeological record and the eco-zone assemblage.
- 4) establish the nature of (why, how, etc.) cultural change and/or continuity through time as it is reflected in the cultural ecological setting of the region.

The following eco-zones (Figure 2) are recognized in the study area (with the exception of the Aspen Parkland) as integral systems in prehistoric human adaptations to the Upper Souris area. It should be noted that these are not the only eco-zones in the region. There are other equally important zones and adaptive patterns throughout the adjacent prairie. It would be ideal, of course, to integrate these cultural/ecological systems with those of the valley so that adaptive patterns might be viewed in their totality. However, the nature of the study has confined the investigations and this strategy is not possible. Therefore, this model is subject to modification through future investigations.

1) Northern Floodplain Forest - primarily situated along the floodplain meanders but also often extends into larger, heavily wooded side coulees. The forest is interspersed with grassland meadows throughout the entire valley. Grassland areas suitable for agriculture have recently been cultivated. Much of the forest has also been cleared for cultivation.

Dominant flora are Populus, Salix, Ulmus; other components include Acer negundo and Fraxinus pennsylvanica. Major grasses have been identified as Carex spp., Bouteloua gracilis, and others. These communities combine to form an excellent habitat for large game animals. Formerly bison, elk and bear utilized the forest and grasslands. So also did deer and antelope. The forest and wooded coulees provided winter browse; the grass lands served as excellent graze. The proximity of this eco-zone to a reliable water supply enhanced utilization. The area also provided excellent shelter.

2) Aspen Parkland - this eco-zone was not encountered during the 1977 survey. It does exist in the Upper Souris Valley, primarily in Canada, and may be present in the study area near the Canadian border.

3) Terrace Grasslands - this eco-zone seems to be more of glacial origin than any other criteria. The distinct terraces along the valley are kame terraces formed by glacial melt waters. They are usually quite flat. Vegetation includes typical mixed prairie grasses and occasional shrubbery. The terrace flats are often bisected at regular intervals by wooded side coulees. At times, the woody vegetation spills out onto the terrace fringes. These conditions provide excellent winter browse for deer and antelope. Smaller animals such as rabbit, fox and coyote find an excellent habitat in these areas. The terrace grasslands lie

at the mid-elevations between the Upland Prairie and Northern Floodplain Forest.

4) Semi-aquatic - formerly the semi-aquatic eco-zones were formed primarily in oxbow lakes by the extensive meander system of the Souris River. Various mammals such as mink, beaver and muskrat flourished in these areas. Aquatic avian species were regular inhabitants. To date, there is no archaeological evidence indicating that this eco-zone was regularly exploited by prehistoric humans. Future subsurface investigations may clarify these relationships, if any.

5) Aquatic - the Aquatic eco-zone is probably most important because it provided a reliable water source, even in drought conditions. It's proximity to the Northern Floodplain Forest no doubt influenced greatly the degree of forest utilization. Secondary utilization may have included aquatic resources such as northern pike and walleye, although there is not yet any archaeological evidence of this.

6) Upland Prairie - the prairie eco-zone in the valley is an extension of surrounding uplands. Often this eco-zone grades imperceptibly into the terraces and even onto the floodplain. The vegetation dominants are primarily prairie grasses (Agropyron - Andropogon - Stipa). Formerly, this community served as excellent graze for a variety of large game animals, probably during summer months after migration from the river bottoms.

Once an eco-zone concept has been established, the next step is to identify and delimit the archaeological record by site type, site chronology and, whenever possible, site seasonality. Site types are established by evaluating the site's archaeological assemblage in reference

to a formal site classification system. Site categories are based on a variety of criteria, including artifact types, lithic debitage assemblage, cultural features, faunal assemblages, ceramics, and site function. Specific time references are assigned to sites by two dating techniques, the use of artifact typologies and/or radiocarbon dates. Artifact typologies (including ceramics) are utilized herein. The site is then delimited spatially in terms of site boundaries and site location (eg., located in the Northern Floodplain Forest eco-zone).

Following the establishment of an eco-zone scheme, identification of site types and placement of the site in time and space, relationships between the cultural (the archaeological record) and the natural (eco-zone) environment may be investigated. At the individual site level, these investigations should be designed to elucidate functional relationships between the site and eco-zone selection, if any. Following similar procedures for each site in the inventory, a composite analysis of the total site inventory with reference to eco-zone preferences or regularities through time may be examined. The composite data may then be ordered so that formal statements regarding the study area may be made and regional applications of the research can be proposed.

There is a serious problem that the eco-zone model must confront. In this instance, the model is constructed from biotic and physical conditions that exist today and inferred, for the most part, as similar to past conditions. This is a less than ideal situation. It would be preferable to develop a prehistoric climatic sequence and demonstrate zonal stability or instability through paleo-botanical and other interdisciplinary studies. However, these types of investigations have not been

conducted in the study area, so that this is not possible.

Generally, it is known that the surrounding Northern Plains prairie region has experienced periodic climatic changes and corresponding vegetation changes during post-Pleistocene times. But to what extent did these climatic episodes influence the floral communities of the Upper Souris River Valley?

Meteorological data compiled by Bryson et al. (1970:58, 59, 60, Figs. 3, 4, and 5) indicate that the study area probably supported a boreal forest circa 10,000 years ago. By 8000 B.P., mixed woodlands and the boreal forest were far enough west to allow floodplain forest extensions into the prairie region much the same as today. Mixed hardwoods extended westward into and beyond the study area from circa 5000 to 3500 years ago. At the same time, short grass plains were greatly reduced in area (Reeves 1973:1231).

By A.D. 900, paleoclimatological and cultural evidence indicate the prevalence of ecological conditions conducive to agriculture in the Middle Missouri region of North Dakota (Lehmer 1970:118). Because of the proximity and by inference, it would seem that conditions favorable to agriculture would also favor maintenance of a floodplain forest along the Upper Souris. Middle Missouri agriculture activities appear to have deteriorated from A.D. 1250 - A.D. 1450 and after A.D. 1550 (Lehmer 1970:128). To what extent these conditions influenced Upper Souris eco-zones is not known.

It is reasonable to postulate that these and other hotter, drier climatic episodes probably significantly altered the extent of prairie floral assemblages. But were the unique eco-zones of the plains region

river valleys modified or replaced by other types? If a reduced but reliable water source were maintained in the Souris Valley even during drought conditions, would the zonal assemblages be drastically changed? Probably not. It is suspected that droughts and temperature changes probably caused eco-zones to fluctuate in quantity rather than kind. This would indicate that forest and grasslands of one type or another have populated the study area during Recent times. The progression has apparently been from boreal forest to mixed woodlands to hardwoods to what we now identify as the western extension of the eastern deciduous hardwood forest.

SITE TYPES

A total of forty-eight archaeological sites have been recorded in the Lake Darling shoreline and proposed Burlington Dam project area (Table 3) (Figure 3). Forty of these sites were recorded during the 1977 survey by the Department of Anthropology and Archaeology, University of North Dakota. Eight sites had been previously recorded in the Burlington project area by the State Historical Society of North Dakota during the fall of 1974 and the summer of 1975 (Franke 1975).

Mound Sites

Not a great deal is known concerning mound sites other than that most contain the remains of individuals who occupied parts of North Dakota from approximately 500 B.C. to A.D. 1000 (Lehmer 1971). The Plains Woodland people lived along rivers and lakes in semipermanent dwellings, hunted and used pottery, stone and bone as their utensils. Occupation remains left by these people are scattered along the major river valleys of the Dakotas. The mounds, themselves, are usually situated on prominent topographic features overlooking river valleys or lakes. Plains Woodland mound sites are generally more common to the eastern portions of North Dakota.

Only one mound site, 32WD103, has been recorded in the project area.

Boulder Arrangement Sites

Tipi Rings

Tipi rings are perhaps the most common variety of boulder arrangement

TABLE 3

Recorded Archaeological Sites in the
Lake Darling/Proposed Burlington Dam Project Area

Site Name and Number	Mounds	Tipi Rings	Rock Cairns	Occupation	Petroforms
RENVILLE COUNTY					
Four Site - 32RV401				1	
Rusty Wrench Site - 32RV402				1	
Pelican Goose Site - 32RV403				1	
Cracked Rock Site - 32RV404				1	
Greene Arrow Site - 32RV405				1	
Mud Flat Site - 32RV406				1	
Often Inundated Site - 32RV407				1	
River Bend Site - 32RV408				1	
Muddy Bank Site - 32RV409				1	
Tolley Crossing Site - 32RV410				1	
Richie Johnson Site - 32RV411				1	
Myrna Johnson Site - 32RV412				1	
Judy Knutson Site - 32RV413				1	
Davidson Site - 32RV414				1	
McCarroll Site - 32RV415				1	
Yale Tipi Ring Site - 32RV416		8			
Flats Tipi Ring Site - 32RV417		6			
Big Bull Tipi Ring Site - 32RV418		5			
Funk Tipi Ring Site - 32RV419		9			
Pale Moon Tipi Ring Site - 32RV420		11			
Almost Tipi Ring Site - 32RV421		4			
Pepsi Tipi Ring Site - 32RV422		6			
Lone Star Tipi Ring Site - 32RV423		1			
Christenson Site - 32RV424		3			
Windy Point Tipi Ring Site - 32RV425		2	1		
Restless Rabbit Tipi Ring Site - 32RV426		17	2		
Four Rings Tipi Ring Site - 32RV427		4			
Cold Duck Tipi Ring Site - 32RV428		1			
Curtis Ones Site - 32RV429				1	

TABLE 3 --continued

Site Name and Number	Mounds	Tipi Rings	Rock Cairns	Occupation	Petroforms
WARD COUNTY					
*32WD101	1		1		1
*32WD102			1		
*32WD103					
*32WD104			1		
*32WD105					
*Musch Site - 32WD106		3			
*32WD107		2			
*32WD108		1			
Herzig Site - 32WD401				1	
H.J. Johnson Site - 32WD402				1	
Nygard Site - 32WD403				1	
Schmidt Site - 32WD404				1	
Stromberg Site - 32WD405				1	
Pritschet II Site - 32WD406				1	
Washek Site - 32WD407				1	
Big Critter Site - 32WD408				1	
Gardner Site - 32WD409				1	
Hoelscher Site - 32WD411		3	1		
Foxholm Overlook Tipi Ring Site - 32WD412		1			

*Sites recorded by the State Historical Society of North Dakota
(Franke 1975).

sites found throughout the Plains. There has been controversy as to the origin of these rings; however, it is fairly well accepted that these features represent the locations of conical-shaped lodges used by nomadic peoples of the Plains (Kehoe 1960; Mulloy 1965). The rocks used as weights to hold down the hide coverings are most often the only indication of occupation since lithic debris, faunal remains and fire hearths are usually absent from these sites.

A total of eighteen tipi ring sites were recorded in the study area. Rock cairns (discussed below) were found in association with the tipi rings at three of the sites; 32RV425, 32RV426, and 32WD411. One of the ring sites, 32RV416, contained associated stone tools, lithics and shatter.

Rock Cairns

Prehistoric rock cairns are best described as "piles of stones" as there appears to be no selection as to the shape of rocks or the size or shape of the features. As indicated above, they are sometimes found in association with tipi rings.

Indication of the antiquity of rock cairns is based on the amount of lichen cover on the rocks and upon how deeply the base of the cairn is embedded in the soil. The function of rock cairns is not completely understood, but it appears that they may have served as trail markers, burial coverings, bison drive lines, fortifications, flint caches, food caches, prominent point markers, etc.

Three rock cairn sites (32WD101, 32WD102, and 32WD104), not found in association with any other features, were recorded in the project area.

Petroforms

Petroforms, the least common boulder arrangement sites found in the Plains area, are rock arrangements of various sizes, either geomorphic, anthromorphic, or zoomorphic in form. Though not common, petroforms are widely distributed having been recorded in Saskatchewan, Manitoba, Montana, and North and South Dakota, as well as in a number of other states. The significance of these features remains speculative; however, they are probably ceremonially or mystically oriented (Wedel 1961; Steinbring 1970).

The one petroform site, 32WD105, recorded in the project area is geomorphic in form, appearing as an arch of stones placed clockwise north to south, with one stone in the approximate center of the arch, one stone beyond the southern limits of the arch, and one stone beyond the eastern limits of the arch.

Occupation Sites

The occupation (or habitation) site, the most common archaeological site found in the study area, poses a never-ending problem for the archaeologist. This type of site is usually composed of scattered lithic debris, faunal remains, stone tools, fire hearths, and, in some cases, ceramics. If the ground is disturbed by plowing, any feature such as stone rings, fire hearths, or packed living surfaces immediately disappear and all that remains is scattered lithics, tools, and fragmentary bone. Of the twenty-five occupation sites recorded during the survey, twelve had been disturbed by plowing. Another problem pertaining to occupation sites found in the survey area is that in some cases, the site

area has been periodically inundated. In these cases, silting and erosion can obscure the majority of the site area's ground surface and cultural materials can become very scattered and displaced by water movement making determination of actual site area impossible. Furthermore, cultural materials found in silt and gravel deposits on beaches can quite possibly have washed up from sites that are already inundated. Ten of the twenty-five occupation sites recorded are in periodically inundated areas and it appears that three of these are either normally underwater or are composed of occupational materials washed up from lowland sites that are already completely underwater. Two of the occupation sites recorded, 32RV413 and 32WD409, had been disturbed by plowing and periodical inundation. Finally, a thick virgin prairie grass cover can so obscure the surface from view that neither actual site size nor any cultural features are visible. Such is the case in the remaining occupation site, 32WD408.

Ceramics were discovered in association with the occupation materials at seven of the occupation sites recorded in the study area: 32RV406, 32RV407, 32RV409, 32RV411, 32RV412, 32RV415, and 32RV429. At four of the recorded occupation sites (32RV404, 32RV406, 32RV407 and 32RV408) fire hearths were observed in association with the cultural materials.

TABLE 4

Summary of Recommendations
Archaeology of Proposed Burlington Flood Control Project

Site Number	NRHP Potential	Systematic Survey Advised	Mapping Advised	Testing Advised	Salvage Advised	Preservation Advised
<u>AREA 1:</u>						
32RV401	No	No	No	No	No	No
32RV402	No	No	No	No	No	No
32RV403	No	No	No	No	No	No
32RV404	?			Yes	?	?
32RV405	No	No	No	No	No	No
32RV406	?	Yes		Yes	?	No
32RV407	No			Yes	?	No
32RV408	No	No	No	No	No	No
32RV409	?			Yes	?	No
32RV410	No	No	No	No	No	No
32RV416	?		Yes	Yes	?	?
32RV417	?		Yes	Yes	?	?
32RV418	?		Yes	Yes	No	?
32RV419	?		Yes	Yes	?	?
32RV420	?		Yes	Yes	?	?
32RV421	No	No	No	No	No	No
32RV422	?		Yes	Yes	?	?
32RV423	No	No	No	No	No	No
32RV424	No	No	No	No	No	No
32RV425	No	No	No	No	No	No
32RV426	Yes		Yes	?	No	Yes
32RV427	No	No	No	No	No	No
32RV428	No	No	?	No	No	Yes
<u>AREA 2:</u>						
32WD101	No	No	No	No	No	No
32WD102	No			Yes	Yes	?
32WD103	No	No	No	No	No	No
32WD104	?			Yes	?	?
32WD105	?			Yes	Yes	?
32WD106	No	No	No	No	No	No
32WD107	No	No	No	No	No	No
32WD108	No	No	No	No	No	No
32WD401	?			Yes	?	?
32WD402	?	Yes		?	?	?

TABLE 4 --continued

Site Number	NRHP Potential	Systematic Survey Advised	Mapping Advised	Testing Advised	Salvage Advised	Preservation Advised
<u>AREA 2</u>						
(Cont.)						
32WD403	?			Yes	?	?
32WD404	?			?	?	?
32WD405	?			Yes	?	?
32WD406	?	No	No	No	?	?
32WD407	?			?	?	?
32WD408	?			Yes	?	?
32WD409	?			Yes	?	?
32WD411	No	No	No	No	No	No
32WD412	Site is not in project area.					
<u>AREA 3:</u>						
32RV411	Yes	Yes	Yes	Yes	?	?
32RV412	Yes	Yes	Yes	Yes	?	?
32RV413	No	No	No	No	No	No
32RV414	?			Yes	?	?
32RV415	?			Yes	?	?
32RV429	?			Yes	?	?

KEY: ? = unknown at this time.

-- If a column is left blank, then the activity is either not advised or it will be completed during the testing phase.

Project Archaeological Sites and Site Recommendations

Each of the archaeological sites discovered during the September to November 1977 survey is described briefly in the following resumes. The reader is referred to Appendix B where more detailed information is listed on the individual site forms.

Following the description, a brief interpretation regarding functional, temporal and cultural affiliations is presented when possible. Recommendations of each individual site follow. The recommendations for archaeological investigations (eg., testing) that might disturb the site are based upon the assumption, in most instances, that the Burlington Dam Project will either lead to disturbance, destruction or inundation of sites. Of course, if it is determined by the U.S. Army Corps of Engineers personnel that a site is not endangered by the project, then the recommendations need not be carried out and the site can be preserved.

In many cases, we feel that sites need to be investigated further before we can determine if they meet National Register of Historic Places criteria. In these instances, we have so indicated these necessities. But, again, if the sites' integrity is not threatened, then preservation is effected without employing National Register processes and safeguards.

Sites located by the North Dakota Historical Society in 1975 are not presented in resume form but are listed below with the Historical Society recommendations. See site forms (Appendix B) for more detailed information.

32WD101 - Site is outside of borrow area and should be avoided during construction.

32WD102 - Site is inside a proposed borrow area. The North Dakota State Historical Society (NDSHS) has recommended testing and salvage if the site is to be disturbed.

32WD103 - NDSHS has recommended that no further work is necessary.

32WD104 - Recommendations by NDSHS suggest preservation if possible. If this is not feasible, then testing and/or salvaging activities should be carried out.

32WD105 - If preservation is not feasible, the site should be tested and/or salvaged.

32WD106 - The site does not appear to be in danger of inundation or destruction through slumping or erosion.

32WD107 - The site lies at elevation 1735' and is not in the project area proper.

32WD108 - At elevation 1740' this site will not be disturbed by construction or inundation.

Archaeological sites located in the September to November, 1977, survey (Department of Anthropology and Archaeology, University of North Dakota).

Four Site - 32RV401:

The Four Site is an occupation site located approximately one and one-fourth miles northwest of Greene, North Dakota. The site lies along a flat abutting Lake Darling near an intermittent drainage that runs easterly into the lake. Since the site area is periodically inundated by the high waters of the lake, its eco-zone cannot be determined. The ground cover of the area presently consists of marsh grasses.

Most of the cultural material discovered was found along old beach lines indicating the possibility that the material has washed up from sites located nearer the former Souris River channel. The size of the present site area, however, is 100 meters X 50 meters.

Cultural material observed at the site consists of bison bone fragments, flakes, and stone tools.

The cultural material collected from the site includes the following:

- 1) One Knife River flint end scraper
- 2) One light brown chalcedony biface
- 3) Five flakes: three of Swan River chert
one of Knife River flint
one of dark brown chalcedony
- 4) Bone fragments:
Bison bison or Bos
 - immature right scapula
 - left metacarpal
 - first phalange from front limb
 - fifth cervical vertebrae
 - first phalange from hind limb
 - immature right rib head, rib between #'s 10-13
 - left distal radius fragment containing facet for ulner carpalcf. Olov columbianus (Whistling Swan)
 - immature left proximal humerus
 - immature right proximal humerus

(Interpretations) Diagnostic material that might indicate cultural or temporal affiliations of this site are absent. Minimally, the bone fragments and scraper suggest that butchering and hide working were performed here. On the basis of our lithic analysis, the site may be associated with a Plains Nomadic cultural manifestation because of the presence of Knife River flint.

(Recommendations) The integrity of this site has been seriously disturbed by inundation. Because of this we do not feel it is necessary

to consider it for nomination to the National Register of Historic Places (NRHP). Problems associated with hydraulics prohibit test excavations at this time.

Rusty Wrench Site - 32RV402:

The Rusty Wrench Site, an occupation site, is located approximately one and three-fourths miles northwest of Greene, North Dakota, along the beach of Lake Darling. The site area's eco-zone cannot be determined since the area is periodically inundated by the high waters of the lake. The present ground cover consists of reeds and marsh grasses.

The size of the present site area is 50 meters X 50 meters though it is possible that the cultural material observed may have washed up from sites existing underwater and nearer the former Souris River channel. The site now lies along an old beach line.

Cultural material observed at the site consists of historic iron products and concrete, flakes and numerous bison bone fragments.

The cultural material collected from the site include:

- 1) Twelve flakes: seven of Swan River chert
four of Knife River flint
one of porcellanite

(Interpretations) It is impossible, at present, to deduce cultural or temporal parameters for this site because of the lack of diagnostic artifacts. The site function cannot be accurately determined from the observed cultural debris.

(Recommendations) Periodic inundation has excluded the option of preserving the site intact. In some ways, inundation effects a fortuituous preservation, but not to the extent that the site needs to be considered

for nomination to the NRHP. Testing is not feasible because of the hydraulic problems involved.

Pelican Goose Site - 32RV403:

The Pelican Goose Site is an occupation site located approximately three-fourths mile northwest of Greene, North Dakota, on a beach at the confluence of an intermittent drainage and Lake Darling. The site extends northward for approximately 100 meters along the beach. Since it is suspected that the cultural materials found in the silt, sand and gravel along the beach have been washed up from an inundated lowland site nearer the former Souris River, the site's eco-zone cannot be determined. The ground cover of the area at this time is composed of reeds and marsh grasses.

Cultural material collected from the site includes the following:

- 1) One granitic grooved maul
- 2) Five flakes: two of Knife River flint
two of light brown chalcedony
one of Swan River chert
- 3) Bone fragments:
Bison bison or Bos
- proximal portion of horn core
- metatarsal shaft fragment
- immature astragalus fragment

(Interpretations) The lack of temporal/cultural diagnostic materials prohibits definitive statements about this site. The grooved maul indicates subsistence activities involved with exploiting vegetal resources occurred here. Butchered bone suggests other subsistence activities.

(Recommendations) No further work is necessary here. The supposition that the materials have been removed from original context eliminates the site from consideration for the NRHP.

Cracked Rock Site - 32RV404:

The Cracked Rock Site is an occupation site located approximately four miles northwest of Greene, North Dakota, along the shoreline of the Souris River. The size of the site is indeterminate at this time as only its edge has been exposed by wave action. Though the site is located on a floodplain, its eco-zone cannot be determined since the area has been flooded and, thus, changed. The present ground cover is swamp grasses and marsh plants.

The cultural material observed at the site includes bison and deer bone and scattered, fire-cracked rock. An associated fire hearth composed of fire-cracked river cobbles of granite and quartzite was also observed in an area near the river's edge. No charcoal was discovered in the hearth, and it is probable that it has been leached out.

Cultural materials collected from the site consist of:

- 1) One gneissic hammerstone
- 2) One basaltic chopper
- 3) Two flakes: one of Knife River flint
 one of basalt

(Interpretations) The hammerstone, bone and fire hearth indicate that subsistence activities were pursued here. Diagnostic materials by which temporal/cultural assessments can be made are lacking.

(Recommendations) Since an archaeological feature (a rock-lined fire hearth) was located in situ at the site, it is felt that a portion of the site may still be intact. We recommend the site be "shovel tested" to determine the existence of any salvageable materials. If this is the case, immediate salvage of the site would be warranted as it is periodically inundated and would be totally inundated as a result of the

proposed flood control project and thus, in danger in total destruction.

Greene Arrow Site - 32RV405:

The Greene Arrow Site is an occupation site located approximately one mile southeast of Greene, North Dakota, along an old beach, fifty meters from the present water level of Lake Darling. The size of the present site area is 50 meters X 50 meters. It is probable, though, that the artifacts found on the beach have washed up from an area of lower elevation that is already underwater. Since the site area is periodically inundated, causing several beach lines and sand and gravel deposits, the eco-zone cannot be determined.

Cultural materials observed at the site include historic pottery, glass, china, and flakes.

The cultural material collected from the site includes:

- 1) Two Knife River flint bifaces
- 2) One Aquamarine incised trade bead
- 3) Two flakes: one of Knife River flint
 one of agate (moss)
- 4) Bone fragment:
 Bison bison or Bos
 - immature left rib head, 8th or 9th rib

(Interpretations) The presence of a trade bead indicates that the site is a Native American protohistoric or historic occupation area. The flint bifaces and bone fragments also suggest that the inhabitants were involved in subsistence activities. This site can be assigned to the Plains Nomadic cultural category.

(Recommendations) Because of the destructive nature of the erosion at this site, it is believed no interpretive data beyond that which has been recovered remains. Therefore, nomination to the NRHP is not necessary nor are testing activities.

Mud Flat Site - 32RV406:

The Mud Flat Site is an occupation site located about one and one-half miles north of Greene, North Dakota, along the eastern shoreline of Lake Darling. The site is normally under water, making its eco-zone impossible to determine. The size of the site area exposed by low water levels is approximately four acres.

Cultural materials observed at the site include scattered bison bone and fire-cracked rock. An associated cultural feature, a fire hearth composed of fire-cracked rock, was observed, as well as some charcoal.

The cultural material collected from the site consists of the following:

- 1) One Knife River flint projectile point
- 2) One Knife River flint end scraper
- 3) Ceramics:
 - eight body sherds
 - four split body sherds
 - one rim sherd
- 4) Eight flakes: seven of Knife River flint
one of Swan River chert
- 5) Bone fragment:
 - Canis sp.
 - left distal femur

(Interpretations) The presence of pottery indicates that this site is from the Woodland Period; the unnotched, triangular projectile point suggests the latter stages of this period, probably a Middle Missouri Variant of the Plains Village Tradition. Site function cannot be adequately determined, but the size and artifacts discovered indicate a significant prehistoric area.

(Recommendations) It is difficult to assess the significance of the

site at this time. Periodic inundation makes surface collecting hazardous and fortuituous. We feel that more information can be gathered from this site provided conditions are right. Therefore, it is recommended that this site be surface collected in a systematic manner in the spring or fall when the pool elevation is down and before it rises. Recommendations concerning NRHP significance or the necessity of more salvage work can be made at that time.

Often Inundated Site - 32RV407:

The Often Inundated Site is an occupation site located approximately three and one-eighth miles northwest of Greene, North Dakota, along the east bank of Lake Darling. The site area, exposed due to low water levels, is 100 meters X 100 meters in size. Since the site area is often inundated, erosion and silt have destroyed the natural eco-zone. The ground cover of the area at this time consists of reeds and marsh grasses.

Included in the cultural features observed at the site are: one fire hearth with fire-cracked rock, and several loci of intense butchering activity (four to five feet in diameter) evidenced by concentrations of splintered and butchered bison bone.

Pottery was found at two concentrated locations. Other cultural materials observed at the site consist of butchered bison bone fragments including some metacarpals.

Cultural materials collected from the site include:

- 1) One hammerstone (granitic)
- 2) One Knife River flint side scraper
- 3) One Knife River flint drill
- 4) One Swan River chert biface

- 5) Ceramics:
 - thirteen body sherds
 - four split body sherds
 - three rim sherds
- 6) Eighteen flakes: nine of Knife River flint
seven of Swan River chert
one of quartzite
one of burnt chalcedony
- 7) Bone fragment:
 - Lepus townsendii (White-tailed Jackrabbit)
 - right proximal humerus

(Interpretations) Pottery fragments indicate that this is probably a Plains Village manifestation from the Late Woodland Period. The flint drill and side scraper suggest that one of the activities carried out here was hide working. No doubt butchering and meat preparation preceded these tasks. These observations are tentative and should be augmented with a resurvey and testing operations.

(Recommendations) Since there is a good deal of material exposed, we feel that there are also significant sub-surface cultural deposits that have been obscured by silting from inundation. We therefore suggest that testing operations should precede any recommendations concerning the NRHP. Or, it may be that salvaging the entire site or portions thereof might be preferable to NRHP consideration, since it is periodically inundated. When the pool elevation of Lake Darling is low, the site area is relatively dry and accessible. Because of this, we feel that tests are feasible and should be conducted in spring or fall months.

River Bend Site - 32RV408:

Located approximately three and one-half miles northwest of Greene, North Dakota, the River Bend Site is an occupation site which lies on a flat adjacent to a large bend in the Souris River. The site extends to

the river's east bank. When discovered, the site area was dry, although the flat is often inundated causing silting and erosion which makes determination of an eco-zone impossible. The size of the site at this time is 30 meters X 30 meters. Reeds and marsh grasses comprise the present ground cover.

One fire hearth and fire-cracked rock were exposed by lower water levels. Cultural materials observed at the site include sharpened sticks and a small amount of butchered bison bone.

No cultural materials were collected from the site.

(Interpretations) Butchering activities probably occurred here. Little other interpretive data is extant.

(Recommendations) The site is not eligible for nomination to the NRHP, nor is testing necessary.

Muddy Bank Site - 32RV409:

The Muddy Bank Site is an occupation site located approximately three and one-half miles east and slightly north of Tolley, North Dakota. The only visible evidence of the site lies along the eastern bank and in a cutbank of the Souris River. Since there are probably substantial deposits beneath the surface, the site size is presently indeterminate. The area is often inundated by flooding, thus an eco-zone cannot be determined. At this time, the ground cover consists of reeds, cattails and marsh grasses.

Cultural materials observed at the site include much butchered bison bone (vertebrae, long bones and a mandible), a bison horn core, and fire-cracked rock.

The cultural material collected from the site consists of:

- 1) One Knife River flint modified flake
- 2) Ceramics:
 - two body sherds
- 3) Two flakes: one of Swan River chert
one of Knife River flint
- 4) Bone fragment:
 - Canis sp.
 - left mandible fragment

(Interpretations) Minimally, it is suggested that butchering tasks were carried out at this site. The presence of two body sherds would allow a tentative assignment of the site to a Plains Village manifestation, probably during the Late Woodland stage. Other interpretive data is lacking at the surface.

(Recommendations) The site is situated on a reed-covered embankment alongside the river channel and has not been completely inundated for at least several years. The cultural material was found eroding from the bank and it appears that additional subsurface deposits exist. As a minimal recommendation, we feel that the site should be "shovel tested" to determine NRHP significance and/or the feasibility of salvaging the remaining materials. Since the site is heavily overgrown by marsh vegetation, it would be wise to excavate a vertical face into the cutbank.

Tolley Crossing Site - 32RV410:

The Tolley Crossing Site, an occupation site, is located along the Souris River bank approximately two and three-fourths miles east of Tolley, North Dakota. The size of the site is unknown since the site is on an old Souris River oxbow and most of it is probably obscured by periodic inundation, silting, and the dense stands of cattails between the oxbow and the present Souris River channel. Also due to the periodic

inundation of the area, the original eco-zone cannot be determined.

Cultural material observed at the site consists of butchered bison bone.

The cultural material collected from the site includes:

- 1) One Swan River chert biface
- 2) Seven flakes: six of Swan River chert
one of quartzite

(Interpretations) There is little interpretive data here and cultural/temporal affiliations are difficult to make. On the basis of material analysis, the presence of Swan River chert would seem to indicate a Late Woodland Period cultural affiliation.

(Recommendations) The site is not far removed from 32RV409. We have recommended limited test procedures at that site (32RV409). If these are carried out then we don't feel that further work is necessary at 32RV310. Therefore, no further work is necessary here (it probably would be difficult to excavate here because of water problems). NRHP nomination is not necessary.

Richie Johnson Site - 32RV411:

The Richie Johnson Site is an occupation site of indeterminate size, located approximately eight miles northwest of the Mouse River Park. The site lies in a plowed field a short distance southeast of the ranch buildings of Mr. Richie Johnson and adjacent to the Souris River. At the time of the survey, the site area was covered with wheat straw. The area's eco-zone is that of the Northern Floodplain Forest.

Though no surface features were observable at the site, the informant, Mr. Richie Johnson, reported that several fire hearths are visible

when the ground is plowed. Mr. Johnson also allowed an examination of his collection of cultural materials from the site. This collection includes three stone axes, hammers, projectile points, scrapers, a catlinite tablet engraved with an anthropomorphic stick figure, and trade items (musket balls, slugs, and a cavalry harness decorative piece). The presence of trade items at the site indicates that there is at least a Protohistoric Period component.

Cultural materials observed at the site include fire-cracked rock, scattered bison bone, flakes, and one mussel shell fragment.

The cultural material collected from the site consists of the following:

- 1) Ceramics:
 - four body sherds
 - two rim sherds
- 2) One quartzite (river cobble) chopper
- 3) Two Swan River chert bifaces
- 4) Forty-one flakes: thirty-five of Swan River chert
three of dark brown chalcedony
two of Knife River flint
one of burnt chalcedony

(Interpretations) There is definitely a Protohistoric Period component (or Historic) at this site and it may be that other earlier components exist, although we have not yet discovered any surface evidence. The ceramics suggest that the site's cultural affiliation is Plains Village. The evidence indicates a wide variety of activities were carried out here, including butchering, hide preparation, hunting and perhaps trading.

(Recommendations) According to Mr. Johnson, every year's plowing turns up new materials from the subsurface of this site. It seems to be a very extensive and important site and we feel that large-scale test excavation are necessary here. In this manner, it can be adequately

assessed according to the NRHP criteria.

Myrna Johnson Site - 32RV412:

The Myrna Johnson Site is an occupation site located approximately seven and one-half miles northwest of the Mouse River Park. The site, which extends for about seven acres, lies in the center of a flat, plowed field, seventy-five meters east of the Souris River and one-half mile southeast of Mr. Richie Johnson's ranch buildings. The site area is in the Northern Floodplain Forest eco-zone. The field in which the site is located was covered with wheat stubble at the time of the survey.

The informant, Mr. Richie Johnson, reported having seen numerous fire pits throughout the site area though none were visible at the time of the survey. Mr. Johnson has collected side-notched projectile points and scrapers from the site.

Cultural material observed at the site consists of butchered bison bone, mussel shell fragments, fire-cracked rock, and quartzite flakes.

The cultural material collected from the site includes the following:

- 1) Ceramics:
 - four body sherds
- 2) Three Swan River chert bifaces
- 3) Four Swan River chert projectile points
- 4) One Swan River chert back-hafted knife
- 5) One Swan River chert end scraper
- 6) One Swan River chert side scraper
- 7) One silicified sediment biface
- 8) One agate (moss) end scraper
- 9) One Knife River Flint biface
- 10) Sixty-nine flakes: sixty-six of Swan River chert
two of light brown chalcedony
one miscellaneous flake
- 11) Bone fragments:
 - Canis sp.
 - left M₂
 - canine tooth

(Interpretations) The number and variety of stone tools, the ceramics, bone and other materials indicate that this site was utilized for a variety of activities. The ceramics indicate a Woodland occupation perhaps of the Plains Village Tradition.

(Recommendations) Test pits should be located at this site primarily to determine its relationships, if any, with 32RV411, a large occupation site just across the river. Also, the protohistoric or historic adaptive strategy in the Northern Floodplain Forest should be investigated. We suspect also that there may be earlier, buried components. The site is threatened by inundation. Test excavations should provide sufficient additional material for assessing NRHP significance.

Judy Knutson Site - 32RV413:

Located approximately five miles northwest of the Mouse River Park, the Judy Knutson Site is an occupation site lying in a flat plowed field immediately adjacent to the west bank of the Souris River and also to the west valley road. The site lies in the Northern Floodplain Forest eco-zone. At the time of the survey, the site area, which is 50 meters X 100 meters in size, was in summer fallow.

An informant, Ms. Judy Knutson, indicated that the last flood washed much of the cultural material from the site. Ms. Knutson has collected cultural material from the area including one small, side-notched projectile point (Swan River chert) and Knife River flint flakes.

Cultural material observed at the site includes sparse scatters of broken bison bone, fire-cracked rock, and flakes.

The cultural material collected from the site consists of the

following:

- 1) Two quartzite (river cobble) choppers
- 2) One Knife River flint modified flake
- 3) Four flakes: one of Swan River chert
one of Knife River flint
one of grey chert
one of quartzite

(Interpretations) The side-notched projectile point indicates a Late Prehistoric occupation of the area. The lack of ceramics might suggest that the area was utilized by Plains Nomadic peoples rather than Plains Village inhabitants, although this is supposition.

(Recommendations) Apparently most of the site has been destroyed by periodic flood erosion. Because of this, it no longer meets NRHP criteria. We do not believe that subsurface testing would be a fruitful venture.

Davidson Site - 32RV414:

The Davidson Site is an occupation site that lies on a small, flat, plowed field approximately two and one-half miles northwest of the Mouse River Park. The site is adjacent to the west valley road and immediately adjacent to the refuge boundary. One hundred meters square in size, the site is situated on the west bank of the Souris River and south of and adjacent to an unnamed, small spring run-off drainage. The site area was in summer fallow at the time of the survey and lies in the Northern Floodplain eco-zone.

Cultural material observed at the site includes scattered bison bone, lithics, and fire-cracked rock.

The cultural material collected from the site consists of:

- 1) One basaltic chopper

- 2) One Swan River chert biface
- 3) One Knife River flint end scraper
- 4) One quartzite (river cobble) hammerstone
- 5) One Knife River flint projectile point
- 6) Twenty-nine flakes: fifteen of Swan River chert
 ten of Knife River flint
 two of basalt
 one of light brown chalcedony
 one of Tongue River silicified
 sediment

(Interpretations) The side-notched projectile point and lack of ceramics might suggest that this site represents a Plains Nomadic (Late Prehistoric) exploitation of the Northern Floodplain Forest eco-zone. Our lithic analysis also supports this conclusion. Preliminary observations in the area indicate that most Plains Nomadic manifestations occur in the Upland Prairie or Terrace Grassland zones. At any rate, it is suggested that butchering (bone, choppers) was carried out here after the kill (projectile point). It may be that this was a spring exploitation of the zone when the bison congregated along the floodplain.

(Recommendations) The site lies in an area that has so far not been disturbed. Since the area will probably be inundated, it would be wise to initiate test excavations here so that decisions regarding salvage or NRHP significance can be made. These suggestions are based on the variety of tool types and bison bone from the surface and the possibility of subsurface materials. Testing may help resolve the supposition that this site represents a Plains Nomadic exploitation of the Northern Floodplain Forest eco-zone.

McCarroll Site - 32RV415:

The McCarroll Site is an occupation site located approximately five

and one-fourth miles northwest of the Mouse River Park. The site lies in a plowed field east of a spring fed lake and adjacent to the west bank of the Souris River. The site, which is 200 meters square in size, is in the Northern Floodplain Forest eco-zone.

The cultural affiliation of the site is believed to be of the Woodland Period as evidenced by the presence of pottery. The side-notched projectile points indicate a Plains Village manifestation of the Late Woodland. Other cultural materials observed at the site consist of bison bone (long bones and scapula), bison teeth, flakes, and fire-cracked rock. One cultural feature, a small lens which has been disturbed by plowing, was observed.

The cultural material collected from the site consists of the following:

- 1) One Swan River chert knife
- 2) One Swan River chert core
- 3) Two Swan River chert projectile points
- 4) One Swan River chert modified flake
- 5) One basaltic chopper
- 6) Ceramics:
 - five body sherds
- 7) Thirty-two flakes: nineteen of Swan River chert
eleven of Knife River flint
two of burnt chalcedony
- 8) Bone fragments:
 - Bison bison or Bos
 - femoral head (two)
 - right PM₁
 - Canis sp.
 - right mandible fragment
 - canine
 - first phalange
 - second phalange

(Interpretations) This is probably a Plains Village site from the Late Woodland Period. It represents an extensive occupation area where a variety of subsistence activities were carried out. The site seems to

fit an emerging pattern of Plains Village utilization of the Northern Floodplain Forest eco-zone.

(Recommendations) We feel that this site should be tested to determine if salvage (from inundation) or recommendation to the NRHP is warranted. We base our decision on the fact that plowing annually uncovers new subsurface deposits and the indication by a variety of cultural materials of extensive occupation. Such tests would help clarify the relationships of apparent Plains Village adaptations to the Northern Floodplain Forest eco-zone.

Yale Tipi Ring Site - 32RV416:

The Yale Tipi Ring Site is a stone circle (tipi ring) site located approximately five and three-fourths miles northwest of the Mouse River Park. The site lies in a pasture on bluffs overlooking the Souris River 200 meters to the west. The site area, which is presently covered with short prairie grasses, is in the Upland Prairie eco-zone.

The site covers an area approximately 100 meters square in size. There are eight tipi rings total, all of which have been disturbed by grazing cattle. All are single-course rings. The nature of the site (tipi rings) indicates a Plains Nomadic cultural affiliation.

Cultural materials observed in association with the tipi rings include lithics and shatter.

The cultural materials collected from the site consist of:

- 1) One Swan River chert biface
- 2) One quartzite (river cobble) chopper
- 3) Eight flakes: four of quartzite
three of Knife River flint
one of Swan River chert

The dimensions of the eight tipi rings are as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	12	4.3 meters
2	28	4.0 meters
3	33	3.6 meters
4	33	5.1 meters
5	23	4.3 meters
6	18	4.6 meters
7	15	4.8 meters
8	21	4.4 meters

(Interpretations) The site is associated with the Plains Nomadic cultural manifestation, but we are unable at this time to assign temporal parameters.

(Recommendations) Although the rings are situated above elevation 1620' and 200 meters from the present river course, the steep bluff area will be highly susceptible to erosion from the proposed lake. Also, the site is being slowly destroyed. For these reasons it would be wise to map the site. Also, it is unusual to find lithic debitage in and around tipi ring sites. We feel that test excavations are warranted to determine the type and extent of this unusual phenomenon. At that time we can assess the site's significance according to NRHP criteria.

Flats Tipi Ring Site - 32RV417;

The Flats Tipi Ring Site is a stone circle (tipi ring) site located on a flat prairie approximately six and one-half miles southeast of Grano, North Dakota. The site is adjacent to Lake Darling's east bank and also near the eastern boundary of the Upper Souris National Wildlife Refuge. The site area, about five acres in size, is presently covered with prairie grasses and small forbes. The eco-zone of the area is that of the Terrace Grasslands.

The site is composed of six tipi rings which are well sodded and disturbed by cattle. The rings are quite difficult to discern because of the heavy grass cover. The cultural affiliation of the site appears to be Plains Nomadic as evidenced by the presence of the tipi rings.

No other cultural features or materials were discovered in association with the tipi rings. This lack of cultural material may be due to the heavy grass cover which obscures the surface from view.

Pertinent information of the six tipi rings, all of which are single course, is as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	14 (may be more)	3.0 meters
2	10 (may be more)	3.8 meters
3	jumbled	---
4	jumbled	---
5	jumbled	---
6	jumbled	---

(Interpretations) Minimally, the site can be assigned to a Plains Nomadic cultural manifestation of unknown temporal parameters.

(Recommendations) The heavy grass obscures the surface and any cultural material that might be scattered about is not visible. It would be wise to test selected portions of the area to determine the extent and type of cultural debris, if any. Also, because of its elevation, the site appears to be in danger of periodic inundation. If this is the case, then the site should definitely be mapped and tested as a salvage effort or to determine NRHP significance.

Big Bull Tipi Ring Site - 32RV418:

The Big Bull Tipi Ring Site, a stone circle (tipi ring) site, is located approximately five and one-third miles south of Grano, North

Dakota. The site lies on a flat 800 meters east of Lake Darling in the Terrace Grassland eco-zone. The ground is presently covered with lush short grass, prairie grasses, and forbes.

The site, 100 meters X 50 meters in size, is composed of five (5) single-course tipi rings, three of which are well-sodded. The other two are not sodded and might be younger in age. The rings have been badly disturbed by grazing cattle. There may be other rings along the flat to the south, but the heavy grass cover has obscured the surface from view. The presence of tipi rings indicates a Plains Nomadic cultural affiliation.

No cultural materials were observed in association with the tipi rings. The lack of discovery of cultural materials may be due to the thick prairie grass covering the area.

The tipi ring dimensions are as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	51	4.8 meters
2	21	4.6 meters
3	25	4.8 meters
4	42	5.0 meters
5	20	4.2 meters

(Interpretations) Plains Nomadic of an unknown time period - sodded and unsodded rings might indicate a two-component site.

(Recommendations) As in other recommendations, if the site is threatened by inundation, it should be mapped and tested. Slumping and erosion might also be a problem facing the integrity of the site. These measures are necessary to determine if the site warrants nomination to the NRHP.

Funk Tipi Ring Site - 32RV419:

The Funk Tipi Ring Site is a stone circle (tipi ring) site located approximately one-sixth mile southeast of Greene, North Dakota. Four of the nine tipi rings observed lie in a flat pasture, two on either side of a vehicle trail which travels along the west bank of Lake Darling. These two groups of rings are about 200 meters apart. Approximately 250 meters south of the rings on the east side of the trail we observed two more rings on a flat pasture. There are also three rings located just to the north of the Greene Church. One of these has a depression in the center. The site area, located in the Terrace Grasslands eco-zone, is presently covered with short prairie grasses and scattered forbes.

The nine tipi rings are single course, two of which are very distinct and the remainder of which have been quite disturbed by grazing cattle. The rocks composing the rings are lichen covered. A Plains Nomadic cultural affiliation is indicated by the presence of tipi rings.

No cultural materials were collected from the site and only one, possibly historic, calcaneus bone (Bison bison) was observed at the site.

The dimensions of the nine tipi rings are:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	89	7.2 meters
2	56	6.1 meters
3	36	4.9 meters
4	15	4.4 meters
5	38	4.4 meters
6	36	4.8 meters
7	25	3.4 meters
8	25	3.5 meters
9	22	1.6 meters

(Interpretations) We have assigned this site to the Plains Nomadic cultural manifestation. The lack of temporally diagnostic artifacts will not allow us to assign this site to a broad time category.

(Recommendations) While we were in the field, and after we had recorded this site, a construction company began to mine gravel from the site terrace (the terrace is composed of glacial till). They assured us that they would not disturb the rings. However, the rings are only part of the site; the terrace and surrounding locale are also integral units and these are being destroyed. Also, it seems to be only a matter of time before the entire area is mined. Therefore, the site is in immediate danger and should be mapped. The elevation (1615') also indicates that the site is threatened by erosion and/or inundation. These factors would also contribute to a decision to map and test the site. These actions will facilitate decision regarding possible salvage efforts or nomination to the NRHP.

Archaeological interests include the possibility of assessing Plains Nomadic adaptations to the Terrace Grasslands and recovering diagnostic implements.

The gravel mining operations were by a Minot company under contract to the U.S. Air Force. The Air Force was improving missile pads with the gravel. In light of this, we also recommend that the U.S. Air Force comply with cultural resource regulations and, in the future, cause cultural resource surveys to be conducted on areas they intend to disturb.

Pale Moon Tipi Ring Site - 32RV420:

The Pale Moon Tipi Ring Site is a stone circle (tipi ring) site located approximately three miles southeast of Greene, North Dakota. The rings lie on a large (45 acre) flat about 500 meters northeast of Lake Darling. Most of the rings appear to be located on the southwest edge of the flat just before it slopes down into Lake Darling. The site area is in the Terrace Grasslands eco-zone and is covered with a heavy growth of short prairie grass, scattered berry bushes, and forbes.

The site consists of eleven definite tipi rings, all of which are single course and in good condition. There are probably more rings in the area, but the heavy grass cover has obscured the surface from view. The site appears to have a Plains Nomadic affiliation as evidenced by the tipi rings.

No other cultural features or materials were observed at the site. However, some small depressions (three and five-tenths meters in diameter and approximately twenty-five centimeters deep) of unknown function were discovered about one-fourth mile east of the site.

The dimensions of the tipi rings are as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	20	4.3 meters
2	15	4.4 meters
3	29	4.6 meters
4	15	5.0 meters
5	23	4.7 meters
6	39	4.7 meters
7	27	4.7 meters
8	47	5.5 meters
9	46	5.1 meters
10	40	6.4 meters
11	54	4.7 meters

(Interpretations) Plains Nomadic of unknown time period.

(Recommendations) This site (elevation 1615') appears to be in danger of inundation and/or disturbance from slumping and erosion. So that we may determine if the site warrants nomination to the NRHP or can be salvaged prior to destruction, we feel that test excavations are necessary. The site must also be mapped so that the surface provenience of the features can be preserved.

Almost Tipi Ring Site - 32RV421:

The Almost Tipi Ring Site is a stone circle (tipi ring) site located approximately one-half mile north of Greene, North Dakota. The rings lie on a gently sloping flat 600 meters west of Lake Darling. The flat is covered with thousands of embedded rocks making identification of the rings difficult. The present floral cover consists of short grass and prairie grasses. The site area has been assigned to the Terrace Grasslands eco-zone.

The site consists of four single-course tipi rings, three on the east side of an intermittent drainage and one on the west, and covers an area of about two acres. The stones comprising the rings are well embedded, appear to have been disturbed, and, as mentioned above, are very difficult to discern. The presence of tipi rings, however, indicates a Plains Nomadic affiliation.

No other cultural features or materials were observed at the site.

Due to the disturbed nature of the rings, their dimensions were not recorded.

(Interpretations) Plains Nomadic of an unknown time period.

(Recommendations) No further work is necessary due to the state of disrepair at the site. We have recommended mapping and testing other, more extensive tipi ring sites along the Terrace Grasslands. We do not believe that further work here has the potential to augment information expected from the other sites.

Pepsi Tipi Ring Site - 32RV422:

The Pepsi Tipi Ring Site is a stone circle (tipi ring) site located approximately one-fifth mile north of Greene, North Dakota, and about 600 meters north of the Funk Tipi Ring Site, 32RV419. The site lies on a flat and rolling pastureland that abuts North Dakota Highway #28 to the north and Lake Darling, which is 400 meters to the east. This site may be a portion of 32RV419 that has been separated by building activities in Greene. The site area is presently covered with short grasses and prairie grasses and is in the Terrace Grasslands eco-zone.

The site covers approximately three acres and is composed of six single-course tipi rings which indicate a Plains Nomadic affiliation. It is suspected that construction of the roadbed for Highway #28 may have destroyed part of the site.

Aside from the tipi rings, no other cultural features or materials were observed or collected from the site.

The distances between the rings are as follows:

Ring #1 to #2	24 meters
Ring #2 to #3	21 meters
Ring #3 to #4	47.5 meters
Ring #3 to #5	22 meters
Ring #4 to #6	75 meters

(Interpretations) Plains Nomadic of unknown temporal parameters.

(Recommendations) The site should be tested and mapped in conjunction with, and for the same reasons as, activities at 32RV419.

Lone Stone Tipi Ring Site - 32RV423:

The Lone Stone Tipi Ring Site is a stone circle (tipi ring) site located approximately one and two-thirds miles north of Greene, North Dakota. The site lies on a flat finger of land that is separated by two small, southwest-northwest oriented draws. It is 600 meters northeast of Lake Darling. An access road that runs through the upper portion of the flat may have destroyed some rings. The site area is covered with short prairie grasses and forbes at this time and is in the Terrace Grasslands eco-zone.

The site is composed of one single-course tipi ring which is four and three-tenths (4.3) meters in diameter and consists of thirty-seven (37) rocks. The nature of the site (tipi ring) indicates a Plains Nomadic affiliation.

No other cultural features were observed at the site, nor were any cultural materials observed.

(Interpretations) Plains Nomadic.

(Recommendations) This site does not appear to have surface (other than the feature) or subsurface deposits. As such, it is relatively unimportant in assessing the prehistory of the area. Nomination to the NRHP is not recommended nor are testing activities.

Christenson Site - 32RV424:

The Christenson Site, a stone circle (tipi ring), is located approximately two miles southwest of Grano, North Dakota. The site is

situated on a gently sloping flat which has coulees flanking the northern and southern sides. It is 100 meters west of Lake Darling. At the time of the survey the site area was covered with prairie grasses and appeared to have been disturbed by pasturing cattle. The site lies in the Upland Prairie eco-zone.

Though the actual number of rings is difficult to determine because of the cattle disturbance, three definite rings were observed, all of which are single course. A Plains Nomadic affiliation is indicated by the presence of the tipi rings.

No cultural features were observed aside from the tipi rings, nor were any cultural materials observed at or collected from the site.

The dimensions of the three tipi rings observed are:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	34	5.0 meters
2	31	5.5 meters
3	26	6.75 meters

(Interpretations) Plains Nomadic of unknown temporal affiliation.

(Recommendations) The site is not in danger of destruction (elevation 1630'). No work is necessary here. NRHP considerations are not necessary at this time.

Windy Point Tipi Ring Site - 32RV425:

The Windy Point Tipi Ring Site is a stone circle (tipi ring) site located approximately seven and three-fourths miles south and slightly east of Grano, North Dakota. It is in the Terrace Grasslands eco-zone. The site lies on a slightly rolling terrace with a small coulee immediately north. Lake Darling is 300 meters to the east. The present ground cover

consists of prairie grasses and a number of large rocks of glacial origin.

The site is composed of two single-course tipi rings that are sodded-in and difficult to observe because of the lush grass cover. There has been some disturbance due to cattle grazing. A rock cairn was observed north of the rings across the small coulee. There is also an historical foundation near the cairn. The presence of tipi rings at the site indicates a Plains Nomadic affiliation.

No other cultural features were observed, nor were any cultural materials noted at or collected from the site.

The following dimensions are those of the tipi rings observed at the site:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter</u>
1	29	4.0 meters
2	35	6.0 meters

(Interpretations) We are not able to assign temporal parameters to the site. It is probably a Plains Nomadic manifestation.

(Recommendations) The site is not in danger of destruction. No further work is necessary. We do not feel that it needs to be included on the NRHP at this time.

Restless Rabbit Tipi Ring Site - 32RV426:

The Restless Rabbit Tipi Ring Site is a stone circle (tipi ring) site located two and one-eighth miles southwest of Grano, North Dakota, in the Terrace Grasslands eco-zone. The site is situated on a flat terrace overlooking the Souris River 600 meters to the east. The site area, 100 meters square in size, is presently in pasture and has been

grazed.

The site contains seventeen tipi rings in total, fourteen on land owned by Mr. Alley and Mr. Jack Miller and three on the edge of the Upper Souris National Wildlife Refuge. Those rings on the refuge are obscured by dense prairie grasses. All of the rings are composed of deeply embedded stones and the majority of them are double-course rings. A Plains Nomadic affiliation is indicated by the presence of tipi rings.

Also observed at the site were two rock cairns. Cairn #1 consists of over seventy stones embedded in the ground in a circular fashion with a diameter of three meters. The center area of this cairn is devoid of stones and depressed several centimeters. Cairn #2 is similar to Cairn #1, but much smaller.

Aside from the tipi rings and rock cairns, no cultural features or materials were observed at the site.

The dimensions of the tipi rings are as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	30	4.1 meters
2	59	6.0 meters
3	67	5.9 meters
4	27	4.9 meters
5	42	5.2 meters
6	25	4.3 meters
7	54	6.0 meters
8	60	5.4 meters
9	70	4.7 meters
10	56	5.2 meters
11	25	4.2 meters
12	31	4.7 meters
13	59	5.4 meters
14	78	4.3 meters
15	obscured	
16	obscured	
17	obscured	

(Interpretations) Plains Nomadic - there are no materials diagnostic of a time period on the surface of the site.

(Recommendations) It is not known whether slumping and erosion will be a problem when higher water levels are common. If so, the site should definitely be tested. The ideal situation would be to place it on the NRHP so that it may be preserved intact. There are several reasons for this: First, it is the only double-course tipi ring site that we encountered. We do not yet know the significance of this phenomenon. Second, it is the largest known tipi ring site (most rings) in the area; and, third, the rock cairns associated with the site also make it unique. We cannot, at this time, assess the significance of the cairns.

Portions of the site are on private pastureland and are in danger of being disturbed by grazing cattle. Therefore, the entire site should be mapped during the field testing expedition.

Four Rings Tipi Ring Site - 32RV427:

The Four Rings Tipi Ring Site is a stone circle (tipi ring) site located approximately two and one-quarter miles southwest of Grano, North Dakota, in the Terrace Grasslands eco-zone. The site, situated on a flat that slopes gently to the valley, is 30 meters X 80 meters in size. The rings are approximately 100 meters north of an unnamed coulee and 600 meters west of Lake Darling. The site area is covered with prairie grasses at this time and has been grazed.

The site consists of four tipi rings which were fairly easy to identify because the prairie grasses have been grazed. It would appear that the cultural affiliation of the site is Plains Nomadic as evidenced by the presence of the tipi rings.

Other than the rings, no cultural features or materials were observed at the site.

The dimensions of the four rings are:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Dimensions:</u>
1	47	5.5 meters
2	30	4.0 meters
3	78	4.6 meters
4	60	4.9 meters

(Interpretations) Plains Nomadic - no other information is available.

(Recommendations) The site is not in immediate danger of destruction. No further work is necessary here. It is not of sufficient importance to merit nomination to the NRHP. Preservation will be automatically affected.

Cold Duck Tipi Ring Site - 32RV428:

The Cold Duck Tipi Ring Site, a stone circle (tipi ring) site, is located approximately two and one-half miles east and slightly north of Tolley, North Dakota. The site lies on a flat terrace in the Terrace Grasslands eco-zone about 300 meters west of the Souris River. It is 100 meters east of the Upper Souris National Wildlife Refuge access road. The flat terminates abruptly into the river valley and is covered with small hardwood trees, buckbrush, and native prairie grasses. Higher hills define the flat's west edge. Its northern boundary is defined by an east-west oriented seasonal drainage that drains into the Souris River.

The site consists of one unusually large, single-course tipi ring which is situated midway between the higher area to the west and the flat's termination to the east. The stones which compose the ring

(58 in number) are deeply embedded and lichen covered. The ring is approximately seven and three-tenths (7.3) meters in diameter and twenty-seven and three-tenths (27.3) meters in circumference.

Aside from the tipi ring, no cultural features or materials were noted at the site.

(Interpretations) The extant data allows only a Plains Nomadic cultural assignment.

(Recommendations) It does not appear that this site is in immediate danger from slumping or erosion, therefore, no further work is necessary. Testing would be required to determined NRHP significance. However, we recommend that the site be preserved as is. The site should be monitored throughout the years to insure that it is not eroded in the future.

Curtis Ones Site - 32RV429:

The Curtis Ones Site is an occupation site located approximately six and one-quarter miles northwest of the Mouse River Park. The site lies on a flat floodplain adjacent the Souris River. It is also near a seasonal stream and in the Northern Floodplain Forest eco-zone. The site area (approximately twenty-five acres) has been recently under cultivation. The site is quite large when compared to similar sites in the area.

Cultural materials observed at the site include stone and bone artifacts, ceramics, and charred areas. There is much fragmentary bison bone and other unidentifiable bone in concentrated areas at the site. The informant and landowner, Mr. Curtis Ones, has a collection from the site which includes a catlinite pipe.

A Woodland affiliation is indicated by the presence of the ceramics. It appears that the occupation of the site was fairly lengthy because there is a large amount of scattered cultural remains. Depressions were not evident at the site; however, this may be due to the fact that the area is now under cultivation. There are probably undisturbed subsurface cultural deposits.

The cultural material collected from the site consists of the following:

- 1) Ceramics:
 - twenty-five body sherds
 - one split body sherd
 - two rim sherds
- 2) One quartzite hammerstone
- 3) One petrified wood biface
- 4) One burnt chalcedony projectile point
- 5) One Swan River chert biface
- 6) One Swan River chert projectile point
- 7) Bone fragments:
 - Bison bison or Bos
 - femural head (two)
- 8) Twenty-eight flakes: twenty of Swan River chert
five of Knife River flint
one of agate (moss)
one of porcellanite
one of plate chalcedony

(Interpretations) This site appears to be another Plains Village (Late Woodland Period) adaptation to the Northern Floodplain Forest eco-zone.

No doubt a wide range of subsistence activities were carried out here.

(Recommendations) The site needs to be extensively tested to obtain information relevant to assessing its NRHP potential. It is in immediate danger of inundation (elevation 1600'). Also, plowing activities are continually disturbing the subsurface cultural distribution. In addition to the above, the site should be tested to:

- 1) determine if there are other buried components;

- 2) assess Plains Village adaptations to the Northern Floodplain Forest eco-zone; and
- 3) establish the relationship of this site to similar adaptations along the valley.

Herzig Site - 32WD401:

The Herzig Site is an occupation site located approximately three and one-half miles southeast of Foxholm, North Dakota. The site lies in a plowed field on the flat floodplain about one-fourth mile west of the Souris River. It is in the Northern Floodplain Forest eco-zone. The site area, 200 meters X 50 meters in size, is presently under cultivation and may extend closer to the river into the pasture to the east. However, nothing could be observed in the pasture because the heavy grass cover obscured the surface from view.

Cultural materials observed at the site are sparsely scattered and include bison bone, fire-cracked rock and flakes.

The cultural material collected from the site consists of the following:

- 1) Two Knife River flint bifaces
- 2) One flake of Knife River Flint

(Interpretations) There was little diagnostic surface evidence at this site during our survey. The bifaces suggest some sort of subsistence activities, but no other suppositions can be made.

(Recommendations) This site yielded only a few tools and only one flake. We feel that this may be because much of the site is obscured by undisturbed pasture nearer the river. For this reason, and because the site is threatened by diversion tunnel outlet construction and/or inundation (elevation 1757'), test excavations should be conducted here. We will then be able to make recommendations concerning NRHP significance. Also, this spring's plowing may turn up additional evidence.

H. J. Johnson Site - 32WD402:

The H. J. Johnson site, an occupation site, is located approximately three and one-fourth miles northwest of Burlington, North Dakota. The site lies in a field covered with cultivated stubble and pigeon grass. It is in the Northern Floodplain Forest eco-zone about 200 meters west of the Souris River. The size of the site was not determined because the heavy stubble and grass cover obscures much of the ground surface from view.

Cultural materials observed at the site included scattered bison bone, fire-cracked rock, artifacts and flakes.

The material collected from the site consists of the following:

- 1) One Knife River flint end scraper
- 2) One quartzite (river cobble) core
- 3) One quartzite (river cobble) chopper
- 4) Two flakes of Swan River chert

(Interpretations) We did not collect any diagnostic evidence from the site's surface. However, there are deep alluvial deposits here that could contain cultural materials. Also, much of the site surface was obscured by grasses.

(Recommendations) Because of the heavy stubble encountered throughout the site, the area should be re-surveyed after the spring plowing. We feel that this should be accomplished prior to making any other recommendations. The re-survey would probably not exceed 1 hour at which time we could arrive at NRHP and/or testing decisions.

Nygard Site - 32WD403:

The Nygard Site is an occupation site situated approximately three and three-fourths miles northwest of Burlington, North Dakota. The site

lies in the Northern Floodplain Forest eco-zone. It is situated in a cultivated field on a flat floodplain adjacent to the west bank of the Souris River. Ward County Road #15 is a short distance to the east. The site covers an area of 300 meters X 50 meters and, according to the landowner (Mr. Lloyd Nygard) has been heavily collected by curio seekers for many years.

Cultural materials observed at the site include fire-cracked rock, broken bison bone, stone artifacts, and flakes.

The cultural material collected from the site consists of:

- 1) One light brown chalcedony modified flake
- 2) One Knife River flint modified flake
- 3) One basaltic biface
- 4) One Swan River chert core
- 5) Twenty-three flakes: thirteen of Swan River chert
six of Knife River flint
one of Tongue River silified
sediment
one of quartzite
two miscellaneous

(Interpretations) Apparently subsistence activities involved with bison procurement were carried out here. Without diagnostic tools we are unable to place this site in time or assign a cultural category.

(Recommendations) Because the site will be inundated it will be necessary to initiate test excavations here. After these operations we can more adequately determine the site's NRHP potential.

Schmidt Site - 32WD404:

The Schmidt Site is an occupation site located approximately one and one-third miles north of Burlington, North Dakota, in the Terrace Grasslands/Northern Floodplain Forest eco-zone. The site is situated on a plowed flat that slopes toward the Souris River 500 meters to the

east. The western bluffs of the Souris River are located immediately west of the site. A side drainage of the Souris River lies directly north. The size of the site was not determined. It may extend into the land west of the observed site area. However, this was not possible to accurately determine because virgin prairie grasses obscure the surface from view.

Cultural materials observed at the site consisted of pieces of unidentifiable butchered bone, stone artifacts, and flakes. Judging from the variety of the projectile points, the site may be a multi-component site. This suggestion, however, is tenuous because of the poor condition of the specimens.

The cultural material collected from the site includes:

- 1) One Swan River chert projectile point (McKean type)
- 2) One porcellanite projectile point
- 3) One Knife River flint biface
- 4) Eight flakes: four of Swan River chert
two of Knife River flint
one of yellow jasper
one of porcellanite

(Interpretations) This is probably a two-component site. The McKean-like specimen is common to the Plains Archaic adaptations. The side-notched point could be either Plains Nomadic or Plains Village. This represents (to date) the earliest known exploitation of the Terrace Grasslands/Floodplain Forest eco-zone.

(Recommendations) This site represents the oldest cultural manifestation (Plains Archaic?) that we discovered during the survey. Because it is situated below the proposed dam site, we are not sure if it will be disturbed. If not, the site should be preserved intact. If there is a likelihood of disturbance, testing operations should be carried out to

assess significance according to NRHP criteria. The site may contain information that will allow us to assess Archaic adaptations to the aforementioned eco-zone.

Stromberg Site - 32WD405:

The Stromberg Site is an occupation site located approximately four miles east of Foxholm, North Dakota, in the Northern Floodplain Forest eco-zone. The site lies in a slightly hilly, cultivated field and covers an area 200 meters X 100 meters in size. At the time of the survey the site area was in summer fallow.

Cultural material observed at the site includes an unusually large quantity of fire-cracked rock in respect to the amounts of other materials, some bison bone, stone artifacts, and a large quantity of lithic shatter.

The cultural materials collected from the site consists of the following:

- 1) One Knife River flint biface
- 2) Two Swan River chert bifaces
- 3) One quartzite (river cobble) core
- 4) Eight flakes: five of Swan River chert
one of Knife River flint
one of quartzite
one miscellaneous

(Interpretations) This seems to be a typical subsistence activity site concerned with bison procurement and/or preparation. The surface materials do not allow further supposition.

(Recommendations) It appears that this area will be inundated so the site should be tested to determine if salvage or nomination to the NRHP is necessary. Areas adjacent to the cultivated acreage should be inspected for subsurface deposits.

Pritschet II Site - 32WD406:

The Pritschet II Site, an occupation site, is located approximately two and three-fourths miles east of Foxholm, North Dakota. It is in the Northern Floodplain Forest eco-zone. The site is situated in a summer-fallowed field that lies adjacent to the east bank of the Souris River. The site area is approximately 500 meters X 300 meters in size.

Abundant scattered bison bone and fire-cracked rock were observed at the site along with stone artifacts and other lithic debitage. It appears that plowing may have just penetrated the cultural zone because the cultural materials are so thinly scattered. This would suggest significant subsurface cultural deposits remain.

Much of the field consisted of large clods. This made surface collecting difficult, but the following cultural materials were recovered:

- 1) One light brown chalcedony end scraper
- 2) One quartzite (river cobble) hammerstone
- 3) One quartzite (river cobble) core
- 4) Twelve flakes: five of Swan River chert
four of Knife River flint
two of quartzite
one of porcellanite

(Interpretations) From the surface evidence not much can be said about the site other than bison related subsistence activities occurred here. There were no temporally or culturally diagnostic artifacts on the surface.

(Recommendations) The site will be inundated by the proposed Burlington Dam pool. We feel that at least one test trench should be located on the site so that we can determine if salvage or NRHP considerations are necessary.

five and two-thirds miles north of Foxholm, North Dakota, in the Terrace Grasslands eco-zone. The site is situated on a large flat that slopes westward and gently to the Souris River. The flat is dissected by an old river channel and contains several gravel pits. The site proper lies between the old river channel and the present Souris River. The size is indeterminate because the flat is covered with virgin prairie grasses, including one to two foot high western wheatgrass and buck brush. This condition tends to obscure the surface from view.

Cultural materials (bones and flakes) at the site were discovered in two different areas. These areas are depicted on the site form map. Flakes were found in the burrow backfill areas which are distributed throughout the flat. Bones were found embedded in the sod and were mostly obscured by the prairie grasses. These bones turned out to be Equus. Although only a small amount of cultural materials was found, it is suspected that the thick grass is obscuring significant subsurface cultural deposits.

Cultural materials collected from the site are:

- 1) Numerous bones that appear to be from a large horse (Equus caballus)
- 2) One horse mandible
- 3) One horse maxillary
- 4) Three flakes: two of Knife River flint
one of Swan River chert

(Interpretations) The horse remains are probably those of a draft animal used in the early farming activities of the area. Other pre-historic debris is non-diagnostic and the site cannot, at present, be assigned cultural or temporal categories.

(Recommendations) The site is in an area proposed for obtaining fill

dirt and will eventually be destroyed and then inundated. It is also presently heavily overgrown by native grasses which effectively obscure the surface cultural debris that might exist. The lithic debris collected from rodent backfill indicates there are subsurface cultural deposits at the site. For these reasons, we feel that the site must be tested. This will allow us to determine if the site qualifies for the NRHP, if salvage work is appropriate or if no further work is necessary.

Gardner Site - 32WD409:

The Gardner Site is an occupation site located on both sides of Ward County Road #8. It is approximately two and nine-tenths miles east of Foxholm, North Dakota. The site area, 150 meters X 75 meters in size, is flat, bare, and has been disturbed by plowing. Since the flat has probably been periodically inundated by the flooding of the Souris River (20 meters to the east), an eco-zone cannot be established.

Cultural materials collected from the site consists of the following:

- 1) One Swan River chert biface
- 2) One antler tine (possibly knapping tool)
- 3) Three flakes: two of Knife River flint
 one of quartzite

(Interpretations) From the extant evidence, it is difficult to arrive at definitive statements regarding functional, temporal and cultural associations.

(Recommendations) The site is in danger of being inundated and should be tested to determine future mitigative options and NRHP significance.

Hoelscher Site - 32WD411:

The Hoelscher Site, a stone circle (tipi ring) site, is located

approximately four and one-half miles east and slightly south of Foxholm, North Dakota. It is in the Terrace Grasslands eco-zone. The site is situated on a flat pasture immediately east of the river bluffs. The area is covered with short prairie grasses and forbes and has been heavily grazed. The site, which extends along the terrace for about 300 meters, is approximately one kilometer east of the Souris River.

The site is composed of three tipi rings, probably single course, one of which is in relatively good condition. The other two rings have become badly disturbed by grazing cattle. A Plains Nomadic affiliation is suggested because of the tipi rings.

Aside from the tipi rings, a square configuration of stone was noted and is believed to be a rock foundation to an historic granary. Also observed was an associated rock cairn (composed of twenty-six visible rocks; 1.8 meters east-west X 1.4 meters north-south). It has not been determined whether or not this feature is prehistoric.

No cultural materials were observed or collected from the site.

The dimensions of the three tipi rings are as follows:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	39 (jumbled)	5.0 meters
2	(jumbled)	---
3	(jumbled)	---

(Interpretations) Plains Nomadic - undetermined temporal affiliation.

(Recommendations) This site is not endangered by construction or inundation. No further work is necessary.

Foxholm Overlook Tipi Ring Site - 32WD412:

The Foxholm Overlook Tipi Ring Site is a stone circle (tipi ring)

site located on a bluff approximately one-third mile northeast of Foxholm, North Dakota. It is in the Upland Prairie eco-zone. This site, though not in the study area, was observed while returning from work and, thus, was recorded. The site lies on a slightly sloping finger of land 700 meters north of the Des Lacs River. The area is undisturbed pasture covered by virgin short prairie grasses.

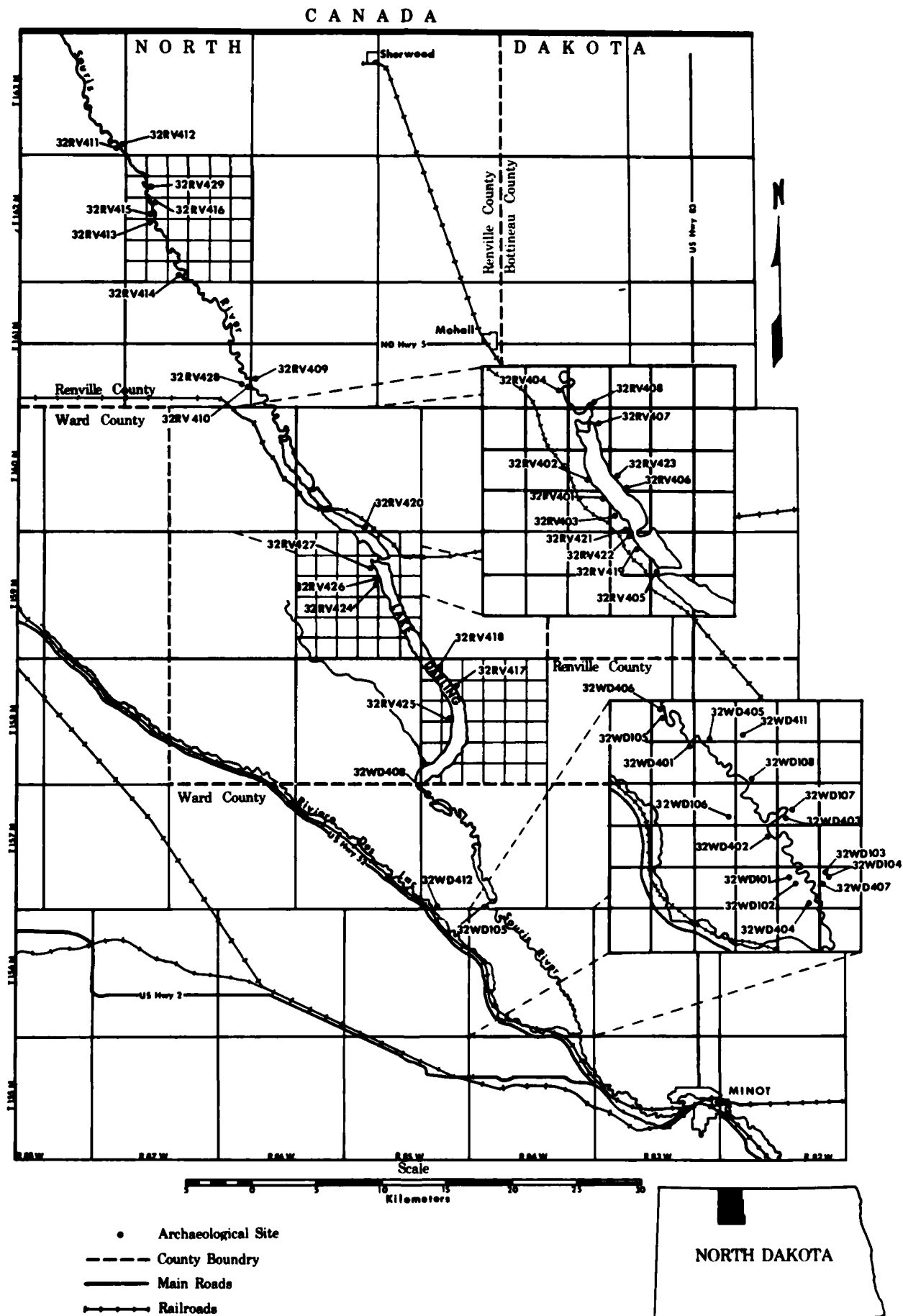
The site is composed of one large, single-course tipi ring. The ring consists of fifty-six (56) well-embedded rocks and is six and five tenths (6.5) meters in diameter. The presence of the ring indicates a Plains Nomadic affiliation.

Other than the tipi ring, no cultural materials or features were noted at the site.

(Interpretation) Plains Nomadic.

(Recommendations) This site is outside the study area and the Souris River Valley.

ARCHAEOLOGICAL SITE LOCATIONS



MATERIAL CULTURAL ANALYSES

Before proceeding with the section concerned with the material culture collected from recorded sites, a brief discussion is needed to explain the analytical strategy used in this report.

All sites, with the exception of 32RV416, yielding cultural debris are considered "occupation sites" in our analyses. Without exception these sites have been disturbed by either erosion or agricultural activities. Consequently, it is most difficult to determine whether or not the material recovered from the sites represents one component or multi-components. Furthermore, it is difficult to identify a particular cultural unit or complex from surface collections as particular cultural traits assigned or associated with particular units or complexes may be mixed. It has been suggested (Schneider 1978:53) that a more appropriate classification unit for these collections, components, and sites would be aggregate. Wood (1961:5) describes the aggregate as:

A collection of cultural manifestations in a given spatial context, or as the sum total of material occurring in a site. This term is used in describing finds from a site when there is no assurance that the remains are actually associated.

The following analyses treat each collection as an aggregate with analysis for individual sites being little more than pure description. Attributes of particular categories of debris are offered in tabular form within each section of the analyses. In this instance sites are lumped together as an aggregate on the basis of general traits, particularly raw materials used for chipped stone tool manufacturing, occurrence of ceramics, their closeness as to spatial context, and location

within particular eco-zones. Thus, the major emphasis of the analyses is concerned with the investigation and interpretation of relationships created by this technique.

Lithic Debitage Analysis

The lithicdebitage collected from sites recorded during the archaeological survey of the Burlington Dam/Lake Darling area has been analyzed in order to investigate possible relationships between sites yielding ceramics during surface collections and those sites which appear to have no ceramics associated with collected cultural debris.

One site, 32RV414, was excluded from the lithicdebitage analysis when comparing non-ceramic and ceramic site. Since this site is a tipi ring site it was felt that it did not fit the pattern of sites established for those being investigated, that being scattered cultural debris with no associated surface features indicative of dwellings. Interestingly enough, 32RV416 was the only tipi ring site recorded during our survey that yielded lithic debris.

Analytical emphasis has been placed on the identification of raw material categories and their frequencies and the frequency of decortication stages within these categories. The analysis has been accomplished for individual sites, for non-ceramic sites, for sites yielding ceramics, and for all sites as one collection (Tables 6, 7 and 8). No further attempt has been made to analyze lithicdebitage as to striking platform attributes and/or flake preservation.

Collection strategy conducted at each site consisted of collecting all lithic debris, ceramics, and non-bison fauna material observed on the surface of the site. Since the majority of sites were discovered in areas affected by present-day cultivation, controlled surface

collecting was felt to be of minimal value. The surface collection of sites was accomplished by four to five individuals walking over the site not to exceed approximately one hour. This type of surface collection is effective when estimating the horizontal distribution of the site represented by thinly scattered cultural material.

Raw Materials

Thirteen categories of raw materials were recognized at the initiation of debitage analysis. The categories consist of: Swan River chert; Knife River flint; Chalcedony, sub-categories (a) Light Brown Chalcedony, (b) Dark Brown Chalcedony, (c) Plate Chalcedony, (d) Burnt Chalcedony; Agate (Moss); Basaltic; Porcellanite; Quartzite (River Cobble); Silicified Sediment; Yellow Jasper; and Grey Chert.

Of the thirteen raw material types represented in sites recorded during the survey, Swan River chert and Knife River flint are the most prevalent, comprising eight-eight percent (88%) of the total lithic debitage collection. Swan River chert is described as having wide variation both in surface texture and color, sometimes within the same specimen. It is possible to find three or four different bands of color within one piece of material. The usual range of color is from cream white to medium grey, pink to deep rust, pale yellow to deep orange. Luster ranges from glossy to waxy to dull in appearance. Swan River chert also has considerable variation in texture from coarse crystalline to cryptocrystalline, within one piece. In some instances pockets of clearly visible quartz crystals may be seen in the cortex while the newly fractured surface shows a highly waxy and extremely

fine texture (Leonoff 1970:12; from Syms 1977:26).

Knife River flint includes all non-porous, fine-grained translucent material of dark brown, or dark reddish brown color (Clayton 1970:228). Other specimens resembling Knife River flint, but appearing as a milky greyish brown (10YR 5/2, 5/3) or opaque brownish black (10YR 2/1, 2/2), have been classified as Light Brown Chalcedony and Dark Brown Chalcedony, respectively.

There has been considerable confusion between Swan River chert and quartzite because of its color and texture as both have similar texture and pronounced color variation. Quartzite is considered to be that material which has a sugary texture and a cortex covering reflective of a stream-rolled cobble. Thus, it is referred to as River Cobble Quartzite.

The sources of Swan River chert are poorly identified, but it is known to occur in till deposits and stream beds of Manitoba (Syms 1977). Quantities have been noted along the Swan River 200 miles north of our study area and along the Red Deer River in Saskatchewan. Syms (1977:28) further states that it is not known to occur in pre-glacial river deposits such as the Souris sands and gravels. It is evident that sources of Swan River chert appear sporadically near our study area and may in fact exist along the Souris River. The existence of cores and cortex-covered flakes may further serve to indicate a nearby quarry source.

Knife River flint has traditionally been associated with the Knife River flint quarries in Dunn and Mercer Counties in western North Dakota

(Clayton et al. 1970). It should be noted, however, that material indistinguishable from Knife River flint has been discovered in stream gravels and in glacial till elsewhere in North and South Dakota.

Decortication Stages

The lithic debitage has been categorized into one of three decortication stages. Primary decortication flakes include those specimens having the dorsal surface entirely covered with cortex or patina (White 1963). Secondary decortication flakes have cortex or patina on a portion of the dorsal surface or on the striking platform (White 1963). Tertiary flakes have no cortex on the dorsal surface or on the striking platform (Schneider 1972).

Analysis

Examination of raw materials and their frequencies indicates an overwhelming preference for the use of Swan River chert for the manufacturing of chipped stone tools (63.1%). Knife River flint debitage comprises the second most common material (24.9%). Analysis of decortication stages indicates that initial manufacturing was probably accomplished away from the study area as the majority of the lithic debris is composed of tertiary flakes (57.8%). Furthermore, few cores of either material were recovered from any of the sites.

Analysis of lithic debris also serves to indicate a significant variation between the utilization of Swan River chert and Knife River flint at particular sites (Table 5). A comparison of these materials reveals a higher percentage of Swan River chert being utilized at sites having ceramics and Knife River flint occurring predominantly at sites

having no ceramics.

A Chi-Square test was constructed to determine the probability of the chance occurrence of the frequency distribution of these materials (Table 5). The results of the test indicate that this distribution could only occur by chance alone less than one time in one thousand.

TABLE 5

Distribution of Swan River Chert and Knife River Flint
Between Non-Ceramic and Ceramic Sites

	Non-Ceramic	Ceramic
Swan River chert	65	149
Knife River flint	44	35

N = 293

$\chi^2 = 15.7$

df = 1

p = 0.001

TABLE 6
Raw Material Frequencies
and
Decortication Stages

Individual Sites

Site Number	Raw Material	Primary		Secondary		Tertiary		Total	
		#	%	#	%	#	%	#	%
32RV401 Occupation (non-ceramic)	Swan River Chert	-	-	2	40.0	1	20.0	3	60.0
	Knife River flint	-	-	-	-	1	20.0	1	20.0
	Dk. Brown Chalcedony	-	-	-	-	1	20.0	1	20.0
	Subtotal	-	-	2	40.0	3	60.0	5	100.0
32RV402 Occupation (non-ceramic)	Swan River Chert	1	8.3	2	16.7	4	33.4	7	58.4
	Knife River flint	-	-	2	16.7	2	16.7	4	33.4
	Porcellanite	-	-	1	8.3	-	-	1	8.3
	Subtotal	1	8.3	5	41.7	6	50.1	12	100.0
32RV403 Occupation (non-ceramic)	Swan River Chert	-	-	-	-	1	20.0	1	20.0
	Knife River flint	-	-	1	20.0	1	20.0	2	40.0
	Lt. Brown Chalcedony	-	-	2	40.0	-	-	2	40.0
	Subtotal	-	-	3	60.0	2	40.0	5	100.0
32RV404 Occupation (non-ceramic)	Knife River flint	-	-	-	-	1	50.0	1	50.0
	Basalt	-	-	1	50.0	-	-	1	50.0
	Subtotal	-	-	1	50.0	1	50.0	2	100.0
32RV405 Occupation (non-ceramic)	Knife River flint	-	-	-	-	2	66.7	2	66.7
	Agate (moss)	-	-	1	33.3	-	-	1	33.3
	Subtotal	-	-	1	33.3	2	66.7	3	100.0
32RV406 Occupation (ceramic)	Swan River Chert	1	12.5	-	-	-	-	1	12.5
	Knife River flint	-	-	-	-	7	87.5	7	87.5
	Subtotal	1	12.5	-	-	7	87.5	8	100.0
32RV407 Occupation (ceramic)	Swan River Chert	1	5.6	1	5.6	5	27.8	7	38.9
	Knife River flint	-	-	2	11.1	7	38.9	9	50.0
	Quartzite	-	-	-	-	1	5.6	1	5.6
	Burnt Chalcedony	-	-	1	5.6	-	-	1	5.6
	Subtotal	1	5.6	4	22.3	13	72.3	18	100.0

TABLE 6 --continued

Site Number	Raw Material	Primary		Secondary		Tertiary		Total	
		#	%	#	%	#	%	#	%
32RV409 Occupation (ceramic)	Swan River Chert	-	-	-	-	1	50.0	1	50.0
	Knife River flint	-	-	1	50.0	-	-	1	50.0
	Subtotal	-	-	1	50.0	1	50.0	2	100.0
32RV410 Occupation (non-ceramic)	Swan River Chert	-	-	5	71.4	1	14.3	6	85.7
	Quartzite	-	-	1	14.3	-	-	1	14.3
	Subtotal	-	-	6	85.7	1	14.3	7	100.0
32RV411 Occupation (ceramic)	Swan River Chert	4	9.7	5	12.2	26	63.4	35	85.3
	Knife River flint	-	-	-	-	2	4.8	2	4.8
	Dk. Brown Chalcedony	-	-	3	7.3	-	-	3	7.3
	Burnt Chalcedony	-	-	-	-	1	2.4	1	2.4
	Subtotal	4	9.7	8	19.5	29	70.6	41	100.0
32RV412 Occupation (ceramic)	Swan River Chert	1	1.4	11	15.9	54	78.3	66	95.6
	Lt. Brown Chalcedony	-	-	1	1.4	1	1.4	2	2.8
	Miscellaneous	-	-	-	-	1	1.4	1	1.4
	Subtotal	1	1.4	12	17.3	56	81.1	69	100.0
32RV413 Occupation (non-ceramic)	Swan River Chert	-	-	1	25.0	-	-	1	25.0
	Knife River flint	-	-	1	25.0	-	-	1	25.0
	Grey Chert	-	-	-	-	1	25.0	1	25.0
	Quartzite	-	-	1	25.0	-	-	1	25.0
	Subtotal	-	-	3	75.0	1	25.0	4	100.0
32RV414 Occupation (non-ceramic)	Swan River Chert	1	3.4	2	6.9	12	41.3	15	51.6
	Knife River flint	1	3.4	4	13.8	5	17.2	10	34.4
	Lt. Brown Chalcedony	1	3.4	-	-	-	-	1	3.4
	Basalt	-	-	1	3.4	1	3.4	2	6.8
	T.R.S.S.	-	-	1	3.4	-	-	1	3.4
	Subtotal	3	10.2	8	27.5	18	61.9	29	100.0
32RV415 Occupation (ceramic)	Swan River Chert	1	3.1	7	22.0	11	34.3	19	59.4
	Knife River flint	1	3.1	7	22.0	3	9.3	11	34.4
	Burnt Chalcedony	-	-	-	-	2	6.3	2	6.3
	Subtotal	2	6.2	14	44.0	16	49.9	32	100.0
32RV416 Tipi Ring (non-ceramic)	Swan River Chert	-	-	-	-	1	12.5	1	12.5
	Knife River flint	-	-	2	25.0	1	12.5	3	37.5
	Quartzite	-	-	3	37.5	1	12.5	4	50.0
	Subtotal	-	-	5	62.5	3	37.5	8	100.0

TABLE 6 --continued

Site Number	Raw Material	Primary		Secondary		Tertiary		Total	
		#	%	#	%	#	%	#	%
32RV429	Swan River Chert	3	11.0	4	14.3	13	46.4	20	71.7
Occupation	Plate Chalcedony	-	-	-	-	1	3.5	1	3.5
(ceramic)	Knife River flint	-	-	1	3.5	4	14.3	5	17.8
	Agate	-	-	1	3.5	-	-	1	3.5
	Porcellanite	-	-	1	3.5	-	-	1	3.5
	Subtotal	3	11.0	7	24.8	18	64.2	28	100.0
32WD401	Knife River flint	-	-	1	100.0	-	-	1	100.0
Occupation		-	-	-	-	-	-	-	-
(non-ceramic)		-	-	-	-	-	-	-	-
	Subtotal	-	-	1	100.0	-	-	1	100.0
32WD402	Swan River Chert	-	-	-	-	2	100.0	2	100.0
Occupation		-	-	-	-	-	-	-	-
(non-ceramic)		-	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	2	100.0	2	100.0
32WD403	Swan River Chert	-	-	6	26.1	7	30.4	13	56.5
Occupation	Knife River flint	-	-	3	13.0	3	13.0	6	26.0
(non-ceramic)	Quartzite	-	-	1	4.3	-	-	1	4.3
	T.R.S.S.	-	-	-	-	1	4.3	1	4.3
	Miscellaneous	-	-	2	8.7	-	-	2	8.7
	Subtotal	-	-	12	52.1	11	47.7	23	100.0
32WD404	Swan River Chert	-	-	1	12.5	3	37.5	4	50.0
Occupation	Knife River flint	-	-	-	-	2	25.0	2	25.0
(non-ceramic)	Yellow Jasper	-	-	1	12.5	-	-	1	12.5
	Porcellanite	-	-	1	12.5	-	-	1	12.5
	Subtotal	-	-	3	37.5	5	62.5	8	100.0
32WD405	Swan River Chert	-	-	4	50.0	1	12.5	5	62.5
Occupation	Knife River flint	-	-	-	-	1	12.5	1	12.5
(non-ceramic)	Quartzite	-	-	1	12.5	-	-	1	12.5
	Miscellaneous	-	-	1	12.5	-	-	1	12.5
	Subtotal	-	-	6	75.0	2	25.0	8	100.0
32WD406	Swan River Chert	-	-	3	25.0	2	16.7	5	41.7
Occupation	Knife River flint	-	-	2	16.7	2	16.7	4	33.4
(non-ceramic)	Quartzite	-	-	2	16.7	-	-	2	16.7
	Porcellanite	-	-	1	8.3	-	-	1	8.3
	Subtotal	-	-	8	66.7	4	33.4	12	100.0

TABLE 6 --continued

Site Number	Raw Material	Primary		Secondary		Tertiary		Total	
		#	%	#	%	#	%	#	%
32WD407	Swan River Chert	-	-	-	-	2	40.0	2	40.0
Occupation	Knife River flint	-	-	2	40.0	-	-	2	40.0
(non-ceramic)	Lt. Brown Chalcedony	-	-	-	-	1	20.0	1	20.0
	Subtotal	-	-	2	40.0	3	60.0	5	100.0
32WD408	Swan River Chert	-	-	-	-	1	33.3	1	33.3
Occupation	Knife River flint	-	-	-	-	2	66.7	2	66.7
(non-ceramic)									
	Subtotal	-	-	-	-	3	100.0	3	100.0
32WD409	Knife River flint	-	-	2	66.7	-	-	2	66.7
Occupation	Quartzite	-	-	1	33.3	-	-	1	33.3
(non-ceramic)									
	Subtotal	-	-	3	100.0	-	-	3	100.0
TOTAL		16	4.7	115	33.8	207	61.7	341	100.0

TABLE 7

Raw Material Frequencies
and
Decortication Stages

All Sites

Raw Material	Primary		Secondary		Tertiary		Total	
	#	%	#	%	#	%	#	%
Swan River Chert	13	3.8	54	15.8	148	43.4	215	63.1
Knife River flint	2	0.6	31	9.1	49	14.4	82	24.9
Lt. Brown Chalcedony	1	0.3	3	0.9	1	0.3	5	1.4
Dk. Brown Chalcedony	-	-	3	0.9	1	0.3	4	1.2
Plate Chalcedony	-	-	-	-	1	0.3	1	0.3
Agate	-	-	2	0.6	-	-	2	0.6
Basalt	-	-	2	0.6	1	0.3	3	0.9
Porcellanite	-	-	4	1.2	-	-	4	1.2
Quartzite	-	-	10	2.9	3	0.9	13	3.8
Burnt Chalcedony	-	-	1	0.3	3	0.9	4	1.2
T.R.S.S.	-	-	1	0.3	1	0.3	2	0.6
Yellow Jasper	-	-	1	0.3	-	-	1	0.3
Grey Chert	-	-	-	-	1	0.3	1	0.3
Miscellaneous	-	-	3	0.9	1	0.3	4	1.2
TOTAL	16	4.7	115	33.8	207	61.7	341	100.0

TABLE 8

Raw Material Frequencies
and
Decortication Stages
Ceramic and Non-Ceramic Sites*

CERAMIC								
Raw Material	Primary		Secondary		Tertiary		Total	
	#	%	#	%	#	%	#	%
Swan River Chert	11	5.6	28	14.1	110	55.6	149	75.3
Knife River flint	1	0.5	11	5.6	23	11.6	35	17.7
Lt. Brown Chalcedony	-	-	1	0.5	1	0.5	2	1.0
Dk. Brown Chalcedony	-	-	3	1.5	-	-	3	1.5
Plate Chalcedony	-	-	-	-	1	0.5	1	0.5
Agate	-	-	1	0.5	-	-	1	0.5
Basalt	-	-	-	-	-	-	-	-
Porcellanite	-	-	1	0.5	-	-	1	0.5
Quartzite	-	-	-	-	1	0.5	1	0.5
Burnt Chalcedony	-	-	1	0.5	3	1.5	4	2.0
T.R.S.S.	-	-	-	-	-	-	-	-
Yellow Jasper	-	-	-	-	-	-	-	-
Grey Chert	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	1	0.5	1	0.5
Subtotal	12	6.1	46	23.2	140	70.7	198	100.0
NON-CERAMIC								
Swan River Chert	2	0.5	26	19.3	37	27.4	65	48.2
Knife River flint	1	0.7	18	13.3	25	18.5	44	32.5
Lt. Brown Chalcedony	1	0.7	2	1.5	2	1.5	5	3.7
Dk. Brown Chalcedony	-	-	-	-	-	-	-	-
Plate Chalcedony	-	-	-	-	-	-	-	-
Agate	-	-	1	0.7	-	-	1	0.7
Basalt	-	-	2	1.5	1	0.7	3	2.2
Porcellanite	-	-	3	2.2	-	-	3	2.2
Quartzite	-	-	7	5.2	-	-	7	5.2
Burnt Chalcedony	-	-	-	-	-	-	-	-
T.R.S.S.	-	-	1	0.7	1	0.7	2	1.5
Yellow Jasper	-	-	1	0.7	-	-	1	0.7
Grey Chert	-	-	-	-	1	0.7	1	0.7
Miscellaneous	-	-	3	2.2	-	-	3	2.2
Subtotal	4	2.9	64	47.3	67	49.5	135	100.0
TOTAL	16	4.8	110	33.0	207	62.2	333	100.0

* Excluding 32RV416.

Stone Tool Analysis

The stone artifact analysis is basically a study of functional tool categories and the raw materials from which they were produced. Tool categories have been established on the basis of presence or absence of particular attributes such as shape, manufacturing technique, and wear patterns. Raw materials established in the preceeding lithic analysis section have been incorporated in this study to make comparisons between frequencies of raw materials reflected in the detritus versus that inherent in the stone tools easier.

Eleven tool categories have been established for all stone artifact specimens recovered from sites during our survey (Table 9 and Appendix A). Of the forty sites recorded, twelve yielded artifacts. Within the eleven stone tool categories, projectile points, scrapers and biface are the most common artifacts recovered, comprising forty-two of the seventy-five specimens or fifty-six percent (56%) of the total collection. Since these three stone tool categories represent over fifty percent of the total assemblage, it is felt that raw materials from which they are manufactured represent those materials preferential in stone tool manufacturing within our study area.

It is immediately obvious that although a particular raw material may be preferred for one functional category, it may not be preferred for another. Within the projectile point category (considering all types and varieties) nine of the thirteen (62.2%) are of Swan River chert. Scrapers, on the other hand, are predominantly manufactured from Knife River flint. Five of nine specimens (55.6%) are of the aforementioned material. The biface category, which although used as a "catch-all"

for non-diagnostic artifacts, also includes chipped stone tools in initial stages of manufacture. Considering all bifaces, thirteen of the twenty-two (59.0%) recovered are of Swan River chert.

To further bolster the hypothesis of preferential material selection for particular functional tool categories, one needs only to compare the chopper category with other functional categories. Choppers are large, crudely manufactured tools thought to be most often utilized in the butchering process of large mammals. The chopper was used to disarticulate bone and to sever connective tendons. River cobble quartzite and basaltic materials were used in the manufacturing of the choppers, both of which are very hard materials resistive to flaking as a result of contact with hard surfaces such as bone.

Syms (1977) suggests that certain trends in these preferences are apparent in archaeological sites near our study area in southern Manitoba. He suggests a preference for Knife River flint is evident for the Paleo-Indian Period, Swan River chert for Archaic forms such as the McKean Complex, a return to Knife River flint for early Woodland (Sonota Complex) and a fairly high percentage of later side-notched (Late-Prehistoric Period) projectile points of Knife River flint (Syms 1969, Leonoff 1970, Richards 1974; all from Syms 1977).

A question is posed, "Does this preference hold true for projectile points recovered from sites within our study area?" From analysis of projectile points it is obvious that the hypothesis suggested by Syms (1977) does not hold entirely true, particularly when considering projectile points associated with the Lake Prehistoric Period, i.e., side-notched and triangular unnotched. A total of thirteen projectile points

TABLE 9
Artifact Categories and Raw Material Types

Artifact Category	Knife River Flint	Swan River Chert	Quartzite	Basaltic	Chalcedony	Granitic	Silicified Sediment	Agate (Moss)	Burnt Chalcedony	Gneissic	Petrified Wood	Porcellanite	Total	Percent
Projectile Point	2	9	-	-	-	-	-	-	1	-	-	1	13	17.3
Scraper	5	2	-	-	1	-	-	1	-	-	-	-	9	12.0
Biface	5	13	-	1	1	-	1	-	-	-	1	-	22	29.3
Notched Biface	2	-	-	-	-	-	-	-	-	-	-	-	2	2.7
Modified Flake	4	1	-	-	1	-	-	-	-	-	-	-	6	8.0
Drill	1	-	-	-	-	-	-	-	-	-	-	-	1	1.3
Chopper	-	-	5	3	-	-	-	-	-	-	-	-	8	10.7
Knife	-	2	-	-	-	-	-	-	-	-	-	-	2	2.7
Grooved Maul	-	-	-	-	-	1	-	-	-	-	-	-	1	1.3
Hammerstone	-	-	3	-	-	1	-	-	-	1	-	-	5	6.7
Core	1	2	3	-	-	-	-	-	-	-	-	-	6	8.0
Total	20	29	11	4	3	2	1	1	1	1	1	1	75	100.0
Percent	26.7	38.7	14.7	5.3	4.0	2.7	1.3	1.3	1.3	1.3	1.3	1.3		100.0

TABLE 10

Stone Artifact Attributes

Description	Variety	Art. No.	Site Number	Dimensions (mm)			Weight (g)	Material
				L	W	T		
<u>PROJECTILE POINTS</u>	Triangular Unnotched	406-20	32RV406	17.6	16.0	3.0	1.0	Knife River flint
		412-15	32RV412	18.4*	17.1	3.5	1.2	Swan River chert
		412-70	32RV412	15.3*	15.3	3.7	1.0	Swan River chert
		412-72	32RV412	22.3	13.4	3.3	1.0	Swan River chert
		429-26	32RV429	18.0	9.0*	2.3	0.5	Burnt Chalcedony
<u>Side-</u> notched		412-40	32RV412	15.2*	13.2	4.3	0.9	Swan River chert
		414-34	32RV414	22.0*	13.4	3.6	0.7	Knife River flint
		415-22	32RV415	20.7*	15.0	3.6	1.0	Swan River chert
		415-23	32RV415	26.6	14.0	3.0	0.9	Swan River chert
		429-29	32RV429	19.0	11.5	3.0	0.5	Swan River chert
<u>Corner-</u> notched		404-2	32WD404	20.0*	22.0	4.6	2.0	Porcellanite
		404-9	32WD404	28.0*	18.2*	4.6	2.3	Knife River flint
<u>Lanceolate</u> (McKean)		404-1	32WD404	31.1	18.0	7.0	4.3	Swan River chert
<u>SCRAPERS</u>	End Scraper	401-6	32RV401	25.6	23.0	6.4	4.4	Knife River flint
		406-23	32RV406	31.5	20.7	8.0	6.0	Knife River flint
		412-33	32RV412	21.1	20.3	9.0	4.2	Swan River chert
		412-71	32RV412	18.2	17.7	4.5	1.3	Agate (Moss)
		414-21	32RV414	25.3	20.0	4.0	2.4	Knife River flint

TABLE 10--continued

Description	Variety	Art. No.	Site Number	Dimensions (mm)			Weight (g)	Material
				L	W	T		
<u>SCRAPERS</u> (Cont.)	End Scraper (Cont.)	402-16	32WD402	26.6	19.0	5.6	2.0	Knife River flint
		406-1	32WD406	29.1	22.0	7.0	4.6	Lgt. Brown Chalcedony
	Side Scraper	407-33	32RV407	28.4*	26.2	3.2	2.3	Knife River flint
		412-19	32RV412	37.7	20.0	6.5	4.0	Swan River chert
<u>BIFACES</u>		401-1	32RV401	30.5*	42.7	9.4	5.0	Lgt. Brown Chalcedony
		405-3	32RV405	26.0*	20.5	4.0	2.5	Knife River flint
		407-42	32RV407	36.8	22.7	5.5	5.0	Swan River chert
		410-9	32RV410	28.0	24.2	8.5	6.6	Swan River chert
		411-11	32RV411	18.1*	21.4	6.4	3.0	Swan River chert
		411-56	32RV411	21.0*	23.4*	6.0	3.0	Swan River chert
		412-0	32RV412	7.5*	9.8	1.4	0.2	Swan River chert
		412-13	32RV412	31.6*	20.0	9.4	5.6	Swan River chert
		412-30	32RV412	19.6*	27.1	14.7	5.3	Swan River chert
		412-64	32RV412	22.2*	17.8*	5.5	1.5	Silicified Sediment
		412-69	32RV412	11.7*	12.2*	2.4	0.3	Knife River flint
		414-4	32RV414	55.6	34.6	9.0	8.0	Swan River chert
		416-4	32RV416	24.0	22.0	6.4	2.7	Swan River chert
		429-19	32RV429	104.0	95.0	28.3	261.0	Petrified Wood
		429-30	32RV429	104.5	69.0	22.0	180.0	Swan River chert
		401-3	32WD401	45.0*	44.0	7.6	20.0	Knife River flint
		401-6	32WD401	25.5*	26.0	5.0	4.5	Knife River flint
		403-17	32WD403	57.0	42.2	20.0	52.4	Basaltic
		405-6	32WD405	31.5*	26.0	6.5	7.0	Knife River flint

TABLE 10--continued

Description	Variety	Art. No.	Site Number	Dimensions (mm)			Weight (g)	Material
				L	W	T		
<u>BIFACES</u> (Cont.)		405-9	32WD405	47.2	32.0	11.7	19.0	Swan River chert
		405-12	32WD405	50.0	32.0	12.1	19.0	Swan River chert
		409-1	32WD409	46.0	39.0	10.0	19.0	Swan River chert
<u>MODIFIED FLAKES</u>	Notched	404-9	32RV404	28.0*	18.2	4.6	2.3	Knife River flint
		405-1	32RV405	21.0*	19.5	4.2	2.0	Knife River flint
		409-2	32RV409	51.6	25.0	6.0	7.7	Knife River flint
		413-7	32RV413	30.0	22.0	5.0	3.0	Knife River flint
		415-19	32RV415	27.6	25.3	3.5	2.7	Swan River chert
		403-3	32WD403	22.0*	13.0	5.3	1.0	Lgt. Brown Chalcedony
		403-7	32WD403	34.4*	12.1	7.3	4.5	Knife River flint
		407-4	32WD407	28.7*	18.1	3.0	2.0	Knife River flint
		407-41	32RV407	18.2*	16.0	4.0	1.0	Knife River flint
		404-2	32RV404	117.6*	44.5*	16.7	102.0	Basaltic
		411-50	32RV411	17.3	91.5	28.3	369.0	Quartzite (River Cobble)
		413-1	32RV413	157.6	90.4	32.0	515.0	Quartzite (River Cobble)
<u>CHOPPERS</u>		413-2	32RV413	151.0	129.8	26.0	562.0	Quartzite (River Cobble)
		414-1	32RV414	159.8	138.5	51.2	1255.0	Quartzite (River Cobble)

TABLE 10--continued

Description	Variety	Art. No.	Site Number	Dimensions (mm)			Weight (g)	Material
				L	W	T		
<u>CHOPPERS</u> (Cont.)		415-14	32RV415	109.0*	33.0*	22.0*	65.0	Basaltic
		416-10	32RV416	122.4	80.7	24.2	285.0	Quartzite (River Cobble)
		402-20	32WD402	125.0	76.6	26.0	306.0	Quartzite (River Cobble)
<u>KNIVES</u>	Back- hafted	412-8	32RV412	46.8*	26.0	7.1	9.0	Swan River chert
		415-1	32RV415	77.3	30.0	10.6	24.0	Swan River chert
<u>GROOVED MAUL</u>		403-1	32RV403	62.0	53.0a	57.0	289.0	Granitic
<u>HAMMERSTONES</u>	404-4	404-4	32RV404	102.4	79.0	36.2	424.6	Gneissic
		407-29	32RV407	101.5	81.5	43.6	522.0	Granitic
		414-27	32RV414	79.0*	58.0*	17.5*	102.0	Quartzite (River Cobble)
		429-7	32RV429	61.2	58.6	22.2	137.0	Quartzite (River Cobble)
		406-2	32WD406	160.5	86.0	81.5	1276.7	Quartzite (River Cobble)

TABLE 10--continued

Description	Variety	Art. No.	Site Number	Dimensions (mm)			Weight (g)	Material
				L	W	T		
CORES		415-12	32RV415	84.0	63.6	49.5	303.0	Swan River chert
		402-17	32WD402	92.6	55.0	26.4	217.0	Quartzite (River Cobble)
		403-26	32WD403	84.7	60.0	46.3	277.0	Swan River chert
		405-13	32WD405	92.4	81.2	38.2	378.0	Quartzite (River Cobble)
	406-3	406-3	32WD406	91.0	52.0	31.5	160.0	Quartzite (River Cobble)
		407-1	32WD407	41.0	34.3	13.7	25.0	Knife River flint

*Refers to measurements taken on broken specimens.

‡Measurement is that of the grooved diameter.

were recovered from our survey, ten of which are either side-notched or triangular unnotched (Table 10). Of the ten associated with the Late Prehistoric Period, one was produced from Knife River flint, eight are of Swan River chert, and one is of Burnt Chalcedony. Although no projectile points were recovered which can be identified as those associated with the Paleo-Indian Period or from the early Woodland Phases, specimens observed in collections near our study area do, in fact, indicate a preference for Knife River flint during these periods. Three specimens associated with the Archaic Period (one McKean Lanceolate and two possible "Oxbow or Parkdale Eared") are of Swan River chert, Porcellanite, and Knife River flint, respectively.

A hypothesis concerning the preference of raw material, based on only projectile points, may only reflect a preference for that material for one functional category and possibly for one particular area. Thus, it is imperative to first determine particular functional categories of stone tools and then to investigate raw materials within each category. Analyzing stone artifacts in this manner would seemingly result in a much broader basis for suggesting overall preference of particular materials within a particular region or area. Furthermore, it is possible to use raw materials as indicators of people's movements into or out of a particular region or area, as well as indicators of utilization of the area (Loendorf 1973). Thus, we must not only take into consideration raw materials used in the manufacturing of projectile points, but we must be concerned with other functional categories of stone tools as well as the detritus left behind during the manufacturing of these tools.

Analysis

In keeping with the scope of lithic debitage analysis, we are concerned with the frequency distribution of the two most common raw materials inherent in the stone artifacts. Like the lithic debitage (68%) our examination of all artifacts finds a general trend of stone tools being manufactured from either Swan River chert or Knife River flint (65.4%).

Since our analysis of lithic debitage revealed a high incidence of Swan River chert being associated with sites yielding ceramics and a high incidence of Knife River flint associated with sites without ceramics, we are concerned with the possibility of a similar situation being reflected by the stone artifacts. Combining the three most frequently collected artifacts (projectile points, scrapers, bifaces) results in a seventy-three percent (73.0%) sample of all artifacts manufactured from either material.

Before further analysis is attempted it is imperative to note that in the lithic and stone tool analysis, site 32RV416 is excluded from analysis as it is a tipi ring site and not an occupation site, as are all others. The stone tool analysis excludes site 32WD404 since the temporally diagnostic artifacts recovered from the site are associated with the Archaic Period. We have excluded this site as the majority (53.0%) of the sites used in the stone tool analysis are considered Lake Prehistoric or Late Woodland by the existence of ceramics and/or by projectile point typology. Those sites having artifacts temporally non-diagnostic or no ceramics are included if the artifacts are one of the three used in

the analysis and if they were manufactured from one of the two most frequently used raw materials. Although site 32RV409 fits within the temporal period of Late Woodland on the basis of ceramics, no artifacts were recovered and, thus, it cannot be included in the analysis. Likewise, eight other sites are excluded as they do not have artifacts manufactured from the two most common raw materials, or the three artifacts used in the analysis. This selection of particular temporally comparable sites results in a thirty percent (30%) sample of all sites yielding artifacts. By including sites having one or more artifacts composed of the two most frequently used raw materials, we increase our sample from seven to fourteen or sixty-one percent (61%). This, however, involves the conclusion that these sites are contemporary with those yielding temporally diagnostic materials.

A second question is posed, "Does the clustering of the three most common artifacts collected from the sites within our study area into one of the two most common raw material types reflect a similar situation as found by using lithic detritus?" A Chi-Square test was constructed to determine the frequency of distribution of these materials as represented by lumping the three most common artifacts (Table 11). The results of the test indicate that this distribution could only occur by chance alone approximately one time in one thousand. Interestingly enough, this relationship is very close to that revealed during the lithic detritus analysis.

TABLE 11

Distribution of Artifact Group
(projectile points, scrapers, bifaces)
between Non-Ceramic and Ceramic Sites

	Non-Ceramic	Ceramic
Swan River chert	4	15
Knife River flint	11	4

N = 34

df = 1

p = $\geq .001 < .01$

$\chi^2 = 9.3$

Lithic Debitage and Stone Tool Analysis

Summary

From our analysis of lithic debris left behind from stone tool production and from the tools themselves several observations can be made:

1. The most common raw material used in the manufacturing of stone tools in our study area is Swan River chert.
2. Swan River chert appears to be used in the manufacturing of particular functional categories of tools, particularly bifacially worked specimens (projectile points, knives, bifaces).
3. Knife River flint is the second most common raw material utilized for stone tool manufacturing.
4. Although few bifacially worked specimens are of Knife River flint, the majority of unifacially worked specimens (scrapers and modified flakes) are of Knife River flint.
5. A study of the lithic debitage decortication stages revealed that initial stages of tool manufacturing took place somewhere away from the study area, with final stages of manufacturing and/or resharpening phases being accomplished at site locations.
6. A correlation between the two most common raw materials with the existence of ceramics is evident. Sites yielding ceramics also yielded an overwhelming amount of lithic debris and numbers of tools of Swan River chert as compared to Knife River flint. The inverse of this is true of sites having no ceramics where lithic debitage and stone tools of Knife River flint are more numerous than those of Swan River chert.
7. Chi-Square tests were constructed to investigate the frequency distribution of lithic debris and stone tools between non-ceramic and ceramic sites. In both instances the frequency distribution of the two most common materials indicates that this relationship could only occur by chance approximately one time in a thousand.

To comment on this relationship would result in little more than speculation; however, it does create a number of questions which can be formulated into a series of testable hypotheses.

Question #1.

Does the occurrence of two non-indigenous materials reflect a utilization of the area by two different peoples who may or may not have been contemporary?

Question #2.

Does the occurrence of ceramics at sites with a high incidence of Swan River chert indicate a somewhat sedentary population from the north and the absence of ceramics, but high incidence of Knife River flint, indicate a population of nomadic hunters utilizing the area from the south?

Question #3.

Does the frequency distribution of raw materials merely indicate a preference of particular materials for particular functional tool categories and, if so, does the existence or non-existence of ceramics reflect site function in relationship to subsistence patterns?

From these observations and questions, two hypotheses can be formulated. A possibility exists that two groups of people, not necessarily contemporary, may have utilized the area. One group appears to have had a woodland oriented subsistence pattern manifested in those sites having ceramics and an abundance of other cultural debris, occurring along the river in the "Northern Floodplain Forest" eco-zone. Their regional orientation, however, appears to be to the north as evidenced by the high incidence of a raw material commonly found along the Swan River some two hundred miles north of our area.

Another group of people appears to have utilized the area which may have been composed of nomadic hunters whose subsistence pattern was based primarily on hunting during sporadic or seasonal visits to the valley of the Souris River. This group of people, manifested by the occurrence of tipi ring sites, may have been regionally oriented to the south in the plains of North Dakota near sources of Knife River flint.

Although it appears that the heaviest pressure on the valley economy was during the Late Prehistoric Period, the existence of tools associated with earlier periods indicates a utilization of the valley for the past five to ten thousand years. Since the valley is quite narrow, the exploitation of its resources would probably have been linearly away from base camps. This probably continuous utilization of the valley brings to light particular factors which may bias our study of the materials recovered during the survey. In most instances, material recovered from occupation sites was discovered in plowed fields and, thus, if a particular site was occupied more than once, a mixing of cultural debris would undoubtedly result. However, because of the nature of flood deposit stratigraphy we are hopefully dealing with fairly contemporary material. During studies conducted by the University of North Dakota in the James River Valley (North Dakota) it was found that as much as 1700 years separated cultural material found near the surface and that found at a depth of one meter (Good et al. 1977). Thus, if the two groups who appear to be responsible for the heaviest utilization of the valley (as represented by those sites on or near the surface) were not contemporary, a mixing of cultural material may have occurred at sites under cultivation.

The second testable hypothesis is formulated as a result of this possibility of mixing. The sites without ceramics may represent hunting camps occupied by either or both groups. The frequency distribution of raw materials within these non-ceramic sites may be the result of raw material preference for particular functional categories of tools as related to subsistence patterns. In other words, both groups appeared to have hunted in the valley and Knife River flint as well as Swan River chert appear to

be preferred in the manufacturing of particular tools.

It is obvious that without further examination of the sites, these hypotheses will remain unsubstantiated. Within the "Recommendations Section" of this record recommendations will be offered which will incorporate these hypotheses.

Ceramic Analysis

Introduction

A total of sixty-eight (68) ceramic sherds (excluding nine split sherds) were recovered from seven archaeological sites recorded during our survey. Each ceramic collection from a site is treated as part of the "aggregate" as defined in the "Introduction to Analyses" section of the report. Since the ceramic samples from each site are exceedingly small, the major emphasis of analysis is on description. Attributes of the body sherds collected are offered in Tables 12-1 through 12-7, while rim sherd attributes are described individually as to particular group and subgroup.

Attribute analysis of the sixty body sherds is divided into four characteristics (1) sherd thickness, (2) paste attributes, which include method of manufacture, surface color, (3) surface treatments, which include smoothing, simple-stamping, cord wrapped paddle stamping, brushed, and cord roughened, (4) decorative techniques, which include tool-incising as the only decorative technique observed on any of the sixty body sherds (Tables 12-1 through 12-7).

One detached appendage is tentatively classified as a lug and is described separately.

The remaining seven (7) sherds are rim fragments which represent five vessels. Since the number of rim sherds recovered is small, each will be described as to rim form, surface treatment employed, the presence or absence of decoration located at the lip, rim, and/or shoulder, and also the physical forms or shapes of each of the aforementioned loci, if observable.

Again, it is imperative to emphasize that because of the small sample of ceramics, no attempt will be made to place our specimens into established wares; however, suggestions are made concerning possible comparisons to established wares.

Analysis

Body Sherd Thickness

It is obvious from our initial observation of the body sherds that it is difficult at best to determine from which loci the sherds originated and that thickness of walls may vary within an individual vessel. This variation in wall thickness may be reflected in variation in thickness of an individual sherd, thus in this analysis measurements are taken on maximum dimensions. When more than one sherd exists having similar surface treatments, these measurements are averaged for the existing number of sherds.

The range of sherd thickness inherent in the entire collection ranges from 3.5 to 8.6 millimeters. When comparing the two most common surface treatments (Smoothed and Cord Wrapped Paddle) there is a tendency for smooth sherds to be thicker than cord wrapped paddle sherds. This variation may be due to the loci from which the sherds originated, or it may be related to individual vessel wall thickness. Although it is possible that two surface treatments may occur on one vessel, to suggest a variation in vessel wall thickness based on surface treatment is speculative at best.

Paste Attributes

It appears that all ceramics recovered during our survey were manufactured by the lump modeling method with thinning accomplished by the

paddle and anvil technique. After the paddle and anvil thinning process, many vessel walls were smoothed while the clay was still malleable.

In general, the paste is usually smooth and fine textured; however, the paste on two sherds from 32RV407, classified as simple-stamped, tends to be coarse. The paste on the majority of sherds is well worked; however, the above two sherds have cores which are friable and tend to crumble more easily than the others in the collection. There is a tendency for all sherds to split as the cores are less compact than the surface. The splitting phenomenon usually occurs parallel to the vessel as reflected in the nine split sherd specimens recovered from ceramic bearing sites.

All sherds are tempered with grit, composed of calcined or decomposed granite consisting of quartzite, mica, and feldspar. Particle size ranges from 0.25 to 3.5 millimeters with most clustering around 0.5 to 1.0 millimeters. Sand also appears to have been used as a temper, but always in combination with grit, never by itself.

Body Sherds - Surface Treatment

Smoothed

Thirty-four body sherds or fifty-seven percent (57%) of all body sherds are smoothed. Average thickness of smooth sherds is approximately 5.9 millimeters with extremes from 3.5 to 8.6 millimeters. Striations caused as a result of smoothing with a variety of tools or merely with the hand are present on both the exterior and interior surfaces and exist in a horizontal direction.

Cord-wrapped paddle stamped

Twelve sherds or twenty percent (20%) of the body sherds recovered are

cord wrapped paddled. Thickness ranges from 3.2 to 5.0 millimeters averaging approximately 4.2 millimeters. Interestingly enough, nine of the twelve cord-wrapped paddle-stamped sherds were recovered from 32RV407. Furthermore, it appears that all nine may be from the same vessel. Since the sherds are very small and have been somewhat smoothed, it is very difficult to determine the direction of cord twist.

Simple-stamped

Four sherds, two from 32RV429 and two from 32RV407, representing a mere seven percent (7%) of the total collection, are classified as simple-stamped. The nature of the stamped grooves and ridges vary on individual sherds, probably as a result of the paddle pattern. Grooves range from 2.0 to 4.0 millimeters in width and are approximately 1.0 millimeters in depth. The grooves are rectangular in cross-section while the ridges between grooves are flat to slightly rounded on top. The process of simple-stamping was probably created by malleting the moist clay with a grooved paddle or possibly with a paddle wrapped with rawhide.

Brushed

Two sherds classified as having a brushed surface treatment were recovered from 32RV415 and 32RV429. These sherds differ from those classified as being smoothed in that it appears possible that a material comparable to grass or small bundles of twigs was used to smooth the surface of the moist clay. The coarseness of the material created striations much deeper than those found on sherds which were purposely smoothed.

Cord-roughened

One sherd recovered from 32RV415 is tentatively classified as cord-roughened. Measuring 4.5 millimeters thick, the specimen is very small

and thus it is difficult to determine surface treatment.

Decorated Body Sherds

Tool-incised

Three sherds, two from 32RV415 (Artifact #'s 415-48, 415-49) and one from 32RV406 (Artifact #406-6) represent the sum total of all decorated body sherds. Specimens 415-48 and 415-49 have incisions which are rectangular in cross-section and appear at right angles to one another. It is impossible to determine the overall pattern formed by the incisions because of the smallness of the specimens. Incisions range from 2.6 to 3.2 millimeters in width, but tend to be of uniform depth (1.0 millimeter).

Incisions on specimen 406-6 are somewhat different than those on the other two specimens. One fairly long incision is shallow and curved, while two short incisions (7 millimeters) appear perpendicular to the curved incision and are fairly narrow (2.0 millimeters). They are deepest near the curve, but then slope toward the surface as they extend away from the curved line. Again, the smallness of the specimen makes difficult any suggestion as to the form of an overall pattern.

All incisions appear to have been created by dragging or trailing a blunt "U" shaped or slightly rectangular shaped instrument along the moist surface of the vessel.

Appendages

One detached appendage, tentatively classified as a lug, was recovered from site 32RV429 (Artifact #429-49). Decoration on the lug appears to have been formed by "pinching" areas between the thumb and index

finger. This process has created ridges and fairly deep depressions. Ridges measure approximately 10 millimeters long and 3 millimeters wide at the crest. Depressions are 10 millimeters long and 13 millimeters wide from ridge crest to ridge crest. The depressions are approximately 3 millimeters deep. It appears that the lug was attached to the lip of the vessel and then decorated by the "pinching" technique.

Rim Sherds

Descriptive Groups and Subgroups

Group I Rims with straight to slightly flared rim profiles (Plate 19).

Sample: Six (6) rims, representing a minimum of five vessels, comprising eighty-six percent (86%) of the total collection.

(Subgroup A) Rims with undecorated lips and undecorated rims

Sample: Four (4) rims representing a minimum of three vessels are all from sites 32RV407, 32RV406 and 32RV429 (Artifact's #'s 407-8, 407-17, 406-1, and 429-47), representing fifty-seven percent (57%) of all rims, fifty percent (50%) of all vessels.

Surface Finish:

Specimen 407-8 has a cord-wrapped paddle-stamped exterior. The interior has been horizontally smoothed. Specimen 407-17 appears to be from the same vessel, thus exterior and interior are comparable to specimen 407-8. Specimen 406-1 has an exterior which is simple-stamped and a partially smoothed interior. The lip is horizontally smoothed. Specimen 429-47 is plain and has been horizontally smoothed.

Decoration:

Lip - No decoration is observable on any of the four specimens.

Rim - No decoration is observable on any specimens.

Form:

Lip - Specimens 407-8 and 407-17 have flattened lip tops which extrude to the exterior. Specimens 406-1 and 429-47 also have flattened lip tops, but they do not extrude toward the exterior or

interior. Lip widths range from 6.1 to 7.0 millimeters for specimens 407-8 and 407-17 and 5.0 to 5.2 millimeters for specimens 406-1 and 429-47.

Rim - Specimens 407-8, 407-17 and 429-47 are straight to slightly incurved, specimen 406-1 is straight and apparently everted. Rim width ranges from 4.5 to 5.0 millimeters for specimens 407-8 and 407-17 and from 6.0 to 8.5 millimeters for the remaining specimens. Specimen 406-1 is one of two rims complete enough to determine rim height which measures 36.0 millimeters.

Neck - Specimen 406-1 is one of two specimens which are complete enough to observe the neck. In this instance, the rim expands at the rim-shoulder juncture.

Size - No rim sherds or composites of sherds are complete enough to estimate vessel size.

(Subgroup B) Straight rims which have tool-incised lips with undecorated lower rim portions.

Sample: One (1) rim (Artifact #411-1) representing one vessel, fourteen percent (14%) of all rims, sixteen percent (16%) of all vessels.

Surface Finish:
Horizontally smoothed.

Decoration:

Lip - A relatively deep (1.5 millimeters) "U" shaped incision is located on top of the lip and is situated so as to be parallel with the two sides of the lip.

Rim - No decoration apparent.

Form:

Lip - The lip is flat, extrudes toward the exterior and approaches an inverted "L" shape.

Rim - Appear to be straight.

(Subgroup C) Straight rims which have tool impressed lips with undecorated lower rim portions.

Sample: One (1) rim (Artifact #407-18) representing one vessel fourteen percent (14%) of all rims, and sixteen percent (16%) of all vessels.

Surface Finish:

The exterior is cord-wrapped paddle-stamped on the lower portion of the rim. An area below the exterior lip-rim juncture and lower rim has been horizontally smoothed.

Decoration:

Lip - Confined to the interior lip-rim juncture, decoration consists of a series of square-shaped tool impressions placed horizontally around the interior rim portion of the ILRJ. The top of the lip is undecorated and has been smoothed.

Rim - Appears undecorated.

Form:

Lip - The lip is basically flat on top and smoothed.

Rim - Rim form is straight.

Group II Short flared rims (Plate 19)

Sample: One rim, representing one vessel comprising seventeen percent (17%) of the total rim collection.

(Subgroup A) Short flared rims with decorations on the exterior of the rims.

Sample: One (1) rim representing one vessel (Artifact #411-2), fourteen percent (14%) of all rims, sixteen percent (16%) of all vessels.

Surface Finish:

Both surfaces (interior and exterior rim) are horizontally smoothed.

Decoration:

Lip - Decoration consists of a series of horizontally placed tool impressions which are confined to the exterior lip-rim juncture. These tool impressions are situated so as to be parallel with the vessel orifice. The lip top and interior lip-rim juncture are devoid of decoration.

Rim - No decoration is observable (decoration appears on a portion that I consider part of the lip).

Form:

Lip - Generally the lip is rounded and approaches being pointed.

Rim - Rim is flared and is short (14 millimeters).

Neck - Neck is slightly constricted, but forms a true neck.

Pottery Discussion

Although the ceramic collection is quite small and there is considerable variance in attributes of individual sherds, there are a number of similarities when the collection is analyzed as a whole.

The paste in the majority of sherds is well worked and fine textured. Surfaces are generally smooth to the touch even when malleted. Temper in all instances is grit with sand being incorporated as a second source in a few sherds, but always with grit.

Sherds are well fired and tend to break in layers parallel to the surfaces and rarely crumble. The cores are generally hard. Surface color ranges from greyish-brown (10YR 5/2) to very dark grey (10YR N/) to black (7.5YR N2/) with the majority being very dark grey. Cores are in most instances laminated and appear as brownish-yellow (10YR 6/6) in color, but there is a tendency for the dark grey color to extend to the surface.

As a whole, it appears the peoples responsible for the manufacturing of these vessels preferred a smooth surface finish. Rims having smoothing as a method or surface treatment far outnumber those having other methods of treatment (Tables 12-1 through 12-7). Only one rim (Artifact #407-8) was recovered which displayed another form of surface treatment, that being cord-wrapped paddle-stamped. This situation is also reflected in the method of surface treatments observed on body sherds, where the overwhelming majority are smoothed with small numbers being cord-wrapped paddle-stamped and brushed. It appears that the horizontal smoothing was accomplished with a

fairly sturdy implement or merely with the hand. It is further apparent that this smoothing probably took place after malleting as emphasized by two specimens from the same vessel having two surface treatments (Artifact #'s 407-8 and 407-17). This smoothing may have been confined mostly to the rim portion of the vessel with less emphasis placed on smoothing the body.

Decoration of rims and lips appears to have been held to a minimum. The most common observed on our specimens is tool incising and tool impression. Again, the reader should note the smallness of our sample, especially when attempting to establish or compose decorative patterns with established modes.

In conjunction with the small sample, our collection is very fragmentary, thus estimations of vessel size or shape is impossible at this time. Only two rims were complete enough to measure rim height. Heights for these two specimens (Artifact #'s 406-1 and 411-2) are 36.0 millimeters and 14.0 millimeters respectively.

TABLE 12
Body and Rim Sherd Attributes
Ceramic Sites

TABLE 12-1

Mud Flat Site - 32RV406

Body Sherd Attributes

Undecorated Body Sherds

Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	7	5.2	58.3
<u>Subtotal</u>	<u>7</u>	<u>5.2</u>	<u>58.3</u>

Decorated Body SherdsDecorative Form

Tool Incised	1	4.5	8.3
<u>Subtotal</u>	<u>1</u>	<u>4.5</u>	<u>8.3</u>
<u>Split Sherds*</u>	<u>4</u>		<u>33.3</u>
<u>TOTAL</u>	<u>12</u>	<u>4.85</u>	<u>100.0</u>

*Split Sherd = any sherd with its exterior surface absent.

TABLE 12-1 --continued
Mud Flat Site - 32RV406

Rim Sherd Attributes											
Artifact Number	Rim Form	Rim Height (mm)	Maximum Rim Thickness (mm)	Rim Decoration	Rim Surface Finish	Lip Form	Maximum Lip Thickness (mm)	Lip Decoration or Surface Finish	Lip Roll Direction	Prominent Sherd Color	
406-1	Straight	36.0	8.2	Absent	Smooth	Flat	4.8	Absent	Ext.	Black	7.5YR N2/

TABLE 12-2

Often Inundated Site - 32RV407

Body Sherd Attributes

<u>Undecorated Body Sherds</u>			
Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Cord Wrapped Paddle	9	4.4	52.9
Smoothed	2	5.8	11.8
Simple Stamped	2	7.6	11.8
<u>Subtotal</u>	13	5.9	76.5
<u>Split Sherds*</u>	4		23.5
TOTAL	17	5.9	100.0

*Split Sherd = any sherd with its exterior surface absent.

TABLE 12-2 ---continued
Often Inundated Site - 32RV407

Rim Sherd Attributes										
Artifact Number	Rim Form	Rim Height (mm)	Maximum Rim Thickness (mm)	Rim Decoration	Rim Surface Finish	Lip Form	Maximum Lip Thickness (mm)	Lip Decoration or Surface Finish	Lip Roll Direction	Prominent Sherd Color
407-8	Straight	Unk.	4.7	Absent	Cord- Wrapped Paddle	Flat	6.9	Absent	Ext.	Very Dk. Grey 2.5YR N3/
407-17	Straight	Unk.	5.1	Absent	Smooth	Flat	6.4	Absent	Ext.	Very Dk. Grey 2.5YR N3/
407-18	Straight	Unk.	5.1	Absent	Smooth	Flat	7.1	Tool- Impr.	Ext.	Very Dk. Grey 2.5YR N3/

TABLE 12-3

Muddy Boot Site - 32RV409

Body Sherd Attributes

<u>Undecorated Body Sherds</u>			
Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	1	5.0	50.0
Cord Wrapped Paddle	1	3.4	50.0
TOTAL	2	4.2	100.0

TABLE 12-4

Richie Johnson Site - 32RV411

Body Sherd Attributes

<u>Undecorated Body Sherds</u>			
Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	2	5.9	66.7
Cord Wrapped Paddle	1	4.1	33.3
TOTAL	3	5.0	100.0

TABLE 12-4 --continued
 Richie Johnson Site - 32RV411

Rim Sherd Attributes										
Artifact Number	Rim Form	Rim Height (mm)	Maximum Rim Thickness (mm)	Rim Decoration	Rim Surface Finish	Lip Form	Maximum Lip Thickness (mm)	Lip Decoration or Surface Finish	Lip Roll Direction	Prominent Sherd Color
411-1	Straight	Unk.	7.7	Absent	Smooth	Flat	8.3	Tool- Incised Groove	Ext.	Greyish Brown 10YR 5/2
411-2	Flared	14.0	5.5	Absent	Smooth	Rounded	3.5	Tool- Impr.	None	Dark Grey 10YR 4/1

TABLE 12-5

Myrna Johnson Site - 32RV412

Body Sherd Attributes

Undecorated Body Sherds

Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	4	7.0	100.0
TOTAL	4	7.0	100.0

TABLE 12-6

McCarroll Site - 32RV415

Body Sherd Attributes

<u>Undecorated Body Sherds</u>			
Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	1	6.7	20.0
Cord Roughened	1	4.8	20.0
Brushed	1	9.0	20.0
<u>Subtotal</u>	<u>3</u>	<u>6.8</u>	<u>60.0</u>
<u>Decorated Body Sherds</u>			
<u>Decorative Form</u>			
Tool Incised	2	5.5	40.0
<u>Subtotal</u>	<u>2</u>	<u>5.5</u>	<u>40.0</u>
<u>TOTAL</u>	<u>5</u>	<u>5.2</u>	<u>100.0</u>

TABLE 12-7

Curtis Ones Site - 32RV429

Body Sherd Attributes

<u>Undecorated Body Sherds</u>			
Surface Treatment	No.	Average Thickness	% of Total # of Sherds
Smoothed	19	5.7	73.1
Simple Stamped	2	5.9	7.7
Cord Wrapped Paddle	3	4.9	11.5
Brushed	1	8.4	3.8
<u>Subtotal</u>	25	6.2	96.1
<u>Split Sherds*</u>	1		3.8
TOTAL	26	6.2	100.0

*Split Sherd = any sherd with its exterior surface absent.

TABLE 12-7 --continued
Curtis Ones Site - 32RV429

Rim Sherd Attributes										
Artifact Number	Rim Form	Rim Height (mm)	Maximum Rim Thickness (mm)	Rim Decoration	Rim Surface Finish	Lip Form	Maximum Lip Thickness (mm)	Lip Decoration or Surface Finish	Lip Roll Direction	Prominent Sherd Color
429-47	Straight	Unk.	6.5	Absent	Smooth	Flat	5.5	Absent	None	Very Dk. Grey 2.5YR N3/

Faunal Remains Analysis

Introduction

Faunal remains, predominantly Bison bison or Bos, were observed at twenty-five of the forty archaeological sites recorded in the study area during the 1977 survey. Due to the large numbers of bone fragments noted at the sites, if the specimens were identifiably Bison bison they were not collected. The only faunal remains that were recovered and brought back to the laboratory for analysis were those which were unidentifiable on the field. The following table (Table 13) lists the collected faunal remains as to site, specimen number, element, and animal identification (genus and species).

It should be noted that two of the faunal specimens, 32RV429-1 and 32RV429-2, are femural heads that may have served as hide grainers. It also appears that they were "saw-cut" which indicates that they may date from the Protohistoric Period.

TABLE 13

Faunal Remains from Archaeological Sites

Site/Specimen #	Element	Animal (Genus and Species)
<u>32RV401</u>		
32RV401-8	immature right scapula	<u>Bison bison</u> or <u>Bos</u>
32RV401-9	left metacarpal	<u>Bison bison</u> or <u>Bos</u>
32RV401-10	first phalange from front limb	<u>Bison bison</u> or <u>Bos</u>

TABLE 13--continued

Site/Specimen #	Element	Animal (Species and Genus)
<u>32RV401</u> (Cont.)		
32RV401-11	fifth cervical vertebrae	<u>Bison bison</u> or <u>Bos</u>
32RV401-12	first phalange from hind limb	<u>Bison bison</u> or <u>Bos</u>
32RV401-13	immature right rib head, rib between #'s 10-13	<u>Bison bison</u> or <u>Bos</u>
32RV401-14	immature left rib, rib between #'s 10-13	<u>Bison bison</u> or <u>Bos</u>
32RV401-16	left distal radius fragment containing facet for ulner carpal	<u>Bison bison</u> or <u>Bos</u>
32RV401-25	immature left proximal humerus	cf. <u>Olov columbianus</u> (Whistling Swan)
32RV401-26	immature right proximal humerus	cf. <u>Olov columbianus</u> (Whistling Swan)
<u>32RV403</u>		
32RV403-7	proximal portion of horn core	<u>Bison bison</u> or <u>Bos</u>
32RV403-8	metatarsal shaft fragment	<u>Bison bison</u> or <u>Bos</u>
32RV403-13	immature astragalus fragment	<u>Bison bison</u> or <u>Bos</u>
<u>32RV405</u>		
32RV405-19	immature left rib head, 8th or 9th rib	<u>Bison bison</u> or <u>Bos</u>
<u>32RV406</u>		
32RV406-25	left distal femur	<u>Canis</u> sp.
<u>32RV407</u>		
32RV407-24	right proximal humerus	<u>Lepus townsendii</u> (White tailed Jack-rabbit)

TABLE 13--continued

Site/Specimen #	Element	Animal (Species and Genus)
<u>32RV409</u>		
32RV409-1	left mandible fragment	<u>Canis</u> sp.
<u>32RV412</u>		
32RV412-94	left M ₂	<u>Canis</u> sp.
32RV412-95	canine tooth	<u>Canis</u> sp.
<u>32RV415</u>		
32RV415-2	right mandible fragment	<u>Canis</u> sp.
32RV415-4	femural head	<u>Bison</u> <u>bison</u> or <u>Bos</u>
32RV415-7	canine tooth	<u>Canis</u> sp.
32RV415-10	femural head	<u>Bison</u> <u>bison</u> or <u>Bos</u>
32RV415-40	first phalange	<u>Canis</u> sp.
32RV415-41	right PM ₁	<u>Bison</u> <u>bison</u> or <u>Bos</u>
32RV415-42	second phalange	<u>Canis</u> sp.
<u>32RV429</u>		
32RV429-1	femural head	<u>Bison</u> <u>bison</u> or <u>Bos</u>
32RV429-2	femural head	<u>Bison</u> <u>bison</u> or <u>Bos</u>

ARCHAEOLOGICAL DISCUSSION

When conducting archaeological research, the archaeologist first conducts a records search in hopes of gaining insight as to what may be discovered in a particular area. North Dakota and particularly our study area has received little professional archaeological investigation. Although this is not a unique situation, the fact that archaeological investigation of the Souris Valley has been accomplished in Southwestern Manitoba near our study area is unusual. These archaeological investigations somewhat complicated our research as strategies, analytical techniques, and nomenclature are not always compatible between the two countries' researchers. Furthermore, much of the research that has been accomplished in this area of Canada has not been published and/or exchanged so as to be made available for our use in the research of the study area.

The most definitive work to date has been accomplished by E. Leigh Syms, entitled "Ecological Dynamics of the Ceramic Period in Southwestern Manitoba," Plains Anthropologist, Memoir 12, 1977. This is more or less a synthesis of archaeology in Southwestern Manitoba including influences from other areas of North America.

When comparing our study area with that immediately across the international border, one of the greatest differences becomes apparent when travelling north as the "Grasslands" area of North Dakota gives way to what is referred to as "Aspen Parklands" of Southwestern Manitoba (Syms 1977). It is generally accepted that the adaptation of a particular culture to a distinct environment or, in this instance, an eco-zone will greatly influence the eventual addition or subtraction of particular cultural traits

through time. It is highly probable that the presence or absence of particular traits associated with particular cultural patterns may be directly related to the difference in environmental setting.

When attempting to compare archaeological remains recorded from our study area to that recovered from the Souris Valley some fifty miles to the northeast, it is obvious that though much of the collected material culture is comparable, some of the cultural traits are absent from our area. This comparison is possible since much of the material collected from the two areas is associated with the "Late Woodland Period". In keeping with Syms (1977), the use of "Late Woodland" includes the "Blackduck Horizon", "Selkirk Horizon", and the "Plains Village Pattern". The Blackduck Horizon is generally characterized by particular distinctive traits as thin-walled globular vessels with flared rims. The decorative technique being cord-wrapped rod or dowl impressions and a single row of punctations around the lip. Other cultural traits include possible burial mound complexes, tubular pipes, awls, socketed bone projectile points, and copper beads. The Selkirk Horizon is not as well defined, but is identified on the basis of its distinctive fabric-impressed pottery, an increase in such features as rock-lined fire hearths, bell-shaped storage pits, and a possible subsistence activity organized around fishing (Syms 1977). The Plains Village Pattern in North Dakota is characterized by more sedentary villages, circular and rectangular house depressions, material culture reflective of mixed horticultural-hunting subsistence activities (ie., scapula hoes, bison horn scoops, bison metatarsal fleshers, triangular unnotched and side-notched projectile points, etc.). Ceramics associated with the Extended

Middle Missouri Variant demonstrates a shift to simple stamping (using a paddle). Rim profiles of Middle Missouri Variants pottery (Initial and Extended) are slightly flared and also S-shaped. Decorative techniques involved incising, punctating, pinching, fingernail-indenting and cord impressing (Lehmer 1970).

Assuming that comparing cultural traits indicative of cultural configurations within an assigned spacial-temporal context is of some value, the material culture collected (particularly ceramics) best compares to those configurations associated with the Middle Missouri Sub-area. The ceramics in our collection have been manufactured by the lump clay and paddle-anvil malleting method, with surface treatments being simple-stamped or cord-wrapped paddle-stamped. Many of the sherds have been subsequently smoothed. Rim profiles are straight to slightly flared. Other traits which possibly suggest a Middle Missouri influence are triangular unnotched and triangular side-notched projectile points and "turtle backed" or plano-convex end scrapers. Additional traits associated with the Missouri trench found in Manitoba, but not in our study area, include stone axes with double raised ridges (Syms 1977).

One major cultural trait lacking in our area is permanent villages generally associated with the Plains Village Pattern. The majority of sites recorded during our survey which yielded material culture are "occupation sites" composed of scattered debris, devoid of structural remains comparable to those associated with Middle Missouri sites (i.e., house depressions and/or fortification ditches). One trait which may indicate a northern influence in our area is the occurrence of Swan River chert as the prominent source of raw material for the manufacturing of

stone tools (see Lithic Analysis Section). Middle Missouri Variants of the Plains Village Pattern used Knife River flint as the preferential source for chipped stone tool manufacturing. While Knife River flint does appear in the form of lithic detritus and in some functional categories of chipped stone tools, it is second in importance at sites yielding ceramics.

"Woodland" traits lacking from our area, but present farther north, are burial mounds. The one mound site discovered by the Historical Society in our area (32WD103) was recorded on the basis of a local informant. No others appear to exist in the area thus far surveyed by the University of North Dakota Archaeological Research team. Some fifty miles to the northeast, however, numbers of large mounds have been recorded including complexes composed of thirty to forty of these earth covered features. Interestingly enough, it appears that not all of the mounds are indicative of burials. One mound near the Souris River in Southwestern Manitoba (the Hearth Mound) between the Antler River and Gainsborough Creek, was excavated in 1970. It was interpreted as being an earth-covered structure that had partially burned and collapsed. A two-foot wide ring of burned earth, with a diameter of fifteen feet, covered ash and oak poles. It appears that the mound is the remnant of an earth-covered dwelling. The only artifacts recovered during excavation were rib spatula, a bone gouge, flint chips and some burned rock (Syms 1977). It is immediately apparent that much additional research needs to be accomplished before mounds and mound complexes are understood.

It is further apparent that within a spacial distance of some fifty miles, archaeological remains are somewhat diverse. As stated previously,

this diversity along the same river valley can only be related to the change in the eco-zones (i.e., Grasslands to Aspen Parklands). It is highly probable, based on cultural remains recorded in the two areas, that our area (which lies in the Grassland) represents that eco-zone utilized mainly for hunting during the Late Woodland Period. Sites recorded in our study area are quite small, lack evidence of permanency in the form of structural remains, but produced chipped stone tools indicative of hunting and associated activities. The lack of mounds (those associated with burials) may further serve to indicate the lack of permanent sites.

The Aspen Parkland, on the other hand, probably offered more abundant and diversified food sources. If this is, in fact, true, then it may also have offered the prehistoric peoples an environment much more suitable for permanent habitation. Whether these more permanent villages exist is not as of yet known. The occurrence of the large mound complexes to the north may indicate the presence of more permanent settlements.

Three sites that have been investigated near or on the Souris River in Southern Manitoba are the Snyder I Site, Snyder II Site, and the Mound "G" Site. All three have been assigned to the Late Woodland Period. Ceramics from Snyder I appear to represent a blend of "Woodland" and "Plains" traits, while Snyder II is reflective of the Selkirk Horizon. A radiocarbon date of A.D. 1285 $\pm$ 70 has been established for Snyder II. The Mound "G" Site has also been assigned to the Late Woodland Period on the basis of a radiocarbon date of A.D. 1560 $\pm$ 90, but little of artifactual material was recovered from the mound (Syms 1977).

However, none of these sites represent large, permanent settlements.

Syms (1977) suggests that the "hybridization" of the ceramic traits mentioned above indicates an interaction between groups from the Boreal Forest north of the Aspen Parkland and the Great Lakes, with those from the Northern Woodlands. He also suggests that traits associated with the Middle Missouri groups, particularly smooth, paddle-stamped pottery, may indicate that people who eventually resided along the Missouri River previously inhabited the area of what is now Southern Manitoba.

Although the first statement may be possible, we feel the occurrence of Middle Missouri cultural traits in our area is due, not to previous occupation prior to moving to the Middle Missouri Area, but to the Middle Missouri people utilizing the area for hunting. It is widely accepted that even though the Middle Missouri people were considered horticulturists, they greatly augmented their vegetable diet by hunting and trading for meat. The lack of evidence of large villages certainly indicates that people who were utilizing the Souris Valley were not permanently inhabiting the area during the Late Woodland Period.

The occurrence of Swan River chert as a lithic source for the production of chipped stone tools over Knife River flint is a trait not usually associated with Middle Missouri peoples. Since the most common known source of Swan River chert is some 200 miles to the north of our study area, we ask the question, "How did the people hunting in the lower Souris Valley acquire the lithic material?" We can make two suggestions:

- 1) People hunting in the valley may have been in contact with peoples who were trading Swan River chert. From our analysis, it appears that initial stages of manufacture took place away from our study area. This

may indicate the material was "blanked out" near the source and later traded with groups hunting in the area. 2) Although most of the material collected was represented by secondary and tertiary decortication flakes, some primary decortication flakes as well as cores of Swan River chert were collected. It is possible that a source for Swan River chert may have been available locally and that peoples utilizing the area quarried it locally.

It is important to emphasize that Knife River flint does occur in our collections, but it is second in preference to Swan River chert at sites yielding "Middle Missouri like" ceramics. Interestingly enough, however, Knife River flint occurs in a position of first preference when considering sites yielding no ceramics. When Knife River flint does occur in the form of tools, it is usually in the form of unifacially-worked specimens, particularly scrapers and modified flakes.

It is difficult to determine whether the frequency of these raw material types is significant or whether it is a result of a biased sampling technique. The Chi-square test, constructed to test frequency as compared to the existence of ceramics, indicated that a situation as outlined could only occur by chance approximately one time in one thousand.

At this point in our discussion it is imperative that we concentrate on the second most common feature recorded during our survey, the tipi ring sites. Without dwelling on their probable function as remnants of the "hold-down" for hide-covered lodges, we feel it more important to note that these sites represent the remains of camps once occupied by nomadic hunters who co-existed with other groups utilizing the

Souris Valley within the Prairie Grasslands. Although purely a speculative statement; we know ethnographically that trade between nomadic hunters and the Plains Village peoples did occur (Lehmer 1970).

In conclusion, it is suggested that the Grasslands of the Lower Souris Valley were occupied during the Late Prehistoric Period by Plains Nomadic groups and peoples representing, or closely related to, the Plains Village people of the Middle Missouri Sub-area. It is further suggested that these people utilized the valley seasonally and were involved in hunting and trading. While utilizing the valley, it appears the Plains Nomadic peoples were occupying the Terrace Grasslands while the Woodland oriented peoples were occupying the Northern Floodplain Forest eco-zone or bottomland.

Those sites with ceramics may represent the Woodland camps while those with no ceramics may be indicative of Plains Nomadic hunting sites. None of the sites yielded evidence suggestive of a permanent population, indicating a probable seasonal use of the valley. Late summer or early fall would have offered both the Nomadic hunters an opportunity to hunt and to trade with Late Woodland groups.

Since our area is in close proximity to the Aspen Parkland, this possible trade network may have been greatly influenced by more northern oriented groups.

Although these statements are somewhat speculative, they are based upon our analysis and knowledge of the area. It is important to emphasize that the material recovered was all from surface collection and not from well-controlled excavation. The speculations, hypotheses, and suggestions may be altered with increased research.

PROJECT SUMMARY AND RECOMMENDATIONS

Project Summary

To date, a total of forty-eight archaeological sites have been identified and recorded in or near the proposed Burlington Flood Control project acreage. It appears that some of these sites will be adversely affected; others will not. We assume the Corps of Engineers will identify, based upon our legal locations and recommendations, which of the forty-eight sites need to be mitigated.

The Upper Souris River Valley maintains five distinct eco-zones. At least three of these zones (Northern Floodplain Forest, Terrace Grasslands and Upland Prairie) were regularly exploited by prehistoric human occupants. The eco-zone and the human adaptive patterns represented in the archaeological remains will be seriously disturbed by inundation, construction, slumping and erosion if the Burlington Project is carried out. In fact, much has already been lost in the past forty years to Lake Darling. It is absolutely essential that we glean from the remaining data all that we can before the rising waters again exact their toll.

Specifically, Woodland Period Plains Village inhabitants seem to have adapted well to the Northern Floodplain Forest. The contemporary Plains nomadic peoples appear to have preferred the Terrace Grasslands but did exploit the many resources along the floodplain. Plains Village and Plains nomadic sites in the Northern Floodplain Forest eco-zone are primarily occupation sites. The Terrace Grasslands sites are predominantly tipi ring sites (Plains nomadic).

The erosional effects of Lake Darling on occupation and tipi ring sites were very apparent. Near the lower end of the lake, where

slumping and erosion seems to have been most severe, the tipi ring sites are now very near the lake banks. Further north, where lower and intermittent water levels are common, erosion has not yet cut into the terraces. However, the higher water levels caused by the Burlington Dam will hasten erosion and slumping.

Occupation sites are nearly totally inundated nearer the Lake Darling Dam. They are, however, frequently exposed along the northern end of the lake. This situation will also change with a higher pool elevation and these and other sites will be totally inundated.

We have calculated that with a rise in pool elevation from the present level of approximately 1598 feet MSL to the projected maximum of near 1620 MSL, significant archaeological resources will be lost. Those nearer the projected dam will be quickly lost to inundation, slumping and/or erosion. Those at the upper end will not be destroyed as rapidly but they will eventually be lost.

In summary, the construction of the Burlington Dam Flood Control project will have serious impacts on our non-renewable cultural resources. It is imperative that these data be properly mitigated. This is particularly true in light of the valuable information that was irretrievably lost when Lake Darling and other wetlands were constructed. We must manage the remaining cultural resources with insight and at a level equal to all other project considerations.

Recommendations

On the basis of our archaeological survey finds, and in light of the probability of possible future flood control project construction, we recommend an immediate testing program be initiated. Our investigations

to date have been designed to locate and to assess on a preliminary basis particular cultural resources. On the basis of these investigations, it is important to emphasize that the area to be affected by the flood control project is very rich in archaeological remains, much of which are contained in subsurface deposits.

As stated, sites were discovered mainly in the "Northern Floodplain Forest" and in the "Terrace Grasslands" eco-zones. A unique situation occurs as a result of Lake Darling (Area 1) where several archaeological sites were recorded along the beach areas of the lake. Although now considered an "Aquatic Zone" it is an artificial designation since the lake is man-made. Sites located in this area are usually inundated, but because of low water levels during the fall of 1977, many were exposed. Although they may be considered inundated during the majority of the year, we suggest that these sites also be investigated when low water levels permit.

Recommendation One

Our first recommendation is to perform an intensive archaeological survey of Area 3 as defined in the Area Defined Section of this report. Investigations in this area during 1977 were confined to random spot-check procedures, yet we discovered a high incidence of important sites. Therefore, we suggest that the completion be one of prime importance. From our "spot check" of Area 3, we discovered an increased site density as compared to other areas (particularly Area 2). This increase, however, is primarily due to an increase in cultivation because of suitable agricultural soils as one proceeds north from Area 2. It is evident that locations where agricultural activities were abundant produced the majority of archaeological remains. It is further apparent that

the majority of occupation sites recorded along the river are situated near the bank in flat areas with a meander. We estimate that completion of the survey of Area 3 will take at least three weeks.

Recommendation Two

The second recommendation is to test those areas not under cultivation. It was learned through our research and noted from our "on the ground" survey that much of Area 2 is in pasture. This is the result of diversity in soil types. Soils in Area 2 are not suitable for agriculture, particularly along the river meanders. We hypothesize that the diversity in soil may have not affected prehistoric settlement, but it may have influenced subsistence patterns. It is likely, then, that areas not under cultivation but obscured by tall grasses would yield archaeological sites if they were exposed by agricultural activities.

The meanders in Area 2 are very apparent and fit the pattern formed by those discovered in Area 3. We feel it is important to investigate these obscured areas to insure that no valuable cultural resources be overlooked in light of the probable inundation by the proposed Burlington Dam. There was a high incidence of sites in cultivated areas of Area 3.

The testing procedure would entail construction of a trench perpendicular to the river bank by means of a backhoe. This trench would probably need not exceed twenty meters in length and not more than the length of the backhoe boom in depth. In some instances several short trenches may be constructed depending on topography. If significant cultural deposits were revealed, standard archaeological testing procedures could be initiated.

Recommendation Three

The third recommendation is to "shovel test" in a systematic manner a number of recorded sites along the shores of Lake Darling. The shovel test will be accomplished to aid in determining whether the materials collected from the beach and nearby mud flats are the result of either redeposition by wave action or the result of erosion of sites still partially in situ.

It is highly probable that a sufficient portion of these sites may still be intact and thus worth salvaging before destruction by erosion activities of the lake. As previously stated, the sites are inundated for most of the year and thus the testing may be delayed until late fall when water levels are below the spring and summer average. During the two months (September and October) that we surveyed along the shore of the lake, pool elevation fluctuated between 1590.9 and 1591.4. At these levels the sites were sufficiently exposed so as to allow identification. As of April, 1978, pool elevation was 1595.5 with an expected maximum level reaching 1596.5 (Irv Rostad, Upper Souris River Wildlife Refuge, personal communication, Spring 1978). It is obvious that at the present time those sites recorded along the shores during the fall of 1977 are now underwater and that testing can only take place when water levels recede.

Recommendation Four

Our fourth recommendation is to extensively test a minimum of six recorded sites. These sites have been selected on the basis of five criteria:

- (a) Probability of Inundation:
Sites above elevation 1620 are not in danger of inundation, consequently recommendations for further work at these sites are minimal.
- (b) Amount of Cultural Debris Collected in Relation to Site Size:
A number of occupation sites recorded consist of thinly scattered debris over a wide area, however, we are concerned with those sites which produced a considerable amount of debris in relation to size.
- (c) Soil Conditions:
This criteria applies mainly to tipi ring sites, where rings are situated on upland knolls or on flat terraces. The upland tipi ring site has been continuously exposed to erosion and thus, any associated material is exposed. Those on terrace grasslands are well-sodded in and thus, any associated material may be in situ.
- (d) Uniqueness as Compared to Other Sites Recorded in the Area:
Again we are concerned with those sites which may yield the most valuable information during testing. Those sites selected are not necessarily those that produced the most material during surface collecting or may not necessarily be the largest of the tipi ring sites. Their uniqueness is determined by the archaeologist based upon the kinds of information he feels they may yield
- (e) Significance as to National Register Quality:
This fifth criteria is closely related to number four in that the archaeologist is responsible for making the decision whether or not a particular site meets the criteria established for National Register nomination. The following sites are those we feel will meet those criteria, based on their uniqueness as recorded and/or the information which it is anticipated that they will yield. This does not mean, however, that other sites do not meet these National Register criteria. All sites that need to be examined further in order to determine National Register significance are listed in the individual site resumes in the Archaeological Site Section. The six sets listed below are suggested as a minimal recommendation for the immediate testing program (Summer 1978).

The following sites have been selected for extensive testing during the upcoming field season: the McCarroll Site, 32RV415 (Owner - E.G. McCarroll, Tolley, North Dakota); the Flats Tipi Ring Site,

32RV417 (Owner - Department of Interior, Fish and Wildlife Division, United States Government); the Pale Moon Tipi Ring Site, 32RV420 (Owner - Department of Interior, Fish and Wildlife Division, United States Government); the Restless Rabbit Tipi Ring Site, 32RV426 (Owners - Alley and Jack Miller, Mohall, North Dakota, and the Department of Interior, Fish and Wildlife Division, United States Government); the Curtis Ones Site, 32RV429 (Owner - Curtis Ones, Tolley, North Dakota); The Schmidt Site, 32WD404 (Owners - Gary Washek and Russ Schmidt, Rural Route, Burlington, North Dakota). Other sites should be tested and it is hoped that this can be accomplished in the 1978 field season.

Recommendation Five

A fifth recommendation concerns historical research. Although last in our list of priorities, it is a recommendation that should be considered of equal importance with that of archaeological survey and testing. As agreed upon during our negotiations with the Corps of Engineers, the historical study will be initiated in the summer of 1978, with the results of the study included under separate cover.

It is highly possible, based on our preliminary records search, that a number of historically important sites exist in the area, particularly early fur trading posts (Kurt Schweigert, Research Historian, UND, personal communication -- 1978). It is our recommendation that we should retain the option to investigate (by testing) a possible site of this importance if it were located. This would expedite the historical study if the historian could make use of an excavation crew already in the field. This recommendation may increase the field time and initial cost of the archaeological testing phase, but it would save time and money toward overall completion of the archaeological and historical study.

The foregoing recommendations as strategies have been formulated to inform those involved with the Upper Souris Flood Control Project as to what we, as archaeologists, suggest be accomplished in the area to be affected by the proposed construction. We are aware, however, that these recommendations may not be in line with the immediate needs of the Corps of Engineers, but they are given as part of a overall strategy that could be used in attempting to learn how prehistoric peoples utilized the Souris Valley. In retrospect, the recommendations are:

1. Complete the intensive "on the ground" survey of Area 3. This could be accomplished by four individuals in approximately three to four weeks.
2. To investigate by backhoe and/or standard archaeological testing procedure those areas where no sites have been recorded and which are not under cultivation, but which closely fit the pattern formed by sites recorded in areas exposed by agricultural activities. Four or five areas would be investigated by a trenching technique. We envision that this investigation would require at least two weeks time.
3. To "shovel test" a number of archaeological sites recorded along Lake Darling. In light of high water levels in spring and mid-summer, this operation would take place during the fall. This could be accomplished in approximately two weeks.
4. To extensively test six archaeological sites (three tipi ring sites and three occupation sites). This testing would include standard testing and recovery techniques. We would not anticipate more than five weeks to complete this phase of the recommendation.
5. To retain the option to test any historical sites deemed of importance by the historian.
6. To test other sites as recommended in the individual site resume's of items 1 thru 5 if time, conditions and financial considerations permit. These sites will have to be investigated (if they are to be adversely affected) eventually and it would probably be more efficient to complete this phase this summer (1978).

In total it is anticipated that a testing and survey completion project of this scope could be completed in approximately three months depending on landowner cooperation and weather.

PALEONTOLOGY AND RECOMMENDATIONS

The Upper Souris Valley area is mantled with surficial deposits of Pleistocene age. Fossil bearing strata of Late Cretaceous and Tertiary age underlie these deposits and crop out locally, but none have been reported in the study area (Lemke 1960:1). Older, unexposed fossiliferous deposits underlie Tertiary and Cretaceous deposits.

The J.H. Kline Well 1 revealed the existence of numerous unexposed fossil bearing strata from Devonian to Tertiary times. This well, drilled in 1948, was located in the SE $\frac{1}{4}$ of Section 16, Township 157 North, Range 85 West near Carpio, North Dakota. These fossiliferous deposits can be expected in the same formations that underlie the study area. The stratigraphic information is from Lemke (1960:11-19), unless otherwise noted.

PALEOCENE

Fort Union Formation

- Pisidium, Eupera, Sphaerium, Plesielliptio, Viviparus, Campeloma, Lioplacodes, Hydrobia (Holland 1977:71), plant bearing clay

CRETACEOUS

- shell fragments and ostracodes, Foraminifera, Baculites sp., fish bones, oyster fragments, Inoceramus, fish scales

JURASSIC

- Gryphaea, pelecypods, oyster fragments, belemnites, ostracodes

TRIASSIC

- None

MISSISSIPPIAN

- unidentified fossil fragments, fossiliferous limestone, microfossiliferous chert

UPPER DEVONIAN

- fossil fragments (spines or spicules)

MIDDLE DEVONIAN

- silicified fossil fragments (unidentified)

In a well two miles northwest of Des Lacs, North Dakota, Ostrea congesta occurred in Upper Cretaceous sediments (Lemke 1960:20). Other fossils specifically identified by Lemke (1960:27) include Tellina sp., Cymbopphora sp., Dentadina sp., Gyroidena sp., Nonion sp., and Speroplecammina sp. (Upper Cretaceous), and numerous flora and fauna from the Cannonball and Tongue River members of the Fort Union Formation. There are over 70 different species now recognized from these strata (see Lemke 1960:30-31, 36 for a complete listing).

There does not seem to be any danger of adversely affecting unexposed fossils through inundation. However, construction activities associated with dam building and the diversion tunnel could seriously affect the rich fossil bearing deposits in the Fort Union Formation. These deposits begin at or near the surface and reach depths up to at least 213 meters. Older fossil bearing strata (eg., Devonian through Jurassic) lie at depths up to 2400 meters and will probably not be disturbed by the Burlington Project.

When it is anticipated that construction activities will disturb fossil bearing strata the following recommendations are suggested:

- 1) A qualified, professional paleontologist be summoned to supervise excavations through fossil bearing strata.
- 2) Provisions for work stoppage be made so that the paleontologist can determine the significance of the deposits and/or collect representative specimens.

As Holland and Klosterman (1977) have pointed out, excavation often exposes unknown paleontological resources from Pleistocene deposits as well as older strata. Therefore, careful paleontological supervision of construction in Pleistocene deposits should also be considered. General environmental damage can be mitigated and paleontological information can be gained during construction if the aforementioned recommendations are adhered to (Holland in Schneider 1977:73).

PLATES



Plate 1. View of Lake Darling, looking northeast.



Plate 2. The Nygard Site - 32WD403.



Plate 3. The Davidson Site - 32RV414.



Plate 4. The McCarrol Site - 32RV415.



Plate 5. The Yale Tipi Ring Site - 32RV416.



Plate 6. The Funk Tipi Ring Site - 32RV419.



Plate 7. Buried Fire Hearth at the Musch Tipi Ring Site -
32WD102.



Plate 8. Scattered Fire Cracked Rock at the Cracked Rock
Site - 32RV404.



Plate 9. The Often Inundated Site - 32RV407.



Plate 10. Scattered Cultural Debris at the Often Inundated Site - 32RV407.

Plate 11. Projectile Points

- a - (32WD404-1)
- b - (32WD404-2)
- c - (32WD404-9)

Plate 12. Projectile Points

- a - (32RV412-72)
- b - (32RV412-15)
- c - (32RV406-20)
- d - (32RV429-26)
- e - (32RV412-50)
- f - (32RV415-23)
- g - (32RV414-34)
- h - (32RV415-22)
- i - (32RV412-34)
- j - (32RV429-29)

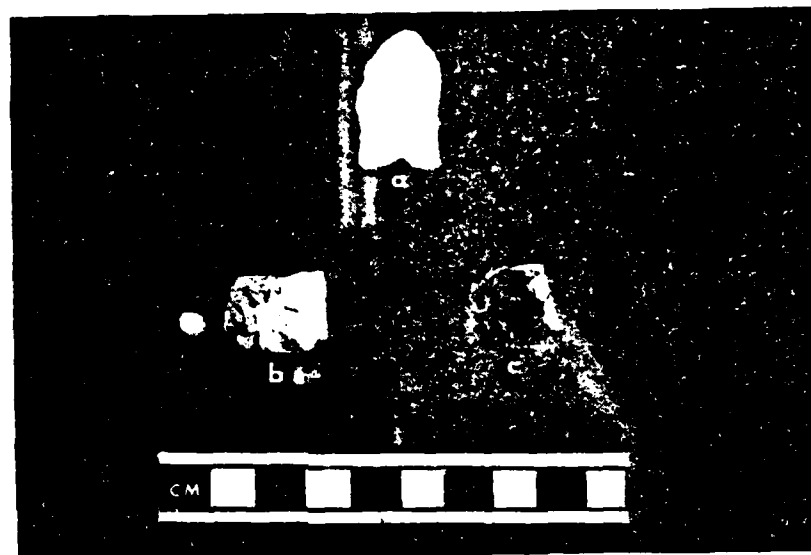


Plate 11. Projectile Points.

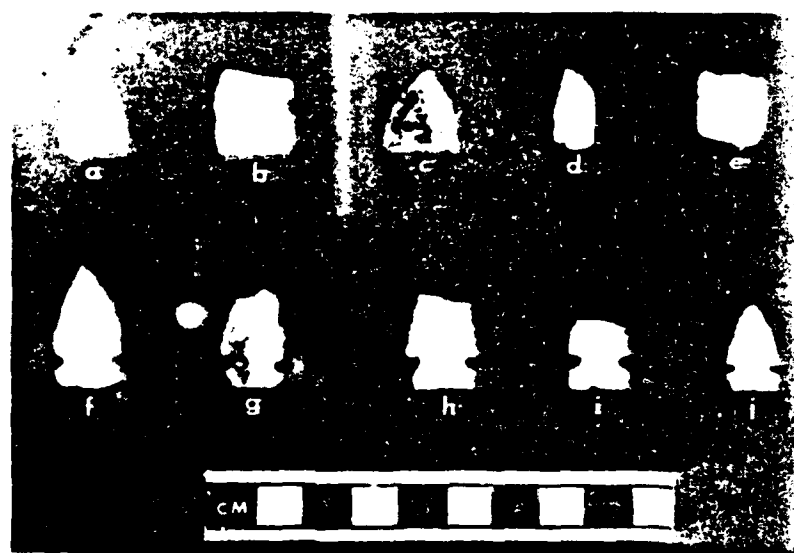


Plate 12. Projectile Points.

Plate 13. End Scrapers

- a - (32RV426-23)
- b - (32WD406-1)
- c - (32RV414-21)
- d - (32RV406-1)
- e - (32WD402-16)
- f - (32RV412-33)
- g - (32RV412-17)

Plate 14. Biface (Representative Sample)

- a - (32RV429-30)
- b - (32Wd401-3)
- c - (32RV414-4)
- d - (32WD405-9)
- e - (32WD405-12)
- f - (32RV407-42)
- g - (32RV413-13)

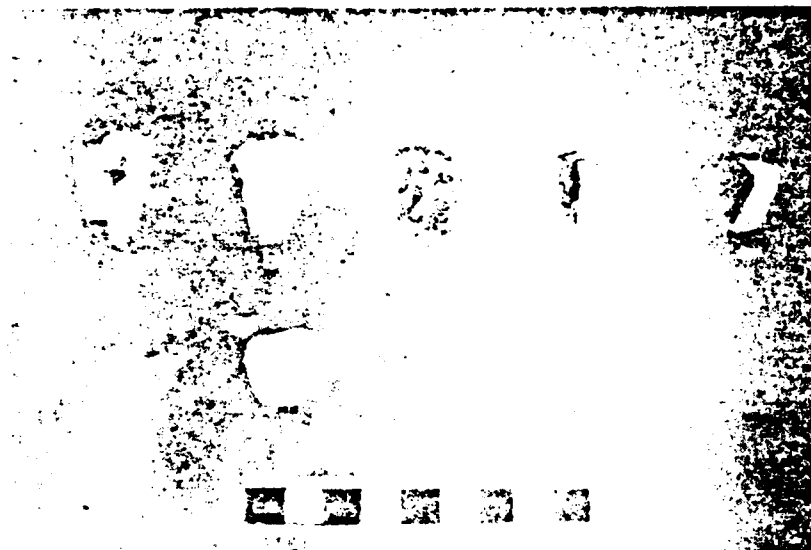


Plate 13. End Scrapers.

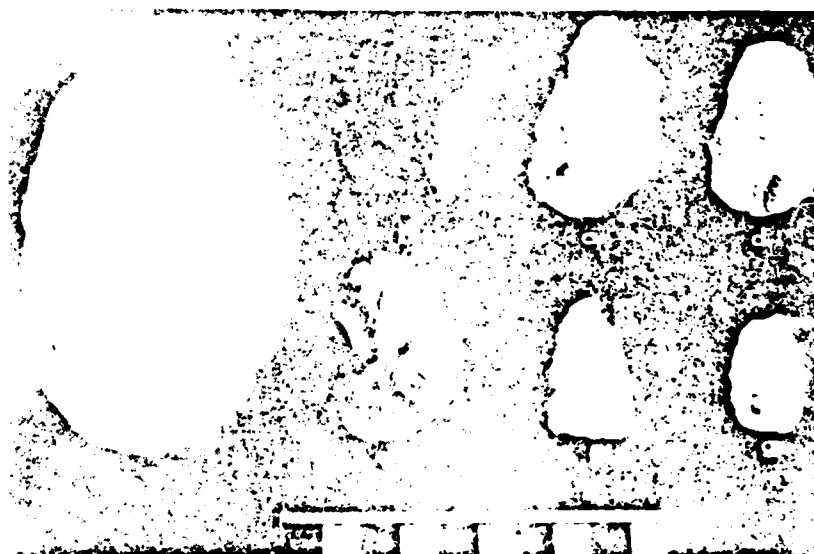


Plate 14. Biface (Representative sample).

Plate 15. Knives

- a - (32RV415-1)
- b - (32RV412-8)

Plate 16. Choppers (Representative Sample)

- a - (32RV413-2)
- b - (32RV411-50)
- c - (32RV414-1)
- d - (32WD402-20)
- e - (32RV413-1)

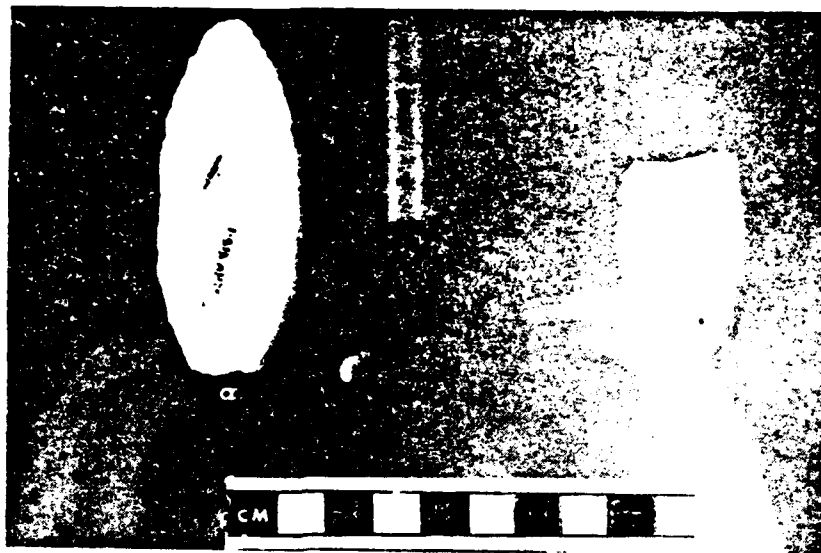


Plate 15. Knives.



Plate 16. Choppers (Representative Sample).

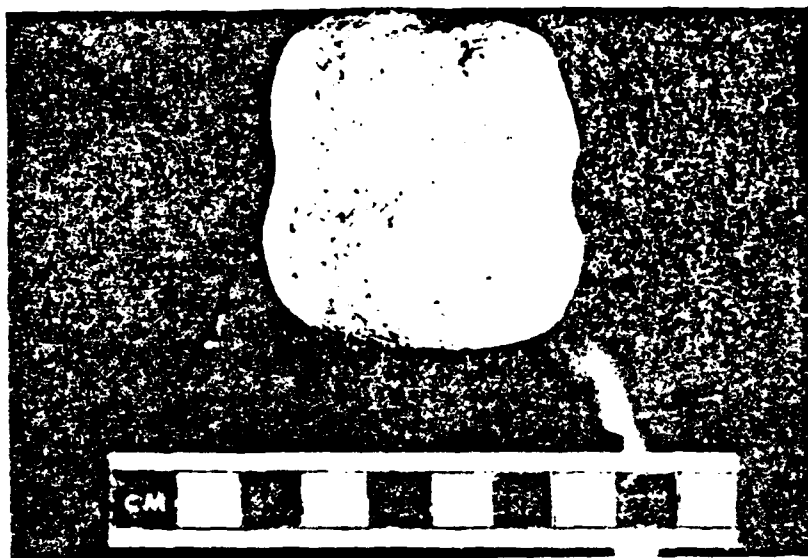


Plate 17. Grooved Maul - 32RV403-1

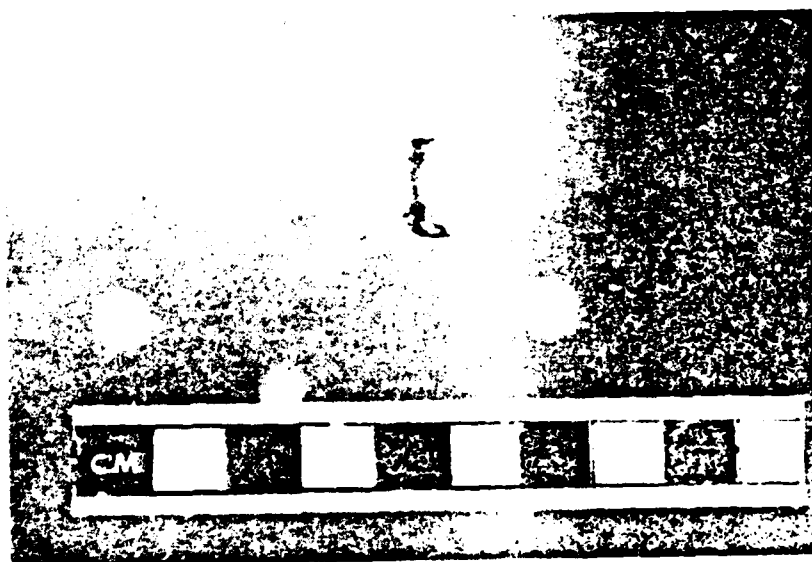


Plate 18. Bead - 32RV405-9

Plate 19. Ceramic Rim Sherds

Group I

- a - (32RV406-1)
- b - (32RV411-1)
- c - (32RV407-8)
- d - (32RV407-17)
- e - (32RV429-47)
- f - (32RV407-18)

Group II

- g - (32RV411-2)

Plate 20. Ceramic Rim Sherds (Same as Above)

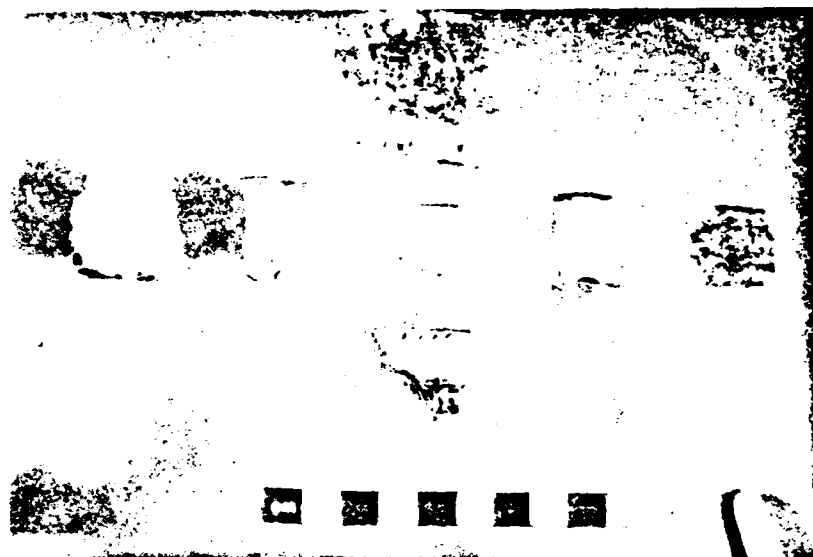


Plate 19. Ceramic Rim Sherds (Side View).

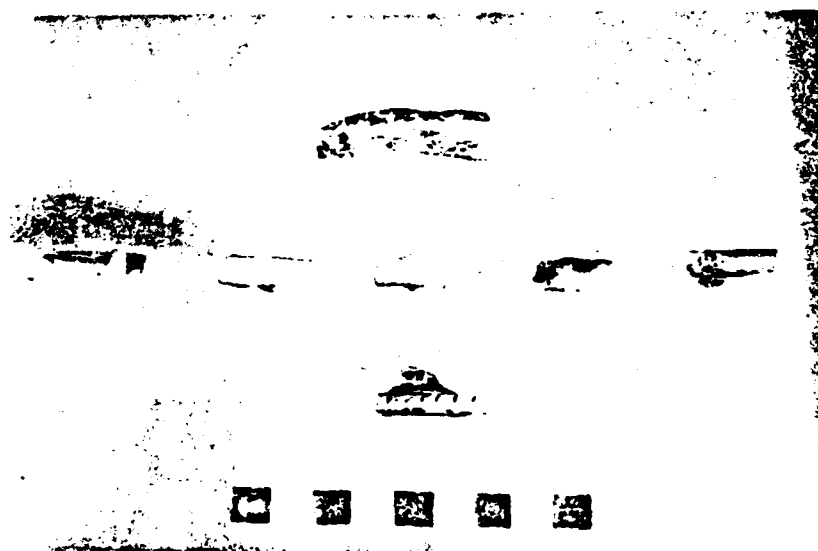


Plate 20. Ceramic Rim Sherds (Top View)

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APPENDIX A

Verbal Attribute Descriptions of Stone Tools

APPENDIX

Verbal Attribute Descriptions of Stone Tools

32RV401 - Four Site

- Artifact Number 401-1: This large, crudely formed biface appears to have been broken in the initial stages of manufacture. Percussion flaking has been used to thin the artifact. A secondary flake, the bulb of percussion is still evident as is the striking platform which is covered entirely with cortex. A hinge fracture has terminated the majority of the artifact.
- Artifact Number 401-6: This finely made specimen is pyriform-shaped in outline and plano-convex in vertical cross-section. The bulb of percussion and striking platform are evident at the proximal end opposite the working margin. All modification is by percussion and pressure flaking and has been applied to the basal surface. The working or distal end of the tool has been resharpened so that the scraping angle approaches 90°. Evidence of use, in the form of edge crushing and faceting, is apparent under 10X magnification.

32RV403 - Pelican Goose Site

- Artifact Number 403-1: This small granitic stone has been modified by pecking and smoothing a groove around the mid-section of the stone. Both ends have been flattened and show evidence of use in the forms of pecking and smoothing. Little else can be discerned concerning the artifact. It is small compared to others observed by the author.

32RV404 - Crack Rock Site

- Artifact Number 404-2: This specimen appears to be a fragment of a chopper. The artifact is badly broken with the only evidence of modification along one lateral edge being the removal of large percussion flakes. It is difficult to determine if these are the result of intentional modification or the result of contact with a resistant surface, i.e., bone.

32RV404 - Cracked Rock Site, continued

Artifact Number 404-4: This hammerstone is flat and ovoid in outline.
(Hammerstone) Evidence of use is in the form of pecking around the circumference of the oval shaped stone. The flat faces of the artifact are unmodified. Little else can be discerned.

32RV405 - Green Arrow Site

Artifact Number 405-1: A badly broken specimen, this notched biface has
(Notched biface) been broken both at the tip and the base. The fracture terminating the basal element is a hinge fracture occurring along a line through the notches. Two hinge fractures have terminated the tip. The interior of the notches have been ground smooth to facilitate hafting as has a small area of the lateral edges immediately above the notches. The specimen is quite well made having flakes detached at random from both faces. The specimen is thin compared to the width. No wear patterns are observable under magnification. The tool may have functioned as a projectile point.

Artifact Number 405-3: A midsection to a fairly well made biface, this
(Biface) specimen has had the basal portion and tip portion terminated by hinge fractures. The flaking pattern is random. Wear patterns consist of faceted areas and edge crushing along both lateral edges. Little else can be discerned regarding original size and shape. The tool probably functioned as a knife.

Artifact Number 405-9: A tubular glass bead, decoration consists of two
(Glass bead) incised lines near the ends and one around the center of the bead. The center line is interrupted by six deep incisions perpendicular to the three lines around the circumference of the bead. The specimen is a trade item.

32RV406 - Mud Flat Site

Artifact Number 406-20: A fairly well-made specimen, this triangular un-
(Projectile point triangular unnotched) notched projectile point has been shaped and sharpened by the removal of small pressure flakes bifacially from each of the three edges toward the center of the specimen. No basal grinding is evident, but it has been thinned by pressure flaking. The percussion bulb and a remnant of the striking platform are apparent at one corner of the specimen.

32RV406 - Mud Flat Site, continued

Artifact Number 406-23: Pyriform shaped in outline, this specimen is well-made with modification being applied entirely to the dorsal surface. The scraper is plano-convex in vertical cross-section with the striking platform and small bulb of percussion evident at the proximal end of the vertical surface. Wear patterns consist of edge crushing and step fractures at the distal or working end. The edge angle of the working margin is approaching 90°.

32RV407 - Often Inundated Site

Artifact Number 407-29: This flatly ovoid shaped cobble is unmodified with the exception of one end. This end is flat as a result of repeated contact with a resistant surface. The tool probably functioned as a hammerstone used in the production of other stone tools.

Artifact Number 407-33: This thin, tertiary flake has been modified along one lateral edge of the dorsal surface by the removal of small pressure flakes. A portion of the flake has been terminated by a straight fracture slightly perpendicular to the lateral edge. Evidence of use appears as faceted areas and step fractures along the working edge of the scraper.

Artifact Number 407-41: Very fragmentary. this specimen is the basal fragment of a drill. The "bit" portion is still discernable and is flatly ovoid in cross-section. One lateral edge is bifacially worked while the opposing edge is unifacially worked. Two notches are apparent immediately above the bit remnant, both of which have been ground smooth to facilitate hafting. Both ends of this tool have been terminated by torsion fracture.

Artifact Number 407-42: A complete specimen, this biface appears to have been discarded or lost during the final stages of manufacture. Percussion flaking has been applied to the tool to shape and thin the specimen. Both lateral edges have the characteristic alternate flaking pattern associated with biface manufacturing leaving a "saw tooth" appearance. The bulb of percussion and striking platform are visible near the tip of the specimen. Attempts have been made to remove them. No wear patterns are observable.

32RV411 - Richie Johnson Site, continued

Artifact Number 411-56: This specimen is broken to such an extent that making observations of basic shape is very difficult. Only one edge (basal margin) is intact and has been modified by the removal of percussion flakes from both surface. It appears that the tool was broken during manufacturing.

32RV412 - Myra Johnson Site

Artifact Number 412-0: This probable midsection to a projectile point appears to have been manufactured from a thin flake. A small amount of modification, in the form of pressure flaking, has been applied to the lateral edges along both faces. The tool may have been broken during manufacture.

Artifact Number 412-8: Approximately one-half of the original specimen, this fairly well-made specimen has been broken as a result of a straight fracture appearing perpendicular to the lateral edges. Percussion and pressure flaking have been applied to the tool for shaping and sharpening. One lateral edge is straight, while the opposing edge is slightly convex in outline. Wear patterns along the convex edge consist of edge crushing and faceted areas. The opposing straight lateral edge does not appear to have been used and may have been the portion hafted into a handle.

Artifact Number 412-13: This specimen appears to have been broken during the final stages of manufacture. Although the tip portion is missing, it appears that this break may be the result of manufacturing and thus, may have been intentional. The break resembles an impact fracture, but the artifact is much too thick to have functioned as a projectile point. A lump of matrix of the stone is apparent near the straight base. It is this "lump" that probably lead to the discarding of the specimen.

Artifact Number 412-15: The basal portion of a projectile, this specimen has been manufactured from a thin flake. Percussion flaking has been applied to one face while the opposing face is unmodified. Pressure flaking has been applied bifacially to the lateral edge and straight basal margin. A straight fracture, perpendicular to the lateral edge, has terminated the tip or distal portion of the artifact. No basal grinding is evident.

32RV412 - Myra Johnson Site, continued

- Artifact Number 412-19: This rectangular appearing specimen has been manufactured from a secondary flake. Cortex is observable on the lateral edge of the dorsal surface opposite the working edge. Fine pressure flaking has been applied unifacially to the dorsal surface of one lateral edge forming the working surface. Wear patterns observable under 20X magnification consist of edge crushing, faceted areas, and step fracturing. Both ends of the tool have been terminated by hinge fractures, one of which has obliterated the majority of the percussion bulb.
- Artifact Number 412-30: This specimen is the basal portion of a biface, in what appears to be the initial stages of manufacture. The specimen is quite thick and has been thinned by the removal of percussion flakes bifacially from the edges toward the center. No wear patterns are observable.
- Artifact Number 412-33: Formed from a tertiary flake, this tool has a portion of the percussion bulb and the striking platform visible on the ventral surface and proximal end, respectively. Modification of the flake is entirely on the dorsal surface resulting in a plano-convex cross-section of the specimen. The distal working edge appears to have been re-sharpened to such an extent so as to result in a working edge angle approaching 90°. Heavy use is evident by step fractures and edge crushing along the steep working edge.
- Artifact Number 412-40: This projectile point is composed of the basal element and a portion of the body. The tip or distal end has been terminated by a straight fracture which is perpendicular to the lateral edges. A pair of side notches have been placed into the lateral edges so as to not restrict the base. Basal margin grinding is evident as is grinding of the interior of the notches. Grinding is also evident along the lateral edges of the basal element. The grinding appears to have facilitated hafting. The point is well-made with both percussion and pressure flaking used to shape and sharpen the tool.

32RV412 - Myra Johnson Site, continued

- Artifact Number 412-64: This midsection of a bifacially worked tool is badly broken missing both the distal portion and proximal or "tip" portion. A remnant of the percussion bulb is evident near the tip. A torsion fracture has terminated the body of the artifact, but it is difficult to determine whether or not this is the result of a twisting force or because of the fossiliferous attributes of the material. The tool may have been broken during a resharpening stage as the only indication of wear is a faceted area along one lateral edge near the tip (25X magnification). The remaining edges are sharp and unworn.
- Artifact Number 412-69: The tip portion or distal end to a possible projectile point, this tool has been finely worked on both faces by pressure flaking. Little else can be discerned regarding size or shape of the complete specimen or whether the projectile point was with or without notches. Since it is finely made, triangular in outline, and quite thin, it is probably a projectile point tip.
- Artifact Number 412-70: This unnotched projectile point is composed of the basal element and a portion of the body. A straight fracture perpendicular to the lateral edges has terminated the portion of the tool immediately below the one where the lateral edges converge to form the tip. Both percussion and pressure flaking have been used to thin, shape, and sharpen the artifact. The basal margin has been thinned by the removal of pressure flakes perpendicular to the lateral edges toward the tip. The basal margin has also been ground smooth to facilitate hafting.
- Artifact Number 412-71: Pyriform-shaped in horizontal cross-section, this finely made specimen is manufactured from a secondary flake. The striking platform is composed solely of cortex and the bulb of percussion is still visible on the ventral surface. Modification consists of the detachment of percussion and pressure flakes from only the dorsal surface resulting in an asymmetrical plano-triangular vertical cross-section. The distal or working edge appears to have been resharpened immediately before it was discarded with little wear apparent on the new scraping edge. Faceted areas do appear, but are the result of prior wear. The two converging lateral edges show little evidence of use and/or preparation for hafting.

32RV412 - Myra Johnson Site, continued

Artifact Number 412-72: This complete triangular, unnotched specimen (Projectile point triangular unnotched) is fairly well-made. Modification by both percussion and pressure flaking is evident along both faces. Flakes have been detached from the basal margin toward the tip to thin the specimen. Fine pressure flakes have been detached from the edges to sharpen the specimen. No grinding is apparent along any of the three margins.

32RV413 - Judy Knutson Site

Artifact Number 413-1: A portion of a large cobble, this specimen has one (Chopper) flat edge and a convex opposing edge. Modification in the form of percussion flake scars appears on both faces of the convex edge. Edge crushing exists along the modified edge as evidence of use.

Artifact Number 413-2: Ovoid in outline, this flat flake has been detached (Chopper) from a large river cobble. A naturally sharp edge resulted from initial detachment. Random flakes have been detached from the cortex side of the flake, but appear to be fortuitous and probably the result of use. Edge crushing appears along the edge of the tool as further evidence of its use as a chopping tool.

Artifact Number 413-7: A secondary flake, modification exists along two (Modified flake) insloping lateral edges. The modification is unifacial pressure flaking. Both ends have been terminated, the widest by a hinge fracture and the narrowest by a torsion fracture. It appears the specimen may have functioned as a perforating tool. Both fractures occurred after modification.

32RV414 - Davidson Site

Artifact Number 414-1: This fairly large cobble has been modified by the (Chopper) removal of several large percussion flakes from one side. Sharp areas along the chopping edge show some crushing from use. Little else can be discerned regarding function of the specimen.

Artifact Number 414-4: This fairly symmetrically-shaped artifact has been (Biface) thinned and shaped by the removal of large percussion flakes from both surfaces, of which all have been struck at random. The tool is bluntly pointed at one end and has a roughly convex base. One corner of the base is flat and appears to be the remnant of the striking platform. No wear patterns are observable and no attempt has been made to sharpen the edges by pressure flaking.

32RV414 - Davidson Site, continued

- Artifact Number 414-21: This specimen is roughly rectangular in outline and bi-plano in vertical cross-section. Several large flake scars are apparent on the dorsal surface with small pressure flake scars around the two lateral edges and distal working edge. The bulb of percussion is still apparent at the proximal end of the ventral surface, but an attempt has been made to remove it. The working edge has areas of edge crushing, step fracturing, and faceted areas indicating extensive use of the artifact.
- Artifact Number 414-27: Little can be discerned concerning original size and shape of the specimen. The remaining portion of this broken hammerstone appears to be one long side. One end is battered and pecked in a manner suggesting its repeated use against another stone.
- Artifact Number 414-34: A rather crude appearing specimen, this small side-notched projectile point has been broken due to impact. A rough impact fracture has terminated the tip of the artifact as well as a portion of the lateral edge. A pair of side notches have been flaked into the side so as to not restrict the base. Their interiors have been ground smooth to facilitate hafting, however, no basal margin grinding is apparent.

32RV415 - McCarroll Site

- Artifact Number 415-1: A very well-made specimen, this artifact has been shaped and thinned by the removal of percussion flakes bifacially from the lateral edges and basal margin toward the center. A "build-up" of material is evident longitudinally on both faces. Some basal margin grinding is evident as is grinding of a portion of the lateral edges near the base. This grinding may have served to facilitate hafting. Wear patterns in the form of edge crushing and faceted areas are observable under 7X to 15X magnification.
- Artifact Number 415-12: This small core has had several flakes removed from both ends. The nodule is criss-crossed with fractures and probably was not a good source of material for the manufacturing of stone tools.

32RV415 - McCarroll Site, continued

- Artifact Number 415-14: A very fragmentary specimen, this artifact is composed of a portion of the lateral edge of a tool used against a fairly resistant surface. No crushing is noted on the working edge, however, step fractures are numerous. A striking platform covered with cortex is located on one end of the fragment. It appears the tool was used as a chopper possibly after it was discarded as a core.
- Artifact Number 415-19: This tertiary flake has been modified along two edges by the removal of small pressure flakes bifacially so as to sharpen the existing thin edges. The percussion bulb and striking platform are apparent and no attempt has been made to remove them. No wear patterns are observable under 7X to 20X magnification. It appears the specimen may have been used as a small cutting tool.
- Artifact Number 415-22: A fairly well-made specimen, this specimen is triangular in outline with a pair of notches being placed into the lateral edges so as to not restrict the straight base. The interior of the notches have been ground smooth as has the basal margin. An irregular fracture perpendicular to the lateral edges has terminated the tip portion of the artifact. Some thinning of the basal element has been accomplished by the removal of flakes bifacially toward the body of the tool.
- Artifact Number 415-23: This complete specimen is roughly triangular in outline with a slightly convex base. Shallow notches have been flaked into the lateral edges of the specimen so as to not restrict the base. The interiors of the notches have been ground smooth as has the basal margin to facilitate hafting. The flaking pattern is random in the form of pressure flaking along the lateral edges.

32RV416 - Yale Tipi Ring Site

- Artifact Number 416-4: A small, crude specimen, this biface has been formed from a secondary flake. Cortex covers a portion of one face. Modification consists of percussion flaking which has thinned and shaped the specimen. The artifact is quite thick as compared to overall size. The artifact appears to have been discarded before final manufacturing.

32RV416 - Yale Tipi Ring Site, continued

Artifact Number 416-10: This roughly ovoid secondary flake has been struck from a larger cobble, which has resulted in a flake appearing plano-convex in cross-section. Little modification has been applied to the flake. The working edge consists of a straight, naturally sharp lateral margin. Edge crushing and irregularly struck percussion flakes appear as a result of contact with a resistant surface.

32RV429 - Curtis Ones Site

Artifact Number 429-7: This flat, circular shaped pebble is unmodified with the exception of one edge which has been roughened by contact with a highly resistant surface. Probably used as a hammerstone, little else can be observed other than the pecked area.

Artifact Number 429-19: Roughly circular in outline, this crude biface has been modified on both faces by the removal of large percussion flakes. The stone is layered and does not appear to be of good quality for stone tool manufacturing. It appears that the biface was discarded after several attempts to thin it.

Artifact Number 429-26: A triangular unnotched specimen, this flake point is rather crude in appearance. Modification consists of fine pressure flaking bifacially along the lateral edges. A portion of one lateral edge has been terminated by a straight fracture parallel to the edge. A remnant of the percussion bulb is evident near the tip. No basal grinding or lateral edge grinding is observable.

Artifact Number 429-29: A very well-made specimen, this small triangular projectile point has a straight base. A pair of notches have been flaked into the lateral edges so as to not restrict the base. The interior of the notches and the basal margin have been ground smooth to facilitate hafting.

Artifact Number 429-30: A fairly large, well-made specimen, this ovoid specimen appears to have been in the final stage of "blanking." The artifact has been thinned and shaped by the removal of large percussion flakes from the lateral surface. Rounded at one end and bluntly pointed at the opposing end, the artifact is probably a blank for use in trade or for later manufacturing. No wear patterns are apparent.

32WD401 - Herzig Site

- Artifact Number 401-3: This fairly well-made specimen is a portion of a
(Biface) biface. The specimen has evidence of wear in the form of faceted areas. It appears the tool may have functioned as a knife and has been sharpened after becoming dull from use. It was during one of the resharpening stages that the tool was broken and was discarded.
- Artifact Number 401-6: It is difficult to discern original shape, size,
(Biface) and function of this specimen. The tool is a midsection to an artifact, bifacially worked along one lateral edge and unifacially flaked along the opposing margin. The percussion bulb is evident near the bifacially worked margin; however, it has been mostly obliterated by flaking. One faceted area is observable along the bifacially worked edge. The distal and proximal ends have both been terminated by hinge fractures.

32WD402 - H.J. Johnson Site

- Artifact Number 402-16: This small specimen is pyriform-shaped in outline
(End scraper) and plano-convex in vertical cross-section. The percussion bulb is near the narrow or proximal end of the tool and is located on the unmodified ventral surface. No attempt has been made to remove it. Percussion flaking has been applied to the dorsal surface and pressure flaking has been used to sharpen the edges. The distal or working edge angle is approaching 90° and appears to have been resharpened immediately prior to its being discarded.
- Artifact Number 402-17: Little can be discerned concerning the core.
(Core) The remaining cortex suggests the cobble was stream-rolled or water worn as it is round and smooth. Several large flakes have been removed from the cobble as at least three striking platforms are visible.
- Artifact Number 402-20: A fairly crude specimen, this artifact has been
(Chopper) roughly shaped by the removal of large percussion flakes mainly from one face. A few flake scars are apparent on the opposing edge, but are confined to one lateral edge. All cortex has been removed from the large flake. Wear patterns along the working edge consist of edge crushing and large step fractures indicating a chopping function.

32WD403 - Nygard Site

Artifact Number 403-3:
(Modified flake)

Slightly triangular in outline and plano-triangular in vertical cross-section, little can be discerned as to function of this specimen. Modification consists mainly of pressure flaking along the lateral edge of one surface. A few flake scars appear on the opposing surface of the lateral edge near the tip. This may be the result of use as the specimen appears to be the tip portion to a drill.

Artifact Number 403-7:
(Modified flake)

This long slender secondary flake is plano-triangular in vertical cross-section and has been modified by the removal of small pressure flakes from the ventral surface of one lateral edge. Little can be discerned concerning original shape or function of the tool. The distal end has been terminated by a hinge fracture. It appears the specimen may be the proximal end of an end scraper.

Artifact Number 403-17:
(Biface)

This crude unfinished specimen has been bifacially flaked by percussion. The striking platform as well as a small area on both surfaces are covered by cortex. It appears that the specimen was discarded after several attempts to thin the specimen failed.

Artifact Number 403-26:
(Core)

This core has had several flakes struck from a number of areas until it was depleted of good material. The remainder is full of fractures and flaws. Several striking platforms and large flake scars are observable.

32WD404 - Schmidt Site

Artifact Number 404-1:
(Projectile point
lanceolate)

This well-made, but quite thick, specimen resembles the "McKean" type. It is lanceolate in outline and fairly short as compared to its width. Lateral edge grinding and basal grinding of the concave base is apparent. A small burin fracture is observable along one lateral edge and may be the result of impact.

Artifact Number 404-2:
(Projectile point
corner-notched)

A fairly well-made specimen, the distal and proximal ends have both been terminated. It appears the tool may have been an "eared" variety, possibly comparable to the historical type referred to as "Oxbow". The interiors of the two notches have been ground smooth.

32WD404 - Schmidt Site, continued

Artifact Number 404-9: A very well-made specimen, but badly broken, (Projectile point corner-notched) this notched biface has the remnant of one notch which has grinding evident in the interior. Hinge fractures have terminated the tip and basal element, while a torsion fracture has terminated a portion of the lateral edge. A portion of the opposing edge has an area of edge crushing which may indicate the tool was used as a hafted knife.

32WD405 - Stromberg Site

Artifact Number 405-6: The basal portion of a fairly well-made specimen, (Biface) this artifact has been manufactured from a secondary flake. Modification consists of percussion and pressure flaking. An area of cortex is still apparent on the vertical surface near the point where the tool has been broken. One lateral edge is straight and is perpendicular to the base while the opposing edge is slightly convex. The tool appears to have been broken during a resharpening stage as remnants of the previous cutting surface are apparent in the form of a faceted area partially obliterated by flake scars.

Artifact Number 405-9: This crude specimen has been manufactured from a (Biface) pebble which is naturally flat and pyriform in outline. A small amount of modification in the form of percussion flaking has been applied to the lateral edges to sharpen the tool. No wear patterns are observable.

Artifact Number 405-12: This biface has been thinned and shaped by the (Biface) detachment of fairly large percussion flakes. The striking platform and a remnant of the bulb of percussion are apparent along the edge of the ventral surface. It appears that the tool was discarded when this area of cortex on the bulb of percussion and striking platform could not be removed.

Artifact Number 405-13: Two large flakes have been struck from opposing (Core) sides of this fist-sized cobble. Three striking platforms are observable. The detachment of these two large flakes has resulted in the cobble being thin with two flat sides.

32WD406 - Pritschet II Site

- Artifact Number 406-1: Pyriform-shaped in outline and plano-convex in vertical cross-section, this end scraper is well made. One lateral edge has been broken, but the break is fortuitous, probably caused by its being run over by modern agricultural equipment. The working margin of the specimen is smooth due to wear and is approaching 90° due to continued wear and resharpening.
- Artifact Number 406-2: This fairly large cobble is unmodified with the exception of the ends of the cobble, which has been pecked and crushed. This modification is the result of contact with a highly resistant surface, probably another stone. The hammerstone was probably used in chipped stone tool manufacturing.
- Artifact Number 406-3: Little can be discerned concerning this core, other than it appears that at least three large flakes of the material were detached from the small cobble.

32WD407 - Washek Site

- Artifact Number 407-1: This core has had several flakes struck longitudinally from both faces of the core. The core appears to have been placed on a hard anvil as the opposing end shows evidence of crushing due to blows struck at the opposing end. The striking platform is roughly hexagonal in shape as a result of flake detachment.
- Artifact Number 407-4: This small, thin, tertiary flake has been terminated on both ends by hinge fractures. Modification consists of fine pressure flaking along the dorsal edge. One hinge fracture at the distal end has terminated a portion of the working edge. Faceted areas along the modified edge appear to have been the result of a cutting function.

32WD409 - Gardner Site

- Artifact Number 409-1: Ovoid in outline, this biface has been thinned and shaped by the removal of fairly large percussion flakes from both surfaces of the specimen. The striking platform, which is covered with cortex, is still visible, however, the percussion bulb has been removed during modification. No attempt has been made to sharpen the edges and no wear patterns are visible.

APPENDIX B

Site Forms

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD101
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington S.W. Quadrangle, USGS 7.5 Minute Topo
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 26 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Take the county road out of Burlington and drive northwest for two miles on the west side of the Souris River. The site is about one quarter mile from the point this road intersects with a gravel road running directly west.
8. A. General description of site: Rock cairn
- B. Condition of site: Undisturbed
9. Owner's name/address: Richard and Martha Musch, Rural Burlington, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Burlington Dam and Reservoir
15. Survey Project: Title Burlington Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: The site should be preserved, but if it will be disturbed by construction it should be tested and/or salvaged.
17. Environment: Elevation 1660 Nearest Water: Type River
Name Souris River Distance 1 mile Direction East
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD101

17. Environment, Cont.

Ground Cover: Prairie grassTerrain: The cairn is located about 200 feet east of the point of an erosional remnant overlooking an intermittent stream.

18. Local contact person or organization: _____

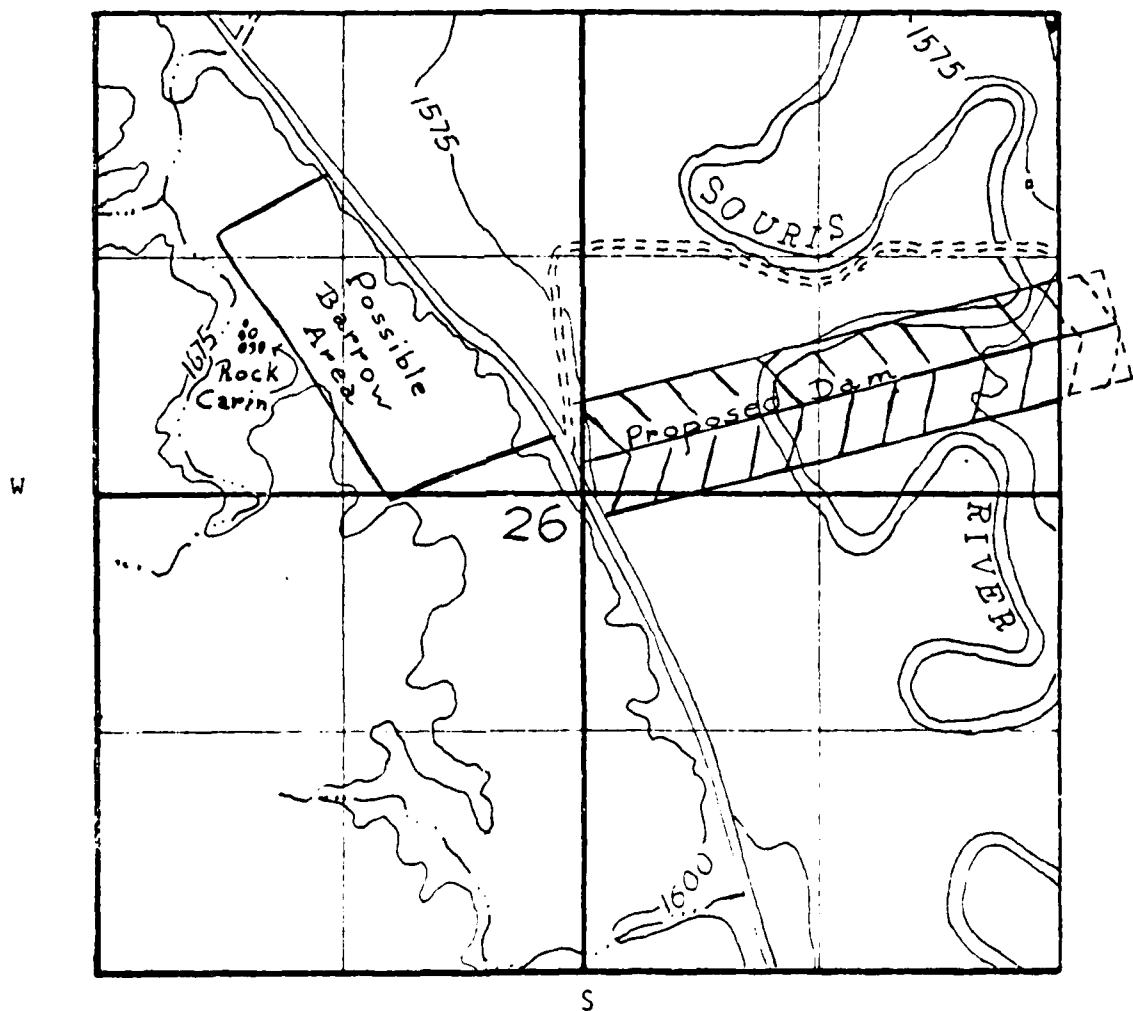
19. Photos: No B/W X Color Prints Slides Comments/ID code Burlington Survey,
roll #1, frames 2-7Negatives stored at: SHSND/A & HP Division Files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Nick G. FrankeDate 10-15-74

Revised by: _____

Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 3
Site Number 32WD171

21. Preliminary cultural assessment: Unknown

22. Site Type: Rock cairn

23. Collection: Time spent collecting: _____ hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: The site consists of a pile of rock partially buried in the sod. The cairn is roughly circular and protrudes no more than 0.8 feet above the ground. The cairn is 3.8 feet long in the east-west direction, and 3.3 feet long in the north-south direction.

26. Comments/References: _____

Recorded by: Nick G. Franke Date 11/15/74

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____ 2. Site Number 32WD102
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington SW Quadrangle, USGS 7.5 Minute Topo
6. Location: SE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 26 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Take the county road on the west side of the Souris River out of Burlington, North Dakota, and drive northwest for about 1.5 miles. The site is just north and 200 feet west of the point in the road where there is an access for a lane.
8. A. General description of site: A partially buried rock cairn.
- B. Condition of site: Undisturbed
9. Owner's name/address: Richard and Martha Musch, Rural Burlington, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Burlington Dam and Reservoir.
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: Preserve; if site is to be disturbed, it should be tested and salvaged.
17. Environment: Elevation 1625 Nearest Water: Type River
Name Souris River Distance 1 mile Direction East
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD102

17. Environment, Cont.

Ground Cover: Prairie grass

Terrain: The site is located on a low erosional remnant overlooking the Souris River bottoms to the east. There are higher erosional remnants to the north, south and west of the site.

18. Local contact person or organization: _____

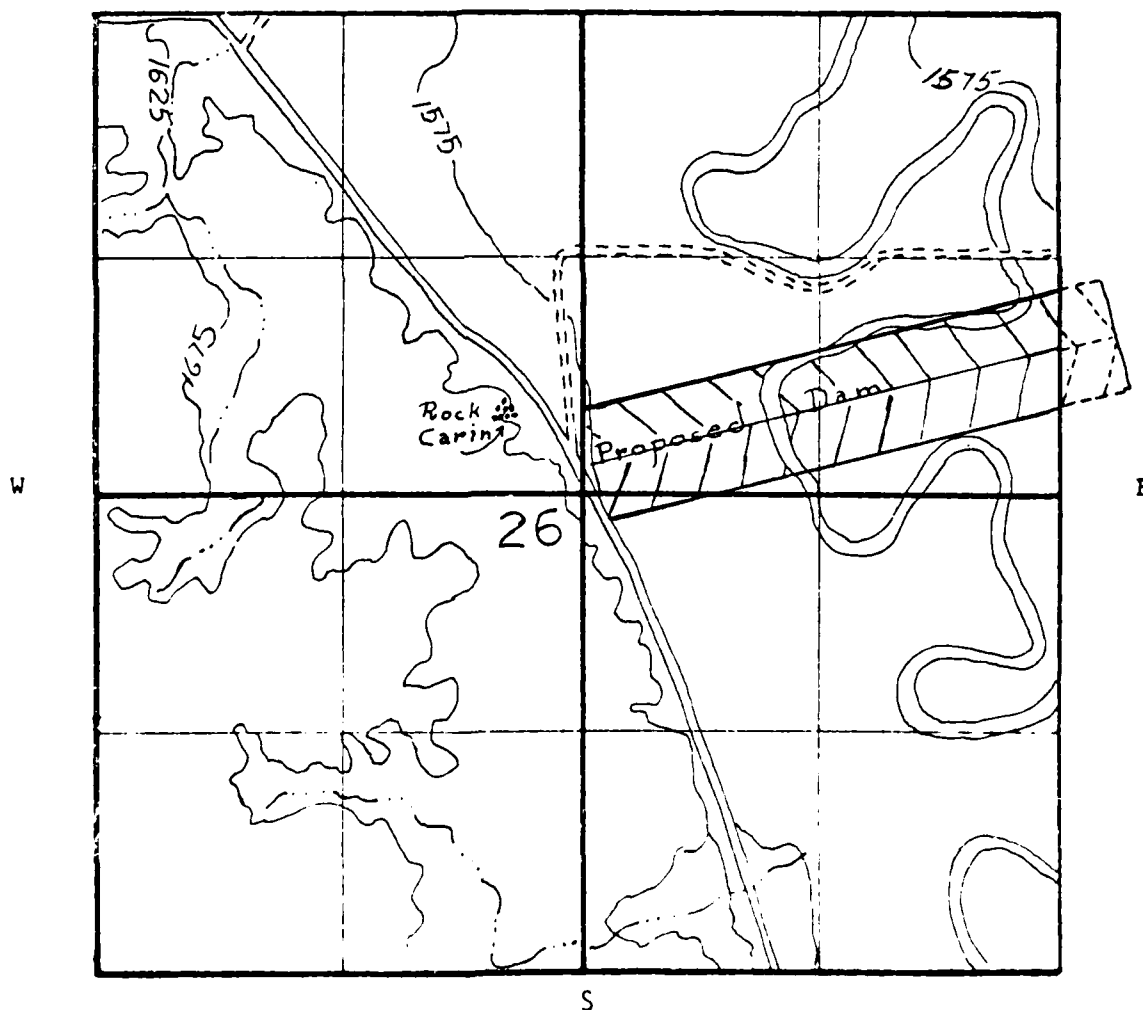
19. Photos: No B/W X Color Prints Slides Comments/ID code _____Burlington Survey, roll #1, frames 8-14Negatives stored at: SHSND/A & HP Division files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Nick G. FrankeDate 10.15.74

Revised by: _____

Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Site Number

21. Preliminary cultural assessment: Unknown

22. Site Type: Rock cairn

23. Collection: Time spent collecting: _____ hr(s). Materials collected: _____
None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: A single rock cairn partially buried in the sod. The
cairn measures about 0.4 feet high and 3.7 feet in an east-west direction and 3.4
feet in a north-south direction. The rocks are also overgrown with grass.

26. Comments/References: _____

Recorded by: Nick G. Franke

Date 10/25/79

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD103
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington SW Quadrangle, USGS 7.5 Minute Topo
6. Location: NW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 25 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Take the county road out of Burlington and drive north on the east side of the Souris River, the site is approximately 2.75 miles from Burlington.
The site is about 300 yards east of the Reinart home which is just west of the road at this point.
8. A. General description of site: Earthen mound
- B. Condition of site: Disturbed by potting and animal burrows.
9. Owner's name/address: James Reinart, Rural Burlington
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Burlington Dam and Reservoir
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: No further work recommended - site completely disturbed.
17. Environment: Elevation 1625 Nearest Water: Type River
Name Souris River Distance $\frac{1}{4}$ mile Direction West
Soil conditions: Dry
Soil Texture: Unknown

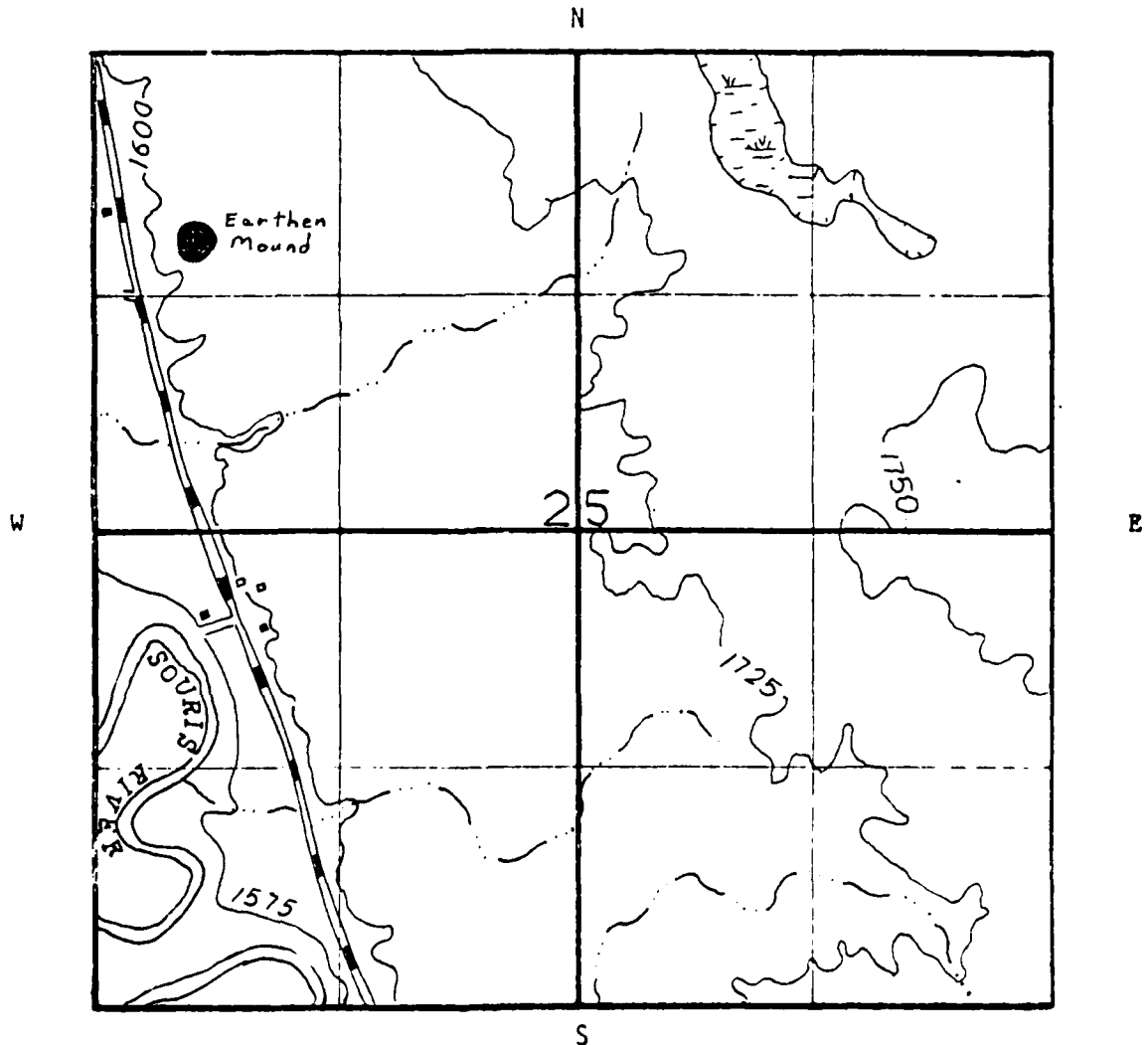
Site Number 32WD103

17. Environment, Cont.

Ground Cover: Prairie grassTerrain: The site was located on the point of a low erosional remnant
extending west towards the bottoms of the Souris River.18. Local contact person or organization: James Reinart19. Photos: No B/W X Color Prints Slides Comments/ID code Burlington Survey, roll 2, frames 2,3, & 4.Negatives stored at: SHSND/A & HP Division files.

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Nick G. FrankeDate 11/6/74Revised by: Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 3

Site Number 32WD103

21. Preliminary cultural assessment: Unknown

22. Site Type: Mound, burial

23. Collection: Time spent collecting: _____ hr(s). Materials collected: _____
None

Artifacts stored at: NA

Materials observed, but not collected: Fragmentary human bone stained with red
ochre.

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: A single, disturbed mound 6 feet in diameter and 0.5 feet
tall.

26. Comments/References: _____

Recorded by: Nick G. Franke Date 11-6-74

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____ 2. Site Number 32WD104
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington S.W. Quadrangle, USGS 7.5 Minute Topo
6. Location: _____ NW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 25 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Burlington, North Dakota, proceed across the Souris River on the county highway bridge; turn left (north) on the gravel river road; proceed 2.5 miles north; stop at section line between sections 25 and 24; site is 300 yards east cross country.
8. A. General description of site: An oval shaped concentration of rocks 8 feet long along the long axis which runs east-west and 5 feet wide.
- B. Condition of site: Good/undisturbed
9. Owner's name/address: James Reinart, Rural Burlington, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Construction of Burlington Dam and Reservoir
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: Preserve, if to be disturbed, test and/or salvage.
17. Environment: Elevation 1625 Nearest Water: Type River
Name Souris River Distance $\frac{1}{2}$ mile Direction West
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD104

17. Environment, Cont.

Ground Cover: Prairie grass

Terrain: Site is located on a small erosional remnant branching north from a larger erosional remnant. The erosional remnant on which the cairn is located runs parallel to the Souris River. The cairn is about 110 feet south of the tip.

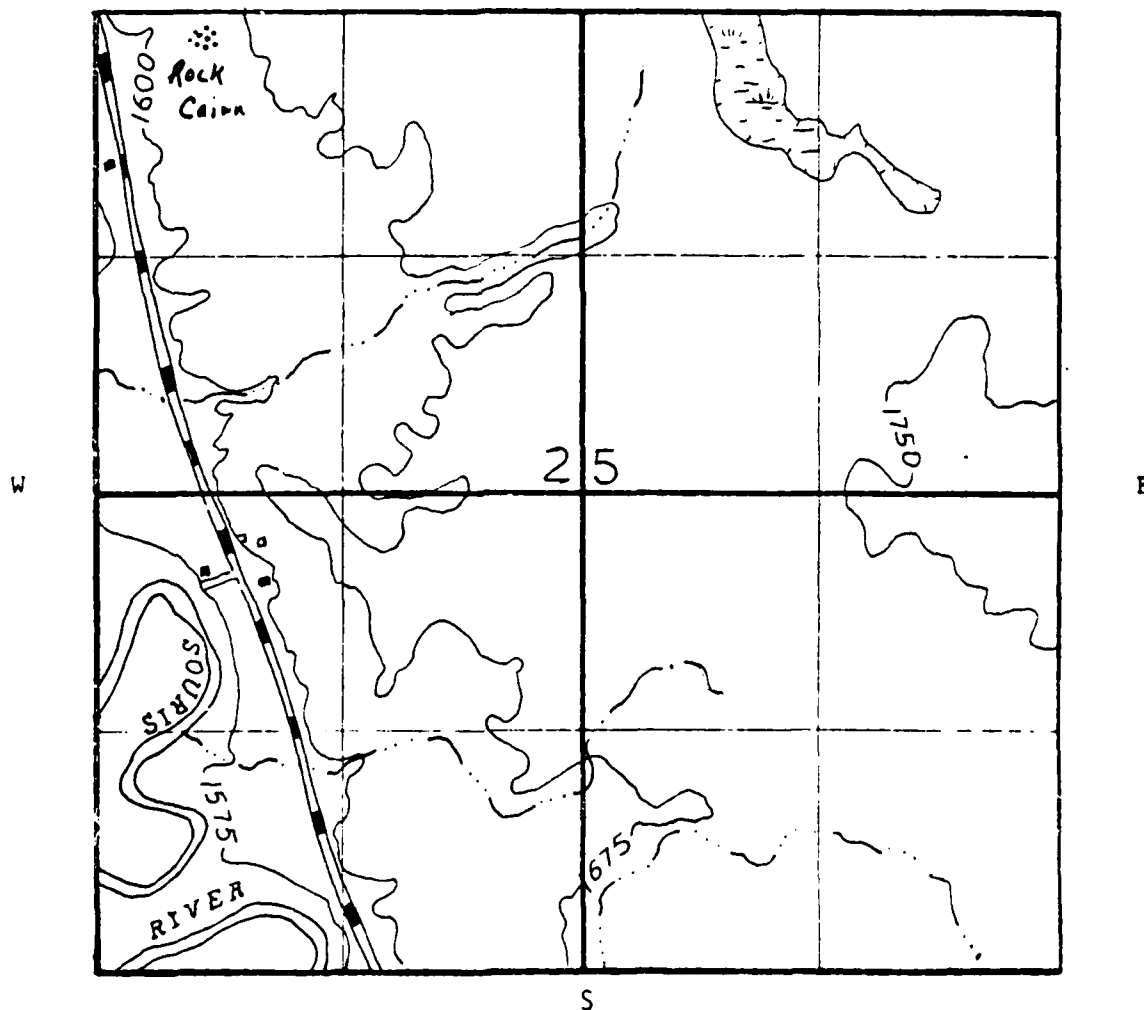
18. Local contact person or organization: James Reinart, owner19. Photos: No B/W X Color Prints Slides Comments/ID codeBurlington Survey roll #2; frames 0 & 1Negatives stored at: SHSND/A & HP Division files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Nick G. FrankeDate 11/6/77

Revised by: _____

Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Continuation form: Archaeological Sites

Site Number

21. Preliminary cultural assessment: Unknown

22. Site Type: Rock cairn

23. Collection: Time spent collecting: _____ hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: A single rock cairn approximately 5 feet X 8 feet

26. Comments/References: _____

Recorded by: Nick G. Franke

Date 11-6-74

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____ 2. Site Number 32WD105
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington S.W. Quadrangle, USGS 7.5 Minute Topo
6. Location: _____ SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 5 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Drive east from Foxholm, North Dakota, on a county road for about 3.5 miles. Turn southeast on the first road east of the Souris River, continue southeast for about 0.5 mile. The site is about 200 yards southwest of the nearest point on the road.
8. A. General description of site: Semi-circular stone alignment
- B. Condition of site: Probably undisturbed; there may be buried rocks to the west of the visible rocks continuing the arch and forming a circle
9. Owner's name/address: John and Richard Pritschet, Rural Foxholm, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Burlington Dam and Reservoir
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: Preserve; if site is to be disturbed, the site should be tested and/or salvaged.
17. Environment: Elevation 1580 Nearest Water: Type River
Name Souris River Distance $\frac{1}{2}$ mile Direction West
Soil conditions: In pasture
Soil Texture: Unknown

Site Number 32WD105

17. Environment, Cont.

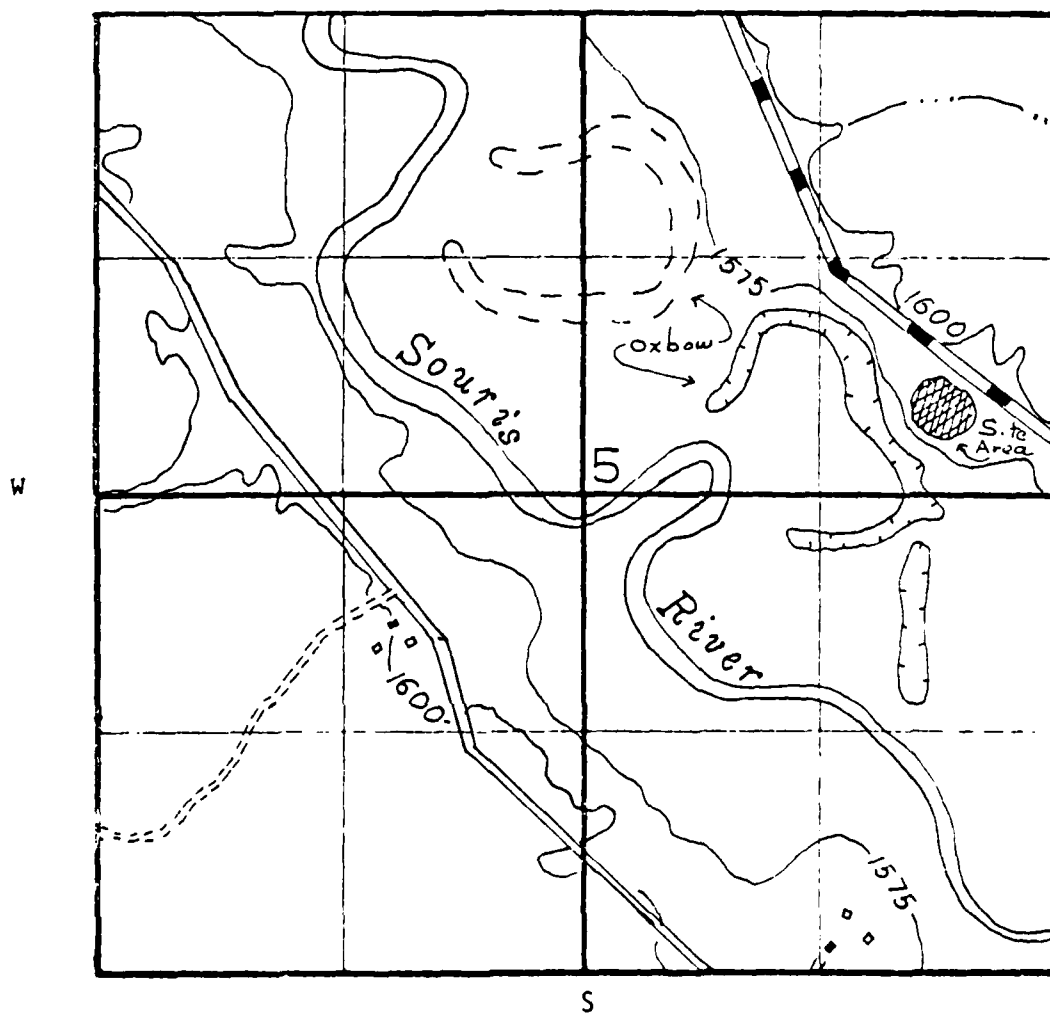
Ground Cover: Prairie grassTerrain: The site is on a bench overlooking an oxbow formed by the Souris
River.18. Local contact person or organization: John and Richard Pritschet, Rural Foxholm, N.D.19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Nick G. FrankeDate 11/7/77

Revised by: _____

Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 5

Site Number 32ND105

21. Preliminary cultural assessment: Unknown

22. Site Type: Stone alignment

23. Collection: Time spent collecting: _____ hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 140 square feet

How determined: Paced Eyeballed X Taped Other

25. Surface Features Observed: Nine stones partially buried in the sod. Six of the stones form an arch, with 1 stone in the approximate center of the arch, 1 stone beyond the south limits of the arch, and 1 stone beyond the east limits of the arch. The arch is about 12.0 feet long on a north-south direction. The distance from the center to the eastern most rock is 8.0 feet and the distance from the center to the southernmost rock is 10.0 feet.

26. Comments/References: _____

Recorded by: Nick G. Franke Date 11-17-74

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD106
3. Site Name (s) Musch Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: SE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 16 T 156 N / R 84 W
Plat: Block Lot
UTMG: A. B.
C. D.
7. Access: Through Richard Musch's farmyard; jog north approximately 100 yards along farm road; east into pasture; to edge of river hills.
8. A. General description of site: Single circular stone alignment; stone lined fireplace reputed to belong to the stone circle site.
- B. Condition of site: Fireplace in good condition; portions of ring moved by Musch
9. Owner's name/address: Richard Musch; Sec.21, T.156N R.84W
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☒ Undt. ☐ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Not in danger
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included Lake Darling/Burlington Dam Project -See continuation form
16. Recommendations: Preserve; map and test
17. Environment: Elevation 1650 Nearest Water: Type Intermittent stream
Name None; tributary to Souris River Distance 750 meters Direction Northwest
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD106

17. Environment, Cont.

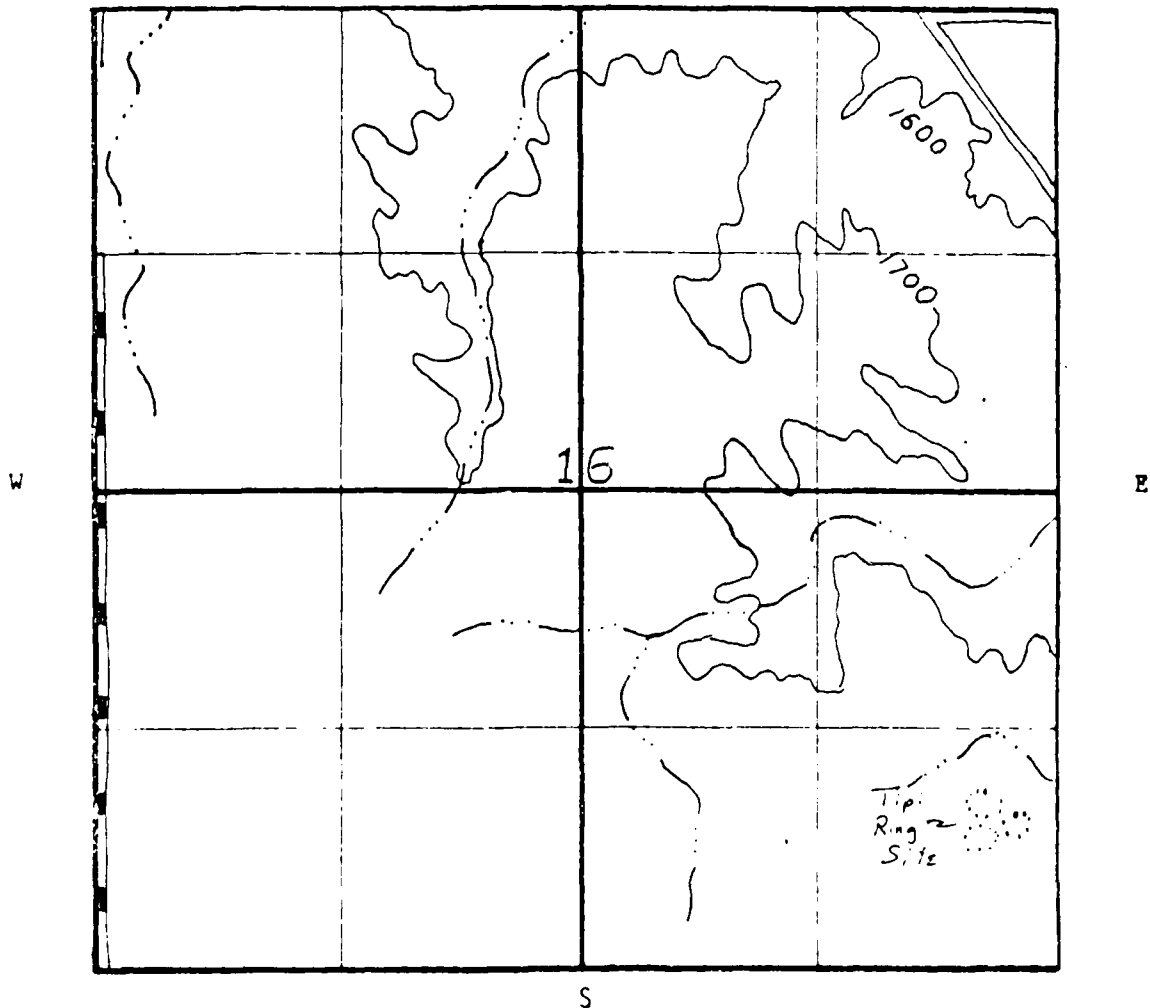
Ground Cover: Prairie grassTerrain: Interstream upland/rolling prairie/top of river hills overlooking the Souris River valley.18. Local contact person or organization: Richard Musch, Rural Foxholm, N.D.19. Photos: No B/W X Color Prints Slides Comments/ID code _____Negatives stored at: SHSND/A & HP Division Files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: C.L. DillDate 7-23-75Revised by: Kent N. Good and John KjosDate 1-1-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 3

Site Number 32W5176

21. Preliminary cultural assessment: Late Nomadic

22. Site Type: Tipi ring

23. Collection: Time spent collecting: 1 hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: A single circular stone alignment; 17.0 feet in diameter; rectangular alignment of stones reputed by informant Musch to have been a fire place associated with several stone circles in this pasture. Musch could only locate this single ring and rectangle. Rectangle is 5.0 feet X 5.9 feet; Musch recalls rolling rocks from the rings down the slope into the coulee below while he was a child. Rocks rolled to roust cattle from brush at coulee bottom.

26. Comments/References: This site should be investigated in some more detail to determine whether or not more materials than just the two features described are still on the site.

Recorded by: C.L. Dill Date 7-23-75

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32WD106

Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949

Location: SW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ Section 16, T.156N, R.84W

Access: Travel 2.5 miles on Ward County #8, take a right on valley road (west side of river). Travel approximately 2 miles southwest passing farmhouses on both sides of road. Take first right after second farmhouse. Traveling south out of river bottom, proceed approximately 2 miles to second farmhouse on left (Musch farm). Site is approximately 3/4 mile northeast of buildings (Musch knows exact location). Site is on flat prairie above river bottom, adjacent to river bluffs. Mouse River is 1200 meters east of site.

Description of Site: Area of occupation indicated by the occurrence of tipi rings (three rings). Rings are slightly overgrown by prairie grass. Cattle have disturbed the area.

Soil Texture: Sandy loess; gravel.

Site Type: Tipi rings - 2 partial, 1 complete; associated fire hearth was also observed; fire hearth comprised of six (6) rocks.

Tipi Ring Dimensions:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	86	6 meters
2	(Only partially complete)	
3	(Only partially complete)	

Recommendations: Though the site is not in danger of being destroyed by the Burlington Dam Project, it should be mapped and tested....rings have been disturbed by cattle.

Photos: 2 B/W and 2 Color -- Negatives stored at the Department of Anthropology/Archaeology, UND

Recorded by: Kent N. Good and John Kjos Date: 10/18/77
(Lake Darling/Burlington Dam Project directed by
Fred Schneider)

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD107
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 14 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Ward County #15; through gate opposite the Lloyd Nygard farm; up coulee ridge to southeast; site is on high point above coulee.
8. A. General description of site: Two circular stone alignments on hill overlooking the Souris River valley.
- B. Condition of site: Good, pasture
9. Owner's name/address: Lloyd Nygard, Section 15, T.156N R.84W
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☒ Undt. ☐ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Site is not in danger.
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: Preserve; site is at 1735' and is not in project area proper.
17. Environment: Elevation 1735 Nearest Water: Type Intermittent stream
Name None, tributary to Souris River Distance 500 meters Direction Northwest
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD107

17. Environment, Cont.

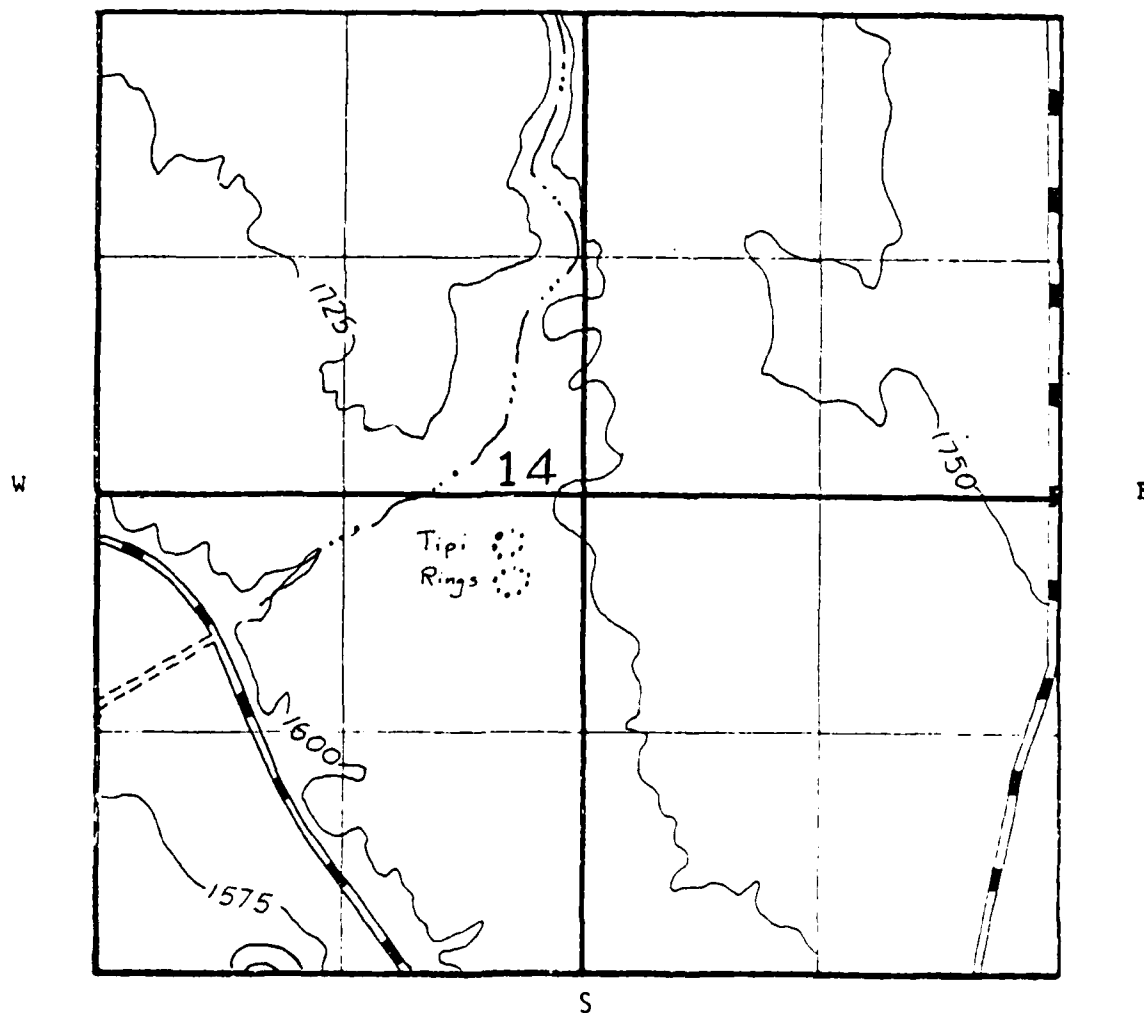
Ground Cover: Prairie grassTerrain: Interstream uplands/rolling prairie/hills overlooking the Souris
River valley.18. Local contact person or organization: Lloyd Nygard19. Photos: No B/W X Color Prints Slides Comments/ID code _____Negatives stored at: SHSND/A & HP Division files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: C.L. DillDate 7-23-77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Late Nomadic

22. Site Type: Tipi rings.

23. Collection: Time spent collecting: 2 hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: Two circular stone alignments; one is 19.0 feet in diameter (A); the other (B) is 16.5 feet in diameter.

26. Comments/References:

Recorded by: C.L. Dill Date 7.25.71

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD108
3. Site Name (s) _____
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: SE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 10 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Through the gate at section line between sections 10 and 15 where this line crosses Ward County #15; up hill to site.
8. A. General description of site: Single circular stone alignment
- B. Condition of site: Good, pasture
9. Owner's name/address: W.M. Harrington (Harrington Ranch) 2120 Westfield, Minot, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☒ Undt. ☐ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Site is not in danger
15. Survey Project: Title Burlington Dam Survey Director Nick Franke
Other surveys in which included None
16. Recommendations: Preserve; site is at 1740' and is not in project area proper.
17. Environment: Elevation 1740 Nearest Water: Type River
Name Souris River Distance $\frac{1}{2}$ mile Direction West
Soil conditions: Dry
Soil Texture: Unknown

Site Number 32WD108

17. Environment, Cont.

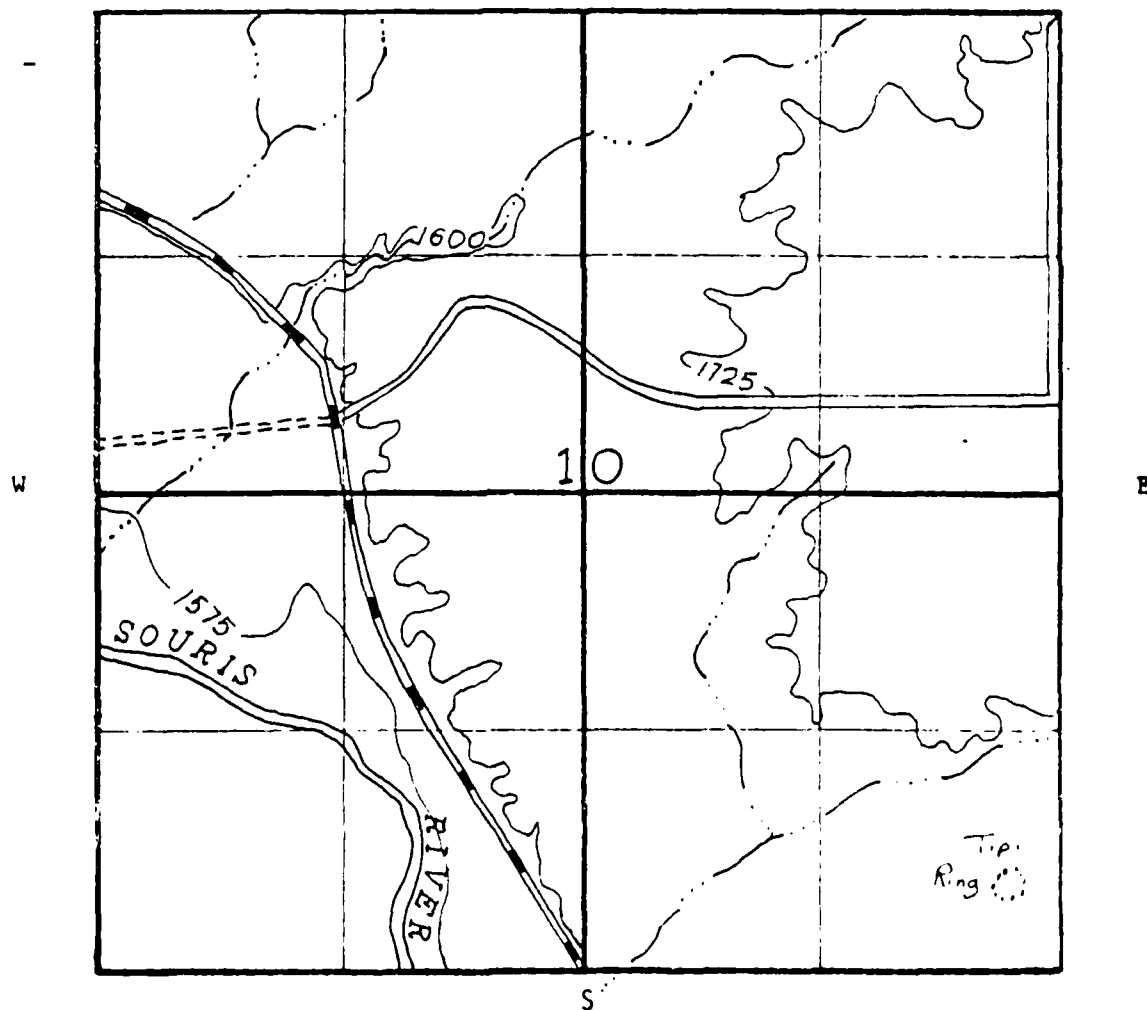
Ground Cover: Prairie grassTerrain: Interstream uplands/rolling prairie overlooking Souris River valley18. Local contact person or organization: None19. Photos: No B/W X Color Prints Slides Comments/ID code _____Negatives stored at: SHSND/A & HP Division files

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: C.L. DillDate 7/23/75

Revised by: _____

Date _____

21. Preliminary cultural assessment: Late Nomadic

22. Site Type: Tipi ring

23. Collection: Time spent collecting: 1 hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Unknown

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: A single circular stone alignment; 15.8 feet in diameter, partially a double ring, stones in center of ring.

26. Comments/References:

Recorded by: C.L. Dill Date 7/23/75

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV401
3. Site Name (s) Four Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$ and SE $\frac{1}{4}$ of NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 24 T 160 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Greene, North Dakota, turn north off of North Dakota Highway #28 and proceed north on the Wildlife Refuge access road for 1 $\frac{1}{2}$ miles. This will take you to an intermittent drainage that runs easterly into Lake Darling, the site is located along the flat abutting the lake.
8. A. General description of site: Apparently the site is often inundated by high water of Lake Darling. Most of the cultural material was discovered along old beach lines. It is possible that the material has washed up from sites existing nearer the former Mouse River channel.
- B. Condition of site: Periodically inundated, very poor.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Untd. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Periodic inundation
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Inundation has seriously disturbed site's integrity; problems associated with hydraulics prohibit test excavations at this time.
17. Environment: Elevation 1595 and lower Nearest Water: Type River
Name Mouse River Distance 400 meters Direction East
Soil conditions: Inundated occasionally
Soil Texture: Silts, sand and gravel

Site Number 32RV401

17. Environment, Cont.

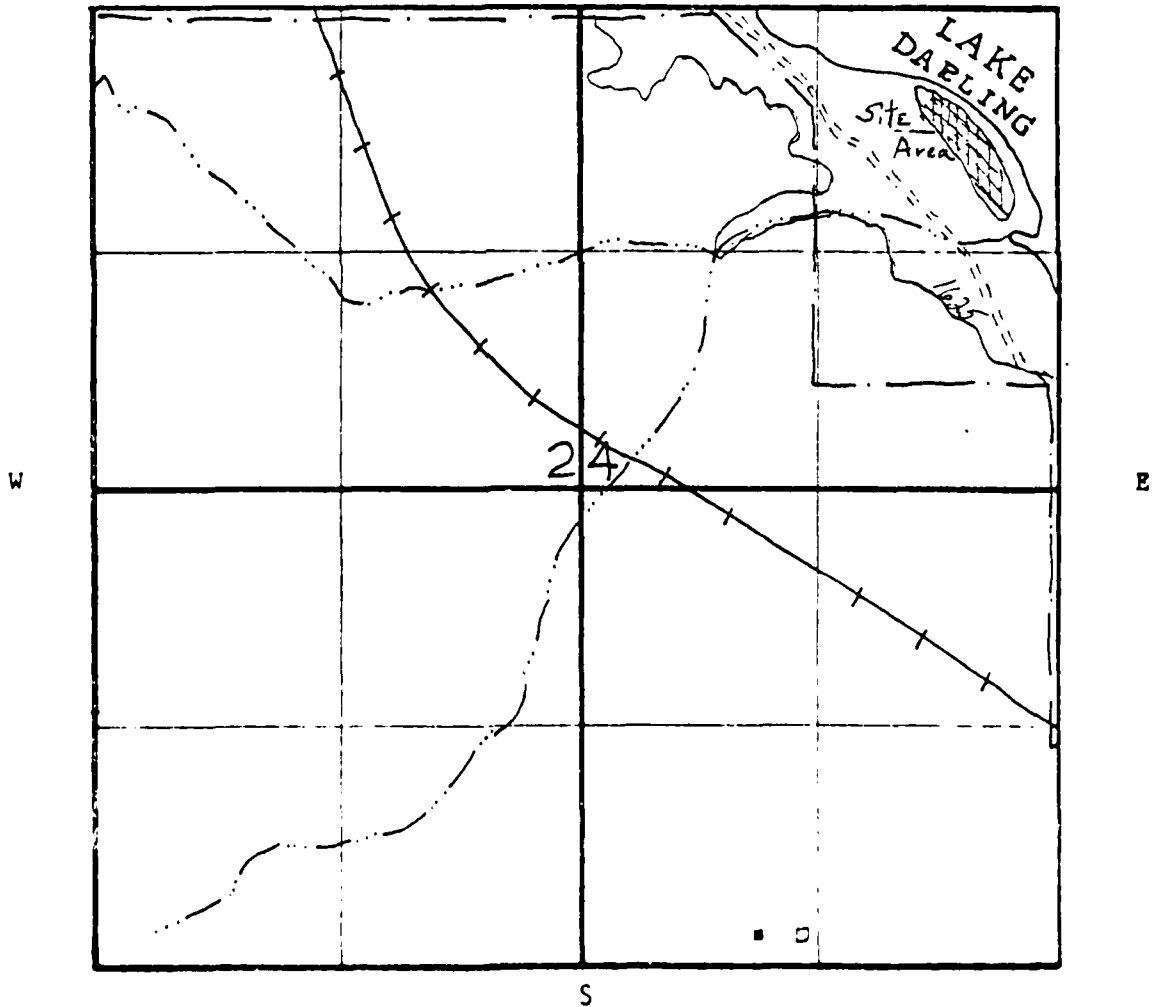
Ground Cover: Periodically inundated - presently marsh grassesTerrain: Flat18. Local contact person or organization: Wildlife Refuge, Lake Darling Dam19. Photos: No XB/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard FoxDate 9-28-77Revised by: Date

21. Preliminary cultural assessment: Unknown

22. Site Type: Unknown

23. Collection: Time spent collecting: 4 men/0.3 hr(s). Materials collected: _____

1 KRF end-scraper, 1 light brown chalcedony biface, numerous bone fragments,
flakes of Knife River flint, Swan River chert, and dark brown chalcedony

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Numerous bone fragments

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 100 meters X 50 meters

How determined: Paced Eyeballed X Taped Other

25. Surface Features Observed: None

26. Comments/References: _____

Recorded by: Richard Fox Date 9-2-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

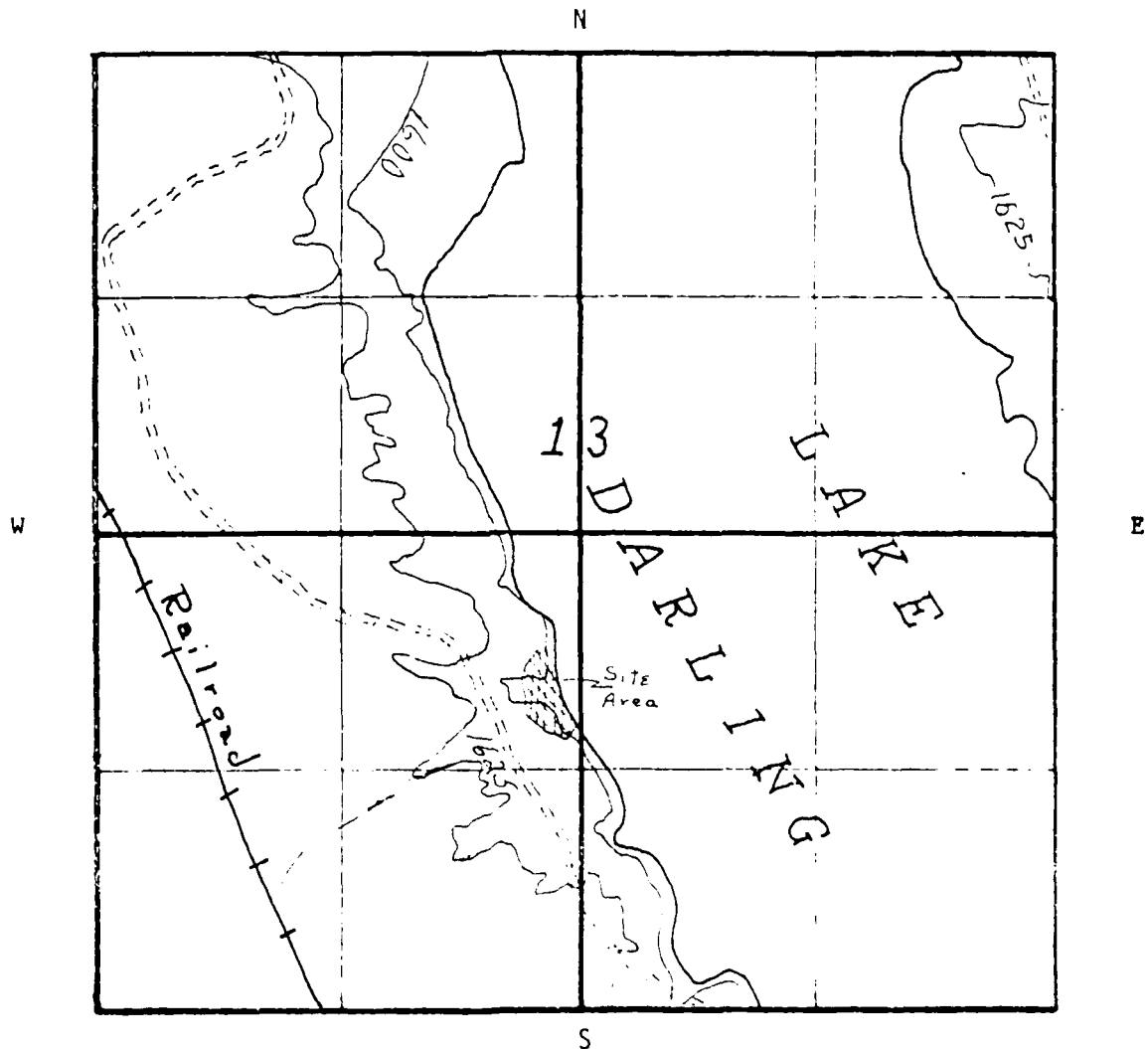
1. County Renville 2. Site Number 32RV402
3. Site Name (s) Rusty Wrench Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5' Topo, 1949
6. Location: E $\frac{1}{2}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 13 T 160 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Greene, North Dakota, turn off of North Dakota Highway #28 and
proceed northerly on the Wildlife Refuge access road for 1 $\frac{1}{2}$ miles. Site is just
to the northeast of here along the Lake Darling beach.
8. A. General description of site: This site has been periodically inundated by Lake
Darling. It is possible that the cultural material has washed up from sites
existing underwater and nearer the former Mouse River channel. Site is presently
along an old beach line.
- B. Condition of site: Periodically inundated - poorly preserved.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Untd. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Inundation has seriously disturbed site's integrity; problems associa-
ted with hydraulics prohibit test excavations at this time.
17. Environment: Elevation 1595 Nearest Water: Type River
Name Mouse River Distance 300 meters Direction East
Soil conditions: Periodically inundated
Soil Texture: Silt, sand, and gravel.

17. Environment, Cont.

Ground Cover: Reeds and marsh grassesTerrain: Flat beach18. Local contact person or organization: Wildlife Refuge, Lake Darling Dam19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard Fox Date 9-1-77

Revised by: _____ Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 3

Site Number 3080

21. Preliminary cultural assessment: Unknown

22. Site Type: Unknown

23. Collection: Time spent collecting: 1 man/0.2hr(s). Materials collected: Flakes of Knife River Flint, Swan River chert, and porcellanite

Artifacts stored at: NA

Materials observed, but not collected: Numerous unidentified bone fragments, historic iron products, concrete.

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 50 meters X 50 meters

How determined: Paced Eyeballed X Taped Other

25. Surface Features Observed: None

26. Comments/References:

Recorded by: Richard Fox Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV403
3. Site Name (s) Pelican Goose Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 19 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Turn right (north) off of North Dakota #28 at Greene, North Dakota and proceed on Wildlife Refuge access road for $\frac{1}{2}$ mile. Then proceed east on foot to the Lake Darling beach line. Site is located along beach at the small drainage confluence and also northward for approximately 100 meters along beach.
8. A. General description of site: Site is situated on beach at the confluence of intermittent drainage and Lake Darling. It is suspected that the cultural materials found in the silt, sand, and gravel along the beach has been washed up from a lowland site nearer the former Mouse River.
- B. Condition of site: Presently inundated
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Already inundated.
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: No further work necessary; Supposition that material have been removed from lowland site eliminates NRHP potential, as well.
17. Environment: Elevation 1595 or lower Nearest Water: Type River
Name Mouse River Distance 400 meters Direction East
Soil conditions: Disturbed by inundation
Soil Texture: Silt, sand and gravel

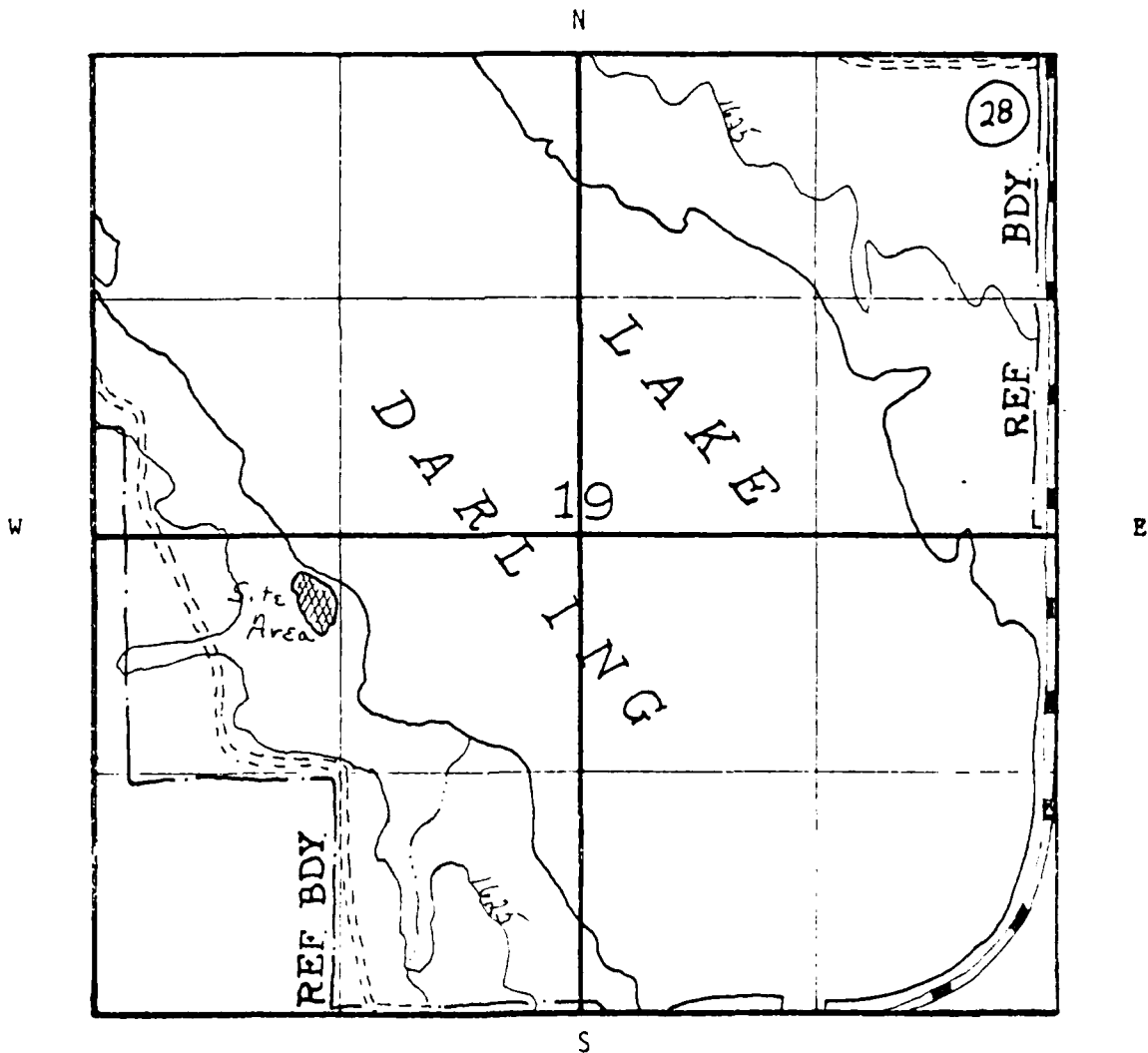
Site Number 32RV403

17. Environment, Cont.

Ground Cover: Reeds, marsh grassesTerrain: Beach18. Local contact person or organization: Wildlife Refuge, Lake Darling Dam19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard FoxDate 4-25-77

Revised by: _____

Date _____

NORTH DAKOTA CULTURAL RESOURCES SURVEY
Continuation form: Archaeological Sites

Page 3
Site Number 32RV403

21. Preliminary cultural assessment: Unknown

22. Site Type: Unknown - inundated

23. Collection: Time spent collecting: 4 men, 1/2 hr(s). Materials collected:

Flakes of KRF, Swan River chert, and light brown chalcedony

Numerous bone fragments (Bison bison or Bos)

One granitic grooved maul

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Inundated

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: None

26. Comments/References: Site is similar to the Greene Arrow Site in as much as the
cultural material was found along the beach line - it is suspected that the
material has been washing from an inundated site nearer the Mouse River.

Recorded by: Richard Fox Date 4-2-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV404
3. Site Name (s) Cracked Rock Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 2 T 160 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Greene, North Dakota take Refuge road north and on west side of lake. Travel approximately 4 $\frac{1}{2}$ miles to where road leaves the bottom land and turn northwest along bluffs. The site is in section 2 along the shoreline of the river (lake).
8. A. General description of site: Site appears to consist of bison bone which has been broken when "green". Exposed fire hearth is associated with bone. The hearth is composed of fire-cracked river cobbles concentrated in an area near the river's edge.
- B. Condition of site: Fair to good, remainder of site is probably intact.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rising water of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site is in immediate danger - should be "shovel tested" to determine existence of salvageable materials; if found, immediate salvage would be warranted.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance Immediately Adjacent Direction East
Soil conditions: Flood deposits, marsh
Soil Texture: Loamy clay

Site Number 32RV404

17. Environment, Cont.

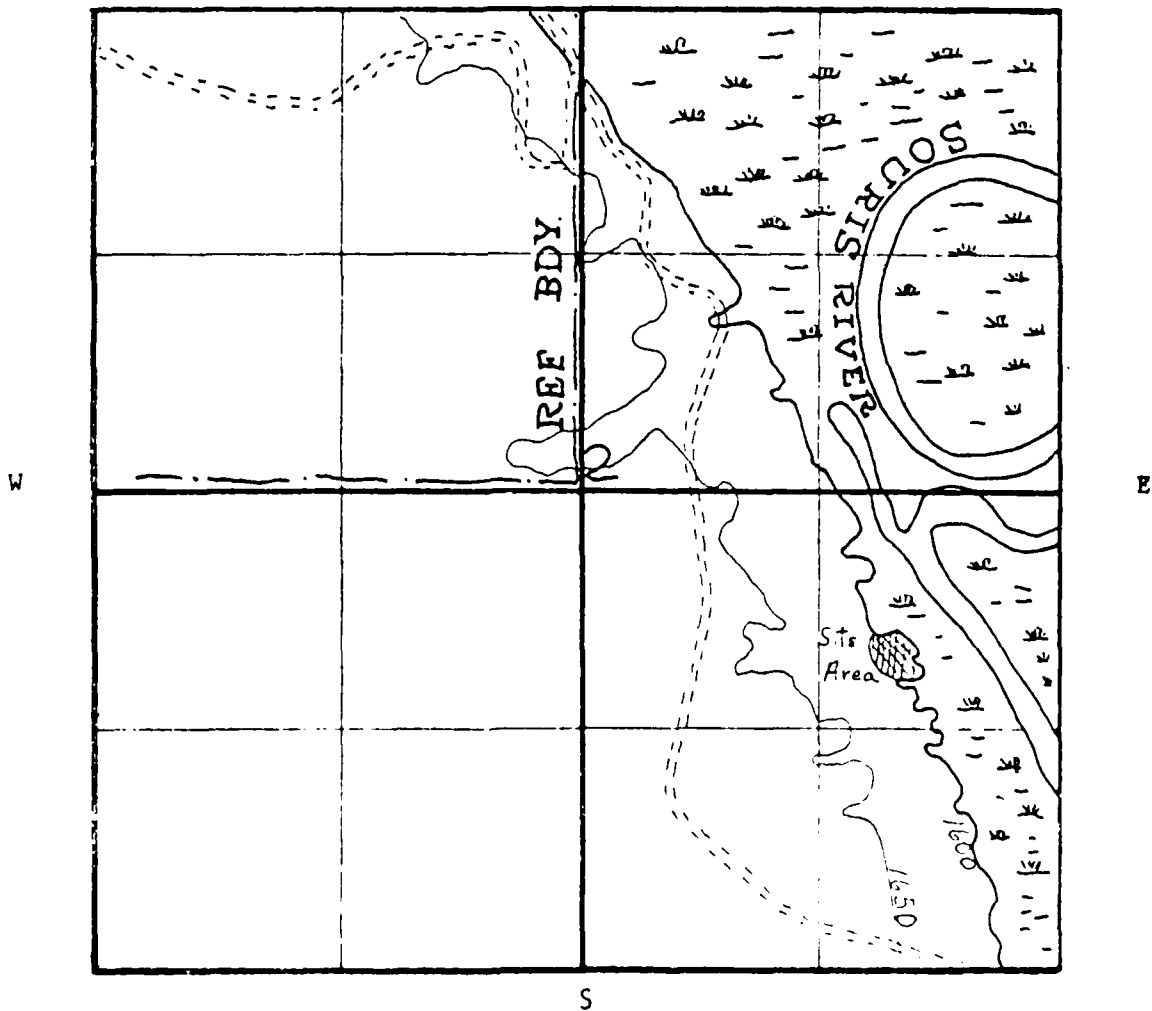
Ground Cover: Swamp grass - marsh plantsTerrain: Floodplain, has been flooded, now is above water level.18. Local contact person or organization: NA19. Photos: No B/W 5Color 3Prints 25Slides XComments/ID codeSlide of fire hearthNegatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



S

Recorded by: Kent GoodDate 4-20-77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Unknown

22. Site Type: Occupation - consists of scattered fire-cracked rock

23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: One gneissic hammerstone, one basaltic chopper, flakes of Knife River flint and basaltic

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Bison bone, deer bone, fire-cracked rock

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Indeterminate at this time.

How determined: Paced Eyeballed Taped Other NA

25. Surface Features Observed: Fire hearth composed of river cobbles, appears to be river cobbles of granite, quartzite, etc. - 45 fragments of fire-cracked rock.

26. Comments/References: No charcoal in the hearth, probably has been leached out. No ceramics and not much cultural debris; may be covered by silt. Site appears to have been exposed by wave action and appears to be intact back from the edge.

Recorded by: Kent Good Date 4-24-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV405
3. Site Name (s) Greene Arrow Site
4. Type of Resource: A Archaeological ☒ Historical Architectural Paleontological
B. District Site ☒ Building Structure Object
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 29 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Enter Wildlife Refuge at Greene and head south on old railroad bed. At a point $\frac{1}{2}$ mile south of where the railroad crosses Lake Darling on a draw, the beach approaches the railroad bed. The artifacts were found on this beach.

8. A. General description of site: It is part of an old beach, 50 meters from the present water level. It is at the bottom of a draw. Site is periodically inundated by the lake water and has a covering of sand and gravel. It appears that the artifacts have washed up from lower elevations which are now inundated.

- B. Condition of site: Covered by a fairly heavy river and swampgrass.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. State Undt. ☒ None On Reg. In District District
12. Open to public: Yes No ☒ 13. Preservation Underway: Yes No ☒
14. Endangered by: Inundation
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: No further work is recommended as site is already inundated.

17. Environment: Elevation 1595 Nearest Water: Type River
Name Mouse River Distance 300 meters Direction Southeast
Soil conditions: Sand/gravel
Soil Texture: NA

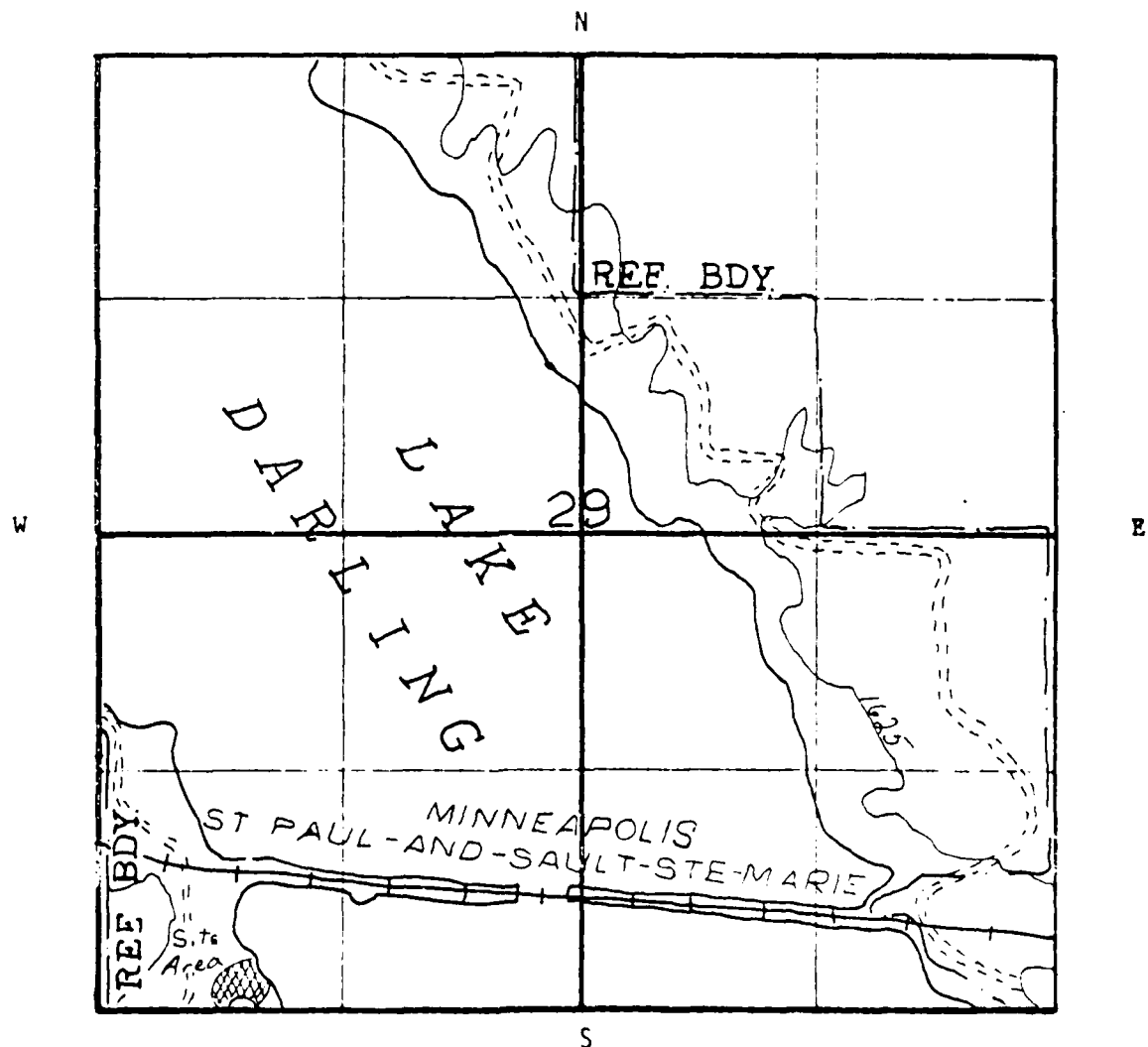
Site Number 32RV405

17. Environment, Cont.

Ground Cover: Swamp grassTerrain: Flat area periodically inundated by lake water causing several beach lines and sand and gravel deposits.18. Local contact person or organization: U.S. Corps of Engineers Hdqts., Lake Darling Dam19. Photos: No XB/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Bob GardnerDate 9-10-77Revised by: Date

Continuation form: Archaeological Sites

Site Number 22K0005

21. Preliminary cultural assessment: Protohistoric - decision based upon finding trade beads.

22. Site Type: Unknown

23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: (Four men) - Knife River Flint - two bifaces ----- one with broken base and tip, side or corner notch, the other a midsection. 1 Aquamarine Incised trade bead. Flakes of Knife River flint and Agate (Moss). Bison bison or Bos left rib head.

Artifacts stored at: Department of Anthropology/Archaeology, UND

Materials observed, but not collected: Historic pottery and broken glass. Some china that seems to be 1930 vintage.

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 50 meters X 50 meters

How determined: Paced Eyeballed xTaped Other

25. Surface Features Observed: None

26. Comments/References: Site is probably located nearer the old Mouse River channel with some of the artifacts washing up onto the old beach line. Suspect that if the beach sands were screened, more material could be recovered.

Recorded by: Bob Gardner

Date 6-27-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV406
3. Site Name (s) Mud Flat Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Green Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$, SW $\frac{1}{4}$ of SE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 18 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Greene, North Dakota, cross bridge of State road #28 and proceed north for 1.5 miles to bench mark (1686). Turn west on Refuge access road. Proceed 0.6 mile to large coulee (washed out bridge). On foot proceed to east shore of lake. Site extends along the shoreline (when lake level is down)
8. A. General description of site: Site consists of scattered cultural debris - over a large area of floodland. Flakes, chips, artifacts, pottery, bone scattered along area of the east side of Lake Darling.
- B. Condition of site: Poor
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rising water of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site is normally underwater, site could be surface collected in fall or spring when water is lower before salvage or NRHP recommendations are made.
17. Environment: Elevation 1590 Nearest Water: Type Lake/River
Name Lake Darling/Mouse River Distance Immediately Adjacent Direction Normally under water
Soil conditions: Normally underwater
Soil Texture: Mud

Site Number 32RV406

17. Environment, Cont.

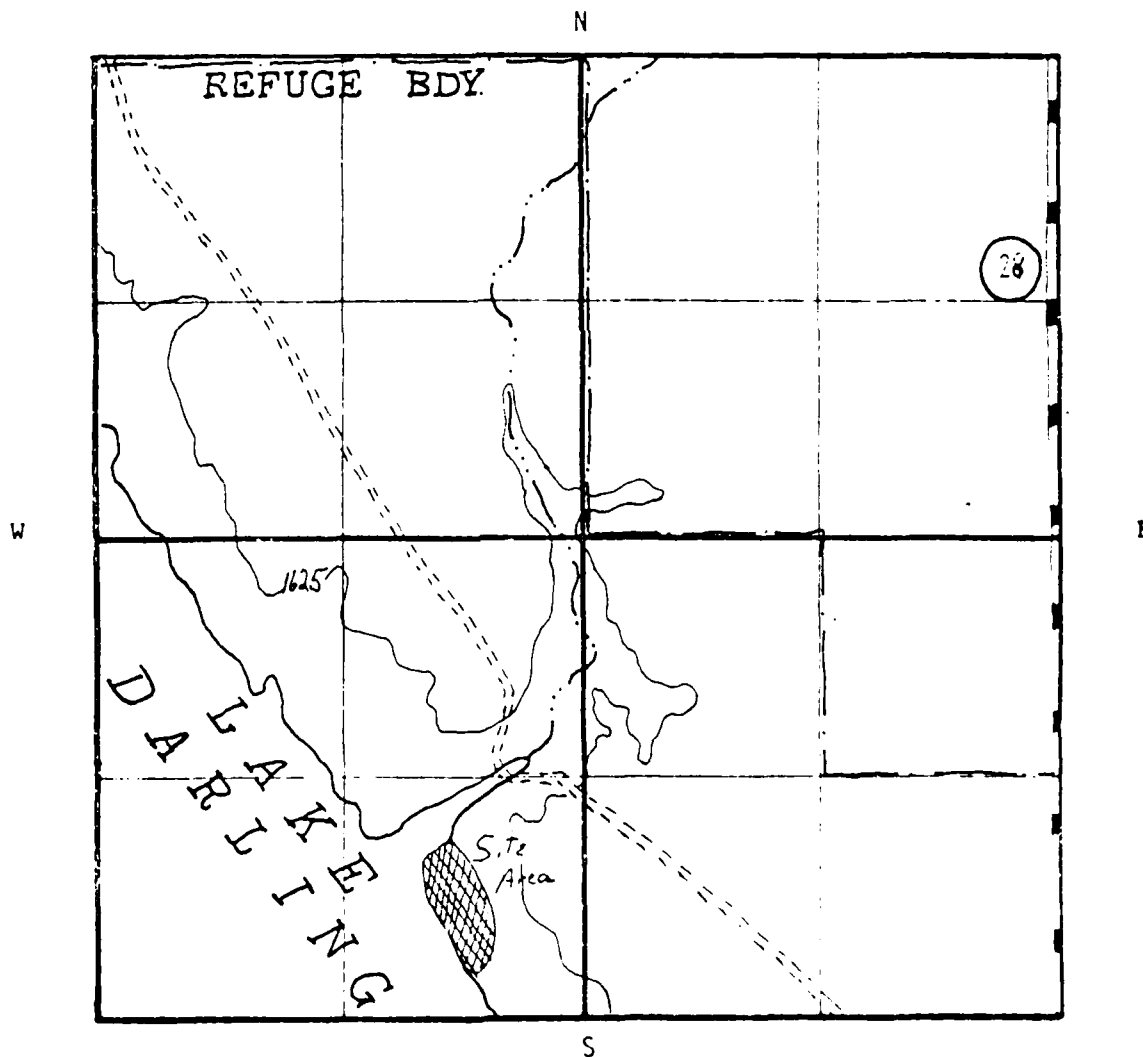
Ground Cover: None - mud flatTerrain: Flat, normally underwater

18. Local contact person or organization: _____

19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Kent GoodDate 9/22/77

Revised by: _____

Date _____

Continuation form: Archaeological Sites

Site Number 32NWA

21. Preliminary cultural assessment: Woodland
22. Site Type: Occupation (scattered cultural debris)
23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: Flakes of S.R. chert and KRF, one projectile point (KRF), one end-scraper (KRF), one bone (genus (Canis))
Flakes of Knife River flint and Swan River chert
8 body sherds, 4 split body sherds, 1 rim sherd
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Scattered bison bone, fire-cracked rock
- Collections observed: Material NA
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 4 acres
How determined: Paced Eyeballed Taped Other Scale for Topo map.
25. Surface Features Observed: One fire hearth, composed of a concentration of fire-cracked rock, some charcoal was also observed nearby.
26. Comments/References: Site should be surface collected in the fall or spring when water is low as at any other time the site will be underwater.
- Recorded by: Kent Good Date 11/1/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV407
3. Site Name (s) Often Inundated Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: W¹/₄, NE¹/₄, SW¹/₄, NE¹/₄ Sec. 12 T 160 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From North Dakota Highway #5, proceed south on North Dakota #28 for 4 miles. Then turn right (west) and proceed on unimproved section line road for 1 mile. Cross Refuge fence line and proceed on foot for 2500 feet directly SW, site is on flat that is often inundated by Lake Darling and/or Mouse River.
8. A. General description of site: Site is located on bank of Mouse River. During the fall the site was exposed due to low water. Site is on east side of channel. Rolling hills are 800 meters east. There is much butchered bison bone and some flint exposed.
B. Condition of site: Periodically inundated causing erosion and silting
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Erosion from river, inundations and proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schepolder
Other surveys in which included NA
16. Recommendations: Site should be extensively tested in spring or fall when water level is low before salvage and/or NRHP recommendations are made.
17. Environment: Elevation 1590 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction West
Soil conditions: Obscured by silting
Soil Texture: Silt

17. Environment, Cont.

Ground Cover: Reeds, marsh grasses

Terrain: Flat

18. Local contact person or organization: Wildlife Refuge Hdqt., Dam site

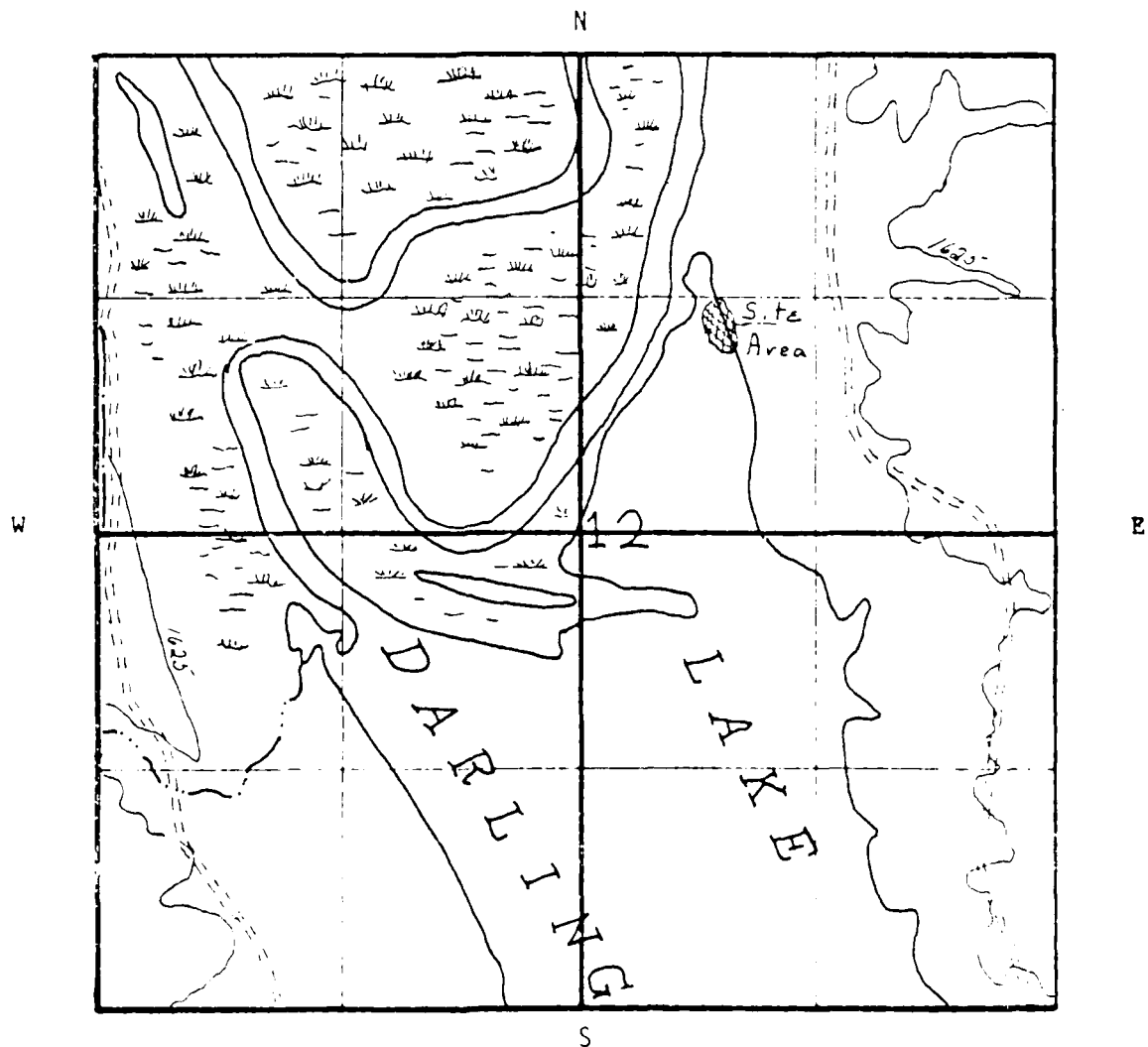
19. Photos: No B/W 1 Color 1 Prints 1 Slides 1 Comments/ID code

Negatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section



Recorded by: Richard Fox

Date 10-1-77

Revised by:

Date

21. Preliminary cultural assessment: Unknown22. Site Type: Occupation/Butchering23. Collection: Time spent collecting: 4 men/.75 hr(s). Materials collected:

One granitic hammerstone, One Knife River flint side scraper, one Knife River
flint drill, one Swan River chert biface, flakes of Knife River
flint, Swan River chert, quartzite, and burnt chalcedony, 13 body sherds,
4 split body sherds, 3 rim sherds; 1 Lepus townsendii right proximal
humeral (White-tailed jackrabbit)

Artifacts stored at: Anthropology/Archaeology Department, UNDMaterials observed, but not collected: Hundreds of butchered bison bone fragments,
some metacarpalsCollections observed: Material NoneOwner/address: NA24. Site size: (Meters, feet-yards, acres) 100 meters X 50 metersHow determined: Paced Eyeballed ☒ Taped Other 25. Surface Features Observed: At least one fire hearth with fire-cracked rock,
several loci of intense butchering activity as evidenced by concentrations of
splintered and butchered bone. These concentrations average 4-5 feet in diameter.26. Comments/References: The flat may have been under cultivation prior to construction
of the dam (pre-1934). There are two large farmers' rockpiles on the site. Each
contains numerous fire-blackened and cracked rock. We found pottery at two
concentrated locations only.Recorded by: Richard FoxDate: 11/1/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV408
3. Site Name (s) River Bend Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE 1/4, NW 1/4, SW 1/4, SE 1/4 Sec. 1 T 160 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From North Dakota Highway #5, proceed south on North Dakota Highway #28 for 4 miles. Then turn right (west) and proceed on unimproved section road for 1 mile. Cross Refuge and proceed on foot for 2000 feet directly to the west. Site is on flat adjacent (and east bank) to large bend in Mouse River.
8. A. General description of site: Site is located on east bank of Mouse River. Flat is often inundated but was dry in October. There doesn't appear to be much butchered bone (approximately 15 pieces visible). We didn't see any pottery or flint. There was some fire-cracked rock and one exposed fire hearth.
- B. Condition of site: Periodically inundated causing silt and erosion
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Project, Inundation
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: None
17. Environment: Elevation 1590 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction East
Soil conditions: Obscured by silting
Soil Texture: Sandy silt

Site Number 32RV406

17. Environment, Cont.

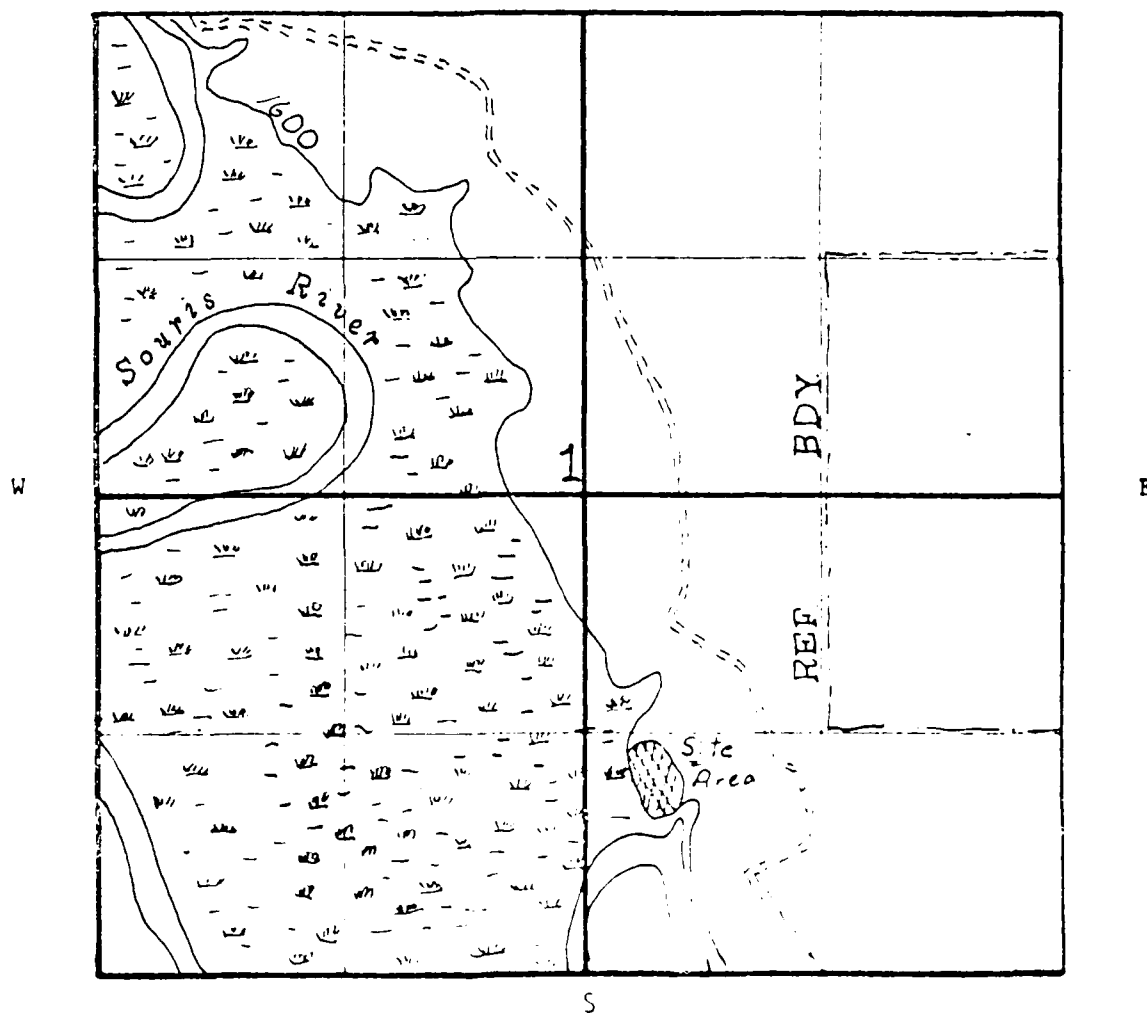
Ground Cover: Reeds and marsh grassesTerrain: Flat18. Local contact person or organization: Refuge Hdqts., Dam Site19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard Fox Date 11/1/77

Revised by: _____ Date _____

21. Preliminary cultural assessment: Unknown
22. Site Type: Occupation/Butchering
23. Collection: Time spent collecting: 4 men/0.4 hr(s). Materials collected: None
- Artifacts stored at: NA
- Materials observed, but not collected: Butchered bison bone, sharpened sticks, fire-cracked rock
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 30 meters X 30 meters
How determined: Paced Eyeballed X Taped Other
25. Surface Features Observed: One possible fire hearth
26. Comments/References:
- Recorded by: Richard Fox Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV409
3. Site Name (s) Muddy Bank Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Tolley Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 30 T 161 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Tolley, North Dakota proceed east on the gravel road that separates sections 26 and 27 from 34 and 35. Proceed for 3.1 miles along this road (from its intersection with the paved access road that comes from North Dakota #5 into Tolley). Cross water intake structure and proceed to dike on east side of valley. Walk along east bank of river for one hundred meters. You will see scattered bone in cutbank and along bank.
8. A. General description of site: Only evidence of site that is visible is along bank and cutbank. The terrace area above cutbanks is heavily covered with cattail and grasses. There are probably substantial deposits beneath the surface at this site.
- B. Condition of site: Often inundated, obscured by silt and cattails
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: NA
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Periodic flooding, proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Minimally, site should be "shovel tested" to determine NRHP significance and/or feasibility of salvage operations.
17. Environment: Elevation 1595 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction West
Soil conditions: River bank
Soil Texture: Silt and sandy

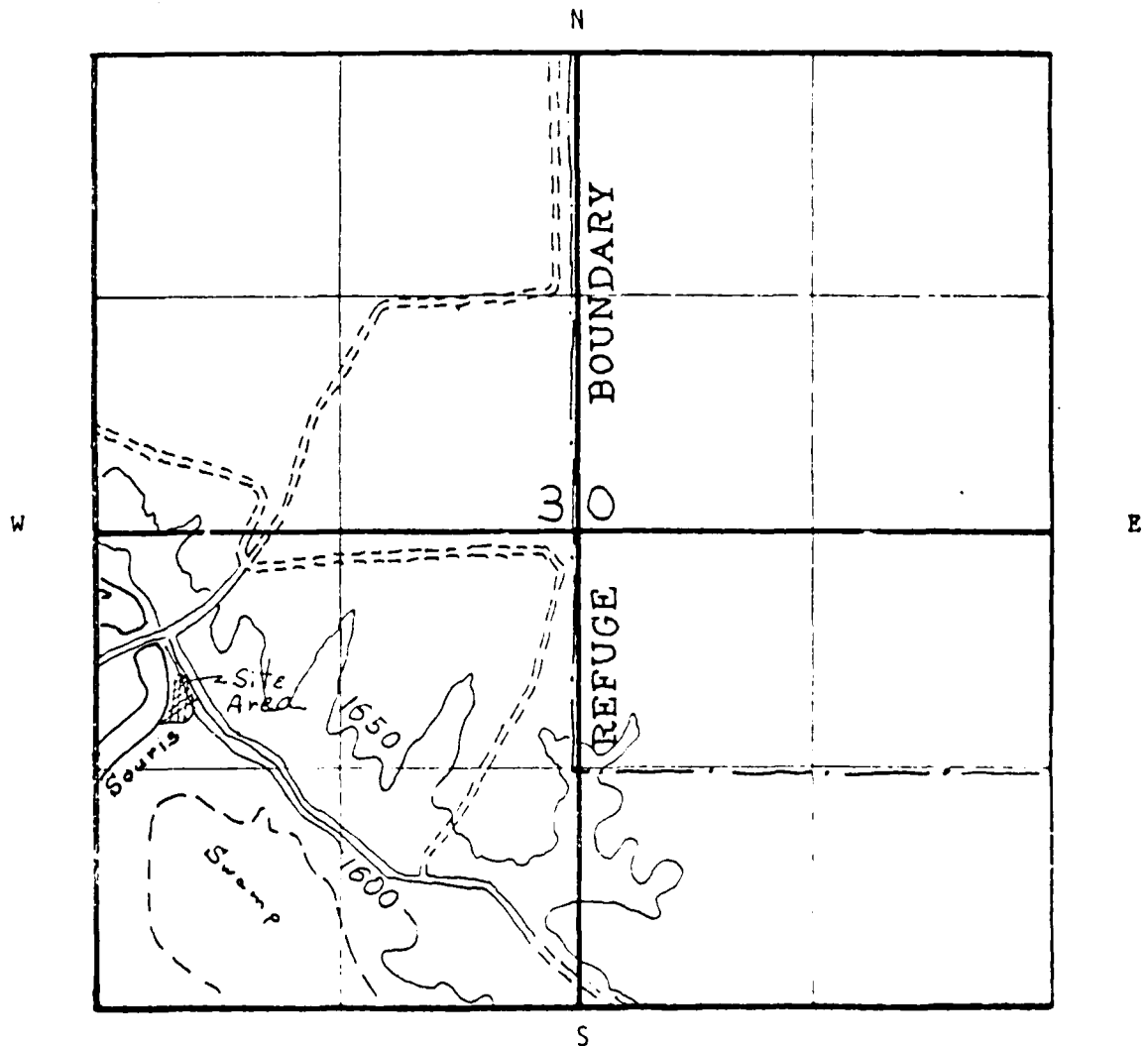
Site Number 32RV409

17. Environment, Cont.

Ground Cover: Reeds, cattails, marsh grassesTerrain: Flat18. Local contact person or organization: Refuge Headquarters, Damsite19. Photos: No XB/W Color Prints Slides Comments/ID codeNegatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard Fox Date 11.1.77

Revised by: _____ Date _____

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Butchering and occupation
23. Collection: Time spent collecting: 3 men/0.5 hr(s). Materials collected: 1 flake of Knife River flint
1 flake of Swan River chert
2 ceramic body sherds
1 portion of a left mandible (Canis sp.)
1 Knife River flint modified flake
Artifacts stored at: Department of Anthropology/Archaeology, UND
Materials observed, but not collected: Much butchered bison bone (vertebrate, long bones, mandible), bison horn core, fire-cracked rock
Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) Indeterminate
How determined: Paced Eyeballed Taped Other
25. Surface Features Observed: None
26. Comments/References: This site has been periodically inundated and is now covered with dense cattails and marsh grasses. Only cultural evidence came from the cut-banks along the river, but it is suspected that significant subsurface cultural deposits remain.
- Recorded by: Richard Fox Date 11-4-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV410
3. Site Name (s) Tolley Crossing Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Tolley Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 25 T 161 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Tolley, North Dakota, proceed east on the gravel road that separates sections 26 and 27 from 34 and 35. Proceed for 2.85 miles from the paved road that comes from Highway #5. Stop at small water intake structure with stone riprap. Walk down the east side of the oxbow channel (this channel doesn't show on quad). Go to dead cottonwood tree (approximately 100 meters) then proceed for another 25 to 30 meters.
8. A. General description of site: Only evidence of site is several pieces of butchered bone (some in bank) and quartzite flakes along the river bank. The area above is covered with cattails but there is a possibility that subsurface deposits exist beneath the cattails.
- B. Condition of site: Periodically inundated, obscured by cattails.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: NA
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Lake Darling high water and proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: If limited test procedures are carried out at 32RV409 (which is close to 32RV410), no work necessary here - furthermore, hydraulic problems prohibit excavation here.
17. Environment: Elevation 1595 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction ----
Soil conditions: River bank
Soil Texture: Sandy loam

Site Number 32RV410

17. Environment, Cont.

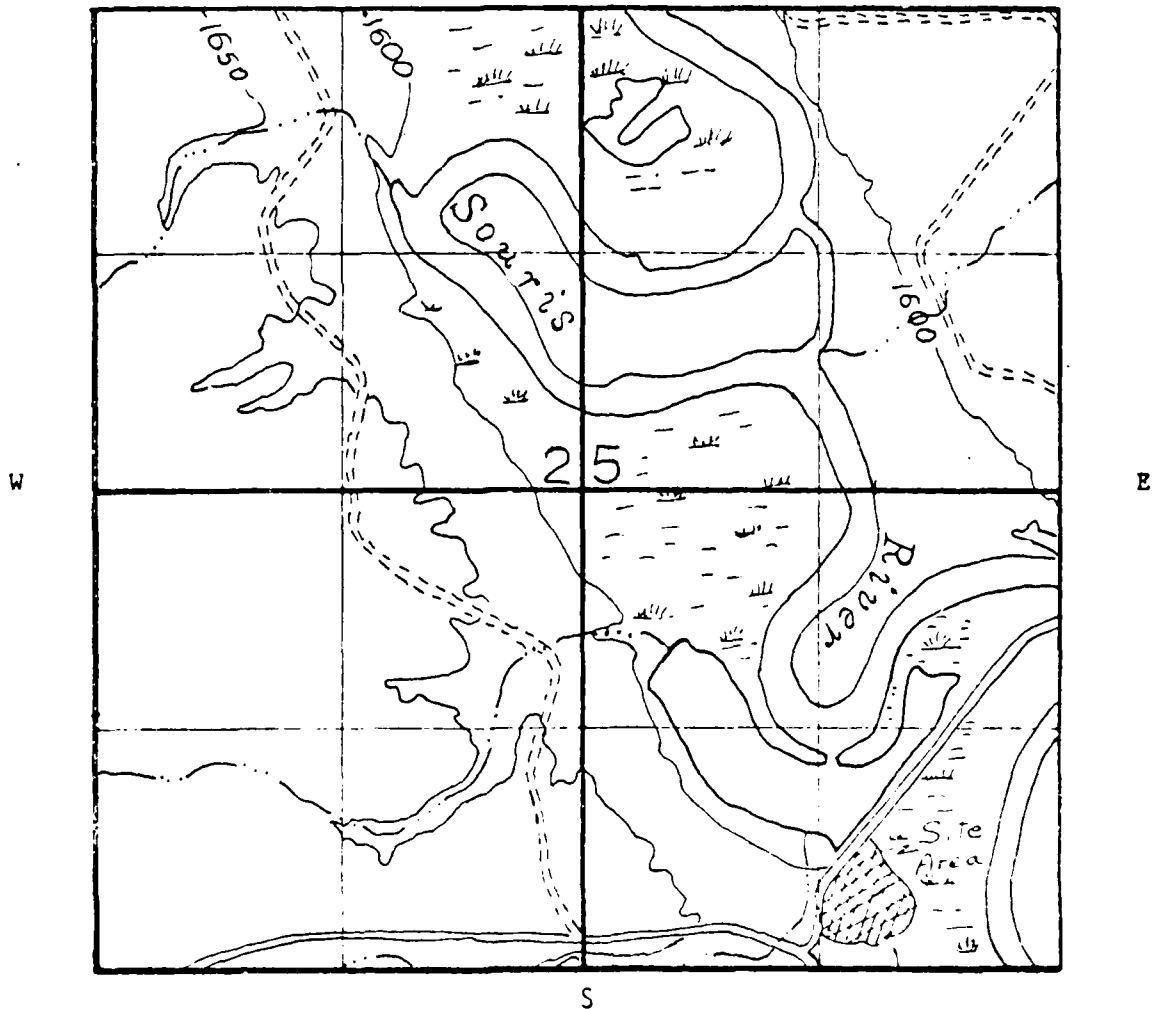
Ground Cover: Cattails, reeds, marshTerrain: Flat18. Local contact person or organization: Refuge Headquarters, Damsite19. Photos: No B/W Color X Prints Slides X Comments/ID code 2 shots of bison bone eroding from bankNegatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard FoxDate 11/4/77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Indeterminate22. Site Type: Probably occupation or butchering23. Collection: Time spent collecting: 0.2 hr(s). Materials collected:One Swan River chert bifaceFlakes of Quartzite and Swan River chertArtifacts stored at: Anthropology/Archaeology Department, UNDMaterials observed, but not collected: Butchered bone, probably bisonCollections observed: Material NoneOwner/address: NA24. Site size: (Meters, feet-yards, acres) UnknownHow determined: Paced Eyeballed Taped Other25. Surface Features Observed: None

26. Comments/References: This site is on an old Mouse River oxbow. Most of it is probably obscured by periodic inundation and silting, and by the dense stands of cattails that cover the flat between the oxbow and the present Mouse River channel. Some recently cut (by saw) bone was observed on the other side of the flat, also brick and concrete.

Recorded by: Richard FoxDate 11. . 77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV411
3. Site Name (s) Richie Johnson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park N.W. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$ & NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 36 T 163 N / R 87 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Mouse River Park, take west valley road, proceed North for approximately 8 miles to the Richie Johnson ranch (Section 36). Site is in a plowed field Southeast of buildings approximately $\frac{1}{2}$ mile.
8. A. General description of site: Site is an occupation site composed of scattered cultural debris consisting of bone and fire-cracked rock. Site has been collected heavily by landowner - Richie Johnson.
- B. Condition of site: Fair to poor - under cultivation, has been heavily potted.
9. Owner's name/address: Richard Johnson, Tolley, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☒ No ☐ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rising waters of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Large scale test excavations necessary here to assess NRRI potential and/or feasibility of salvage.
17. Environment: Elevation 1610 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction South
Soil conditions: Under cultivation
Soil Texture: Dark brown loam

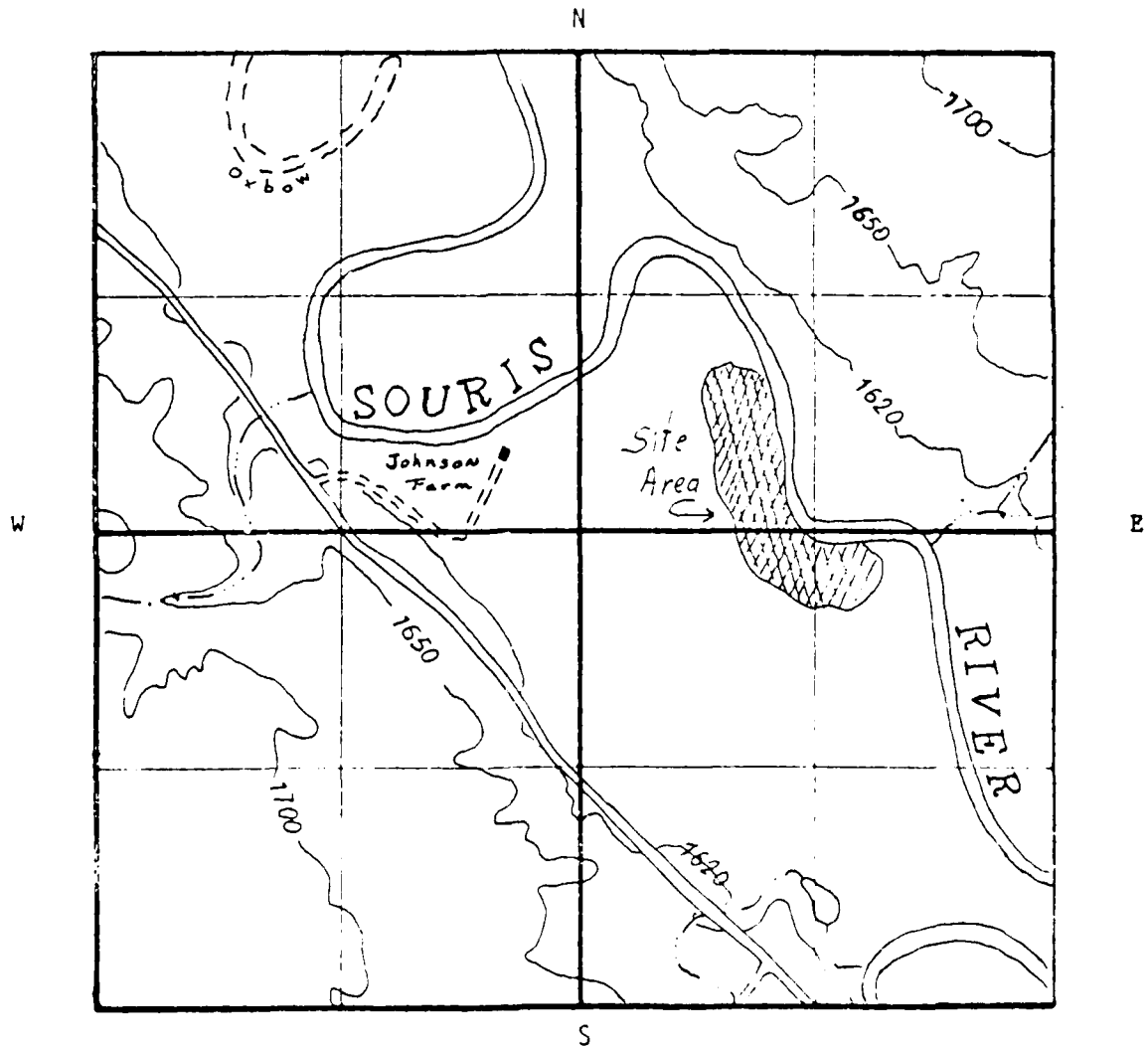
Site Number 0280001

17. Environment, Cont.

Ground Cover: Wheat straw (1977 crop)Terrain: Flat floodplain, remnant of old river channel.18. Local contact person or organization: Rich Johnson, Tolley, N.D.19. Photos: No XB/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Kent N. GoodDate 10/1/77Revised by: Date

21. Preliminary cultural assessment: Protohistoric - Mr. Johnson has recovered
items (Musket slugs and balls), cavalry button (US) or harness decorat
22. Site Type: Occupation - scattered cultural debris - no surface features
observable.
23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: Two rim sherds; four body sherds; one quartzite (river cobble) chopper;
two Swan River chert bifaces; flakes of Swan River chert, dark brown
chalcedony, Knife River flint and burnt chalcedony
- Artifacts stored at: NA
- Materials observed, but not collected: Fire-cracked rock and scattered bison bone,
1 mussel shell fragment
- Collections observed: Material Three stone axes, hammers, projectile points,
scrapers, musket balls, cavalry harness decorative piece.
- Owner/address: Rich Johnson, Tolley, N.D.
24. Site size: (Meters, feet-yards, acres) _____ Indeterminate
How determined: Paced Eyeballed Taped Other
25. Surface Features Observed: None
26. Comments/References: Mr. Johnson claimed there are several fire hearths which
are exposed when ground is plowed. Collection will be eventually photographed.
- Recorded by: Kent N. Good Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 328N412
3. Site Name (s) Myrna Johnson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park, N.W. quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SEL, SEL, NEL, SEL Sec. 36 T 163 N / R 87 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Mouse River Park, take west valley road, proceed North approximately 9 miles to section road. Take section road east, crossing river at the section line between sections 26 and 23. Proceed for approximately 1 2/3 mile and turn right on field trail. Travel 1 1/2 miles south through pasture to river. Site is in a plowed field 1/2 mile southeast of the Johnson ranch.
8. A. General description of site: Site is located in a plowed field on the east side of the Mouse River along a horseshoe channel. Field is presently in wheat stubble. Site is confined to the center area of the flat field. Evidently the river associated vegetation extended further east before it was cleared for planting. Thus, the site's western limit is approximately 50 meters from the present vegetation line.
- B. Condition of site: Presently in wheat stubble.
9. Owner's name/address: Richard Johnson, Tolley, N.D. 58787
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Plowing and proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should have numerous test pits initiated to determine significance or feasibility of salvage.
17. Environment: Elevation 1620 Nearest Water: Type Mouse River
Name Mouse River Distance 75 meters Direction _____
Soil conditions: Sandy loam, dark brown
Soil Texture: -----

21. Preliminary cultural assessment: Protohistoric - Mr. Johnson has recovered items (Musket slugs and balls), cavalry button (US) or harness decoration
22. Site Type: Occupation - scattered cultural debris - no surface features observable.
23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: Two rim sherds; four body sherds; one quartzite (river cobble) chopper; two Swan River chert bifaces; flakes of Swan River chert, dark brown chalcedony, Knife River flint and burnt chalcedony
- Artifacts stored at: NA
- Materials observed, but not collected: Fire-cracked rock and scattered bison bone, 1 mussel shell fragment
- Collections observed: Material Three stone axes, hammers, projectile points, scrapers, musket balls, cavalry harness decorative piece.
- Owner/address: Rich Johnson, Tolley, N.D.
24. Site size: (Meters, feet-yards, acres) Indeterminate
How determined: Paced Eyeballed Taped Other
25. Surface Features Observed: None
26. Comments/References: Mr. Johnson claimed there are several fire hearths which are exposed when ground is plowed. Collection will be eventually photographed.
- Recorded by: Kent N. Good Date 9/16/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV412
3. Site Name (s) Myrna Johnson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park, N.W. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 36 T 163 N / R 87 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Mouse River Park, take west valley road, proceed North approximately 9 miles to section road. Take section road east, crossing river at the section line between sections 26 and 23. Proceed for approximately 1 2/3 mile and turn right on field trail. Travel 1 1/2 miles south through pasture to river. Site is in a plowed field 1/2 mile southeast of the Johnson ranch.
8. A. General description of site: Site is located in a plowed field on the east side of the Mouse River along a horseshoe channel. Field is presently in wheat stubble. Site is confined to the center area of the flat field. Evidently the river associated vegetation extended further east before it was cleared for planting. Thus, the site's western limit is approximately 50 meters from the present vegetation line.
- B. Condition of site: Presently in wheat stubble.
9. Owner's name/address: Richard Johnson, Tolley, N.D. 58787
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Plowing and proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should have numerous test pits initiated to determine NRHP significance or feasibility of salvage.
17. Environment: Elevation 1620 Nearest Water: Type River
Name Mouse River Distance 75 meters Direction West
Soil conditions: Sandy loam, dark brown
Soil Texture: -----

Site Number 32RV412

17. Environment, Cont.

Ground Cover: Wheat stubble

Terrain: Absolutely flat

18. Local contact person or organization: Richard Johnson

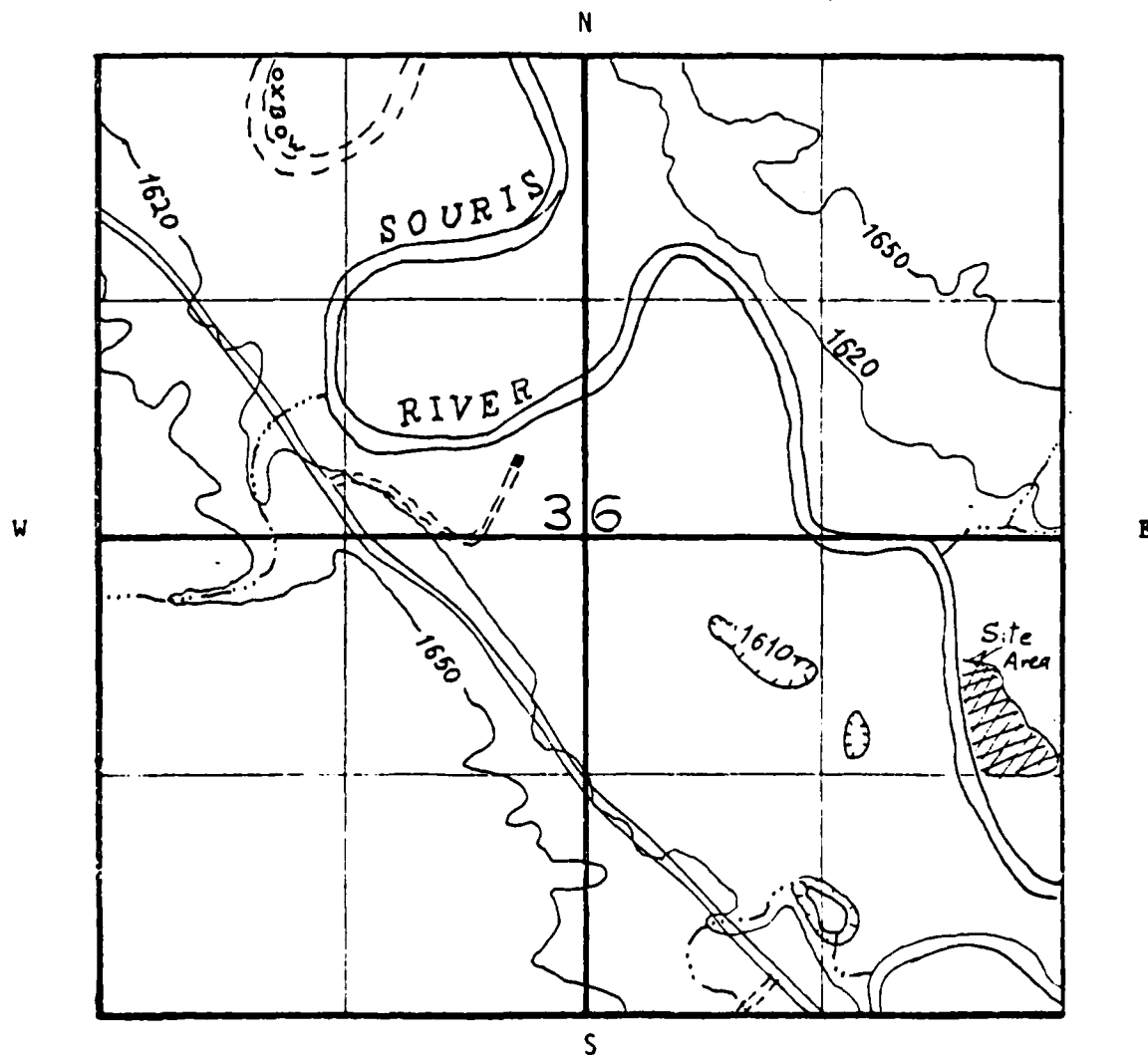
19. Photos: No XB/W Color Prints Slides Comments/ID code

Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section



Recorded by: Richard Fox Date 9/26/77

Revised by: Date

21. Preliminary cultural assessment: Protohistoric - Mr. Johnson found metal points on this site.
22. Site Type: Occupation site
23. Collection: Time spent collecting: 8 men/.75 hr(s). Materials collected: 4 ceramic body sherds, KRF, Swan River chert and Silicified sediment bifaces (5), Swan River chert projectile points (4), 1 Swan River chert back-hafted knife, 1 Swan River chert side scraper, Agate (Moss) and Swan River chert end scrapers (2), 1 canine tooth and 1 left M₂ (Canis sp.) and flakes of Swan River chert and light brown chalcedony
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Butchered bone (bison), mussel shell fragments, fire-cracked rock, quartzite flakes.
- Collections observed: Material Folsom points (not from river lowlands), Eden point, hundreds of Middle Period specimens (McKean complex, corner-notched), side-notched, scrapers, awls, drills, metal points, spokeshaves, knives, bifaces, ground stone, catlinite, pottery, others
- Owner/address: Richard Johnson, Tolley, N.D.
24. Site size: (Meters, feet-yards, acres) Approximately 7 acres
How determined: Paced Eyeballed ☒ Taped ☐ Other ☐
25. Surface Features Observed: Mr. Johnson reported seeing numerous fire pits throughout the acreage.
26. Comments/References: Mr. Johnson is a knowledgeable collector with tens of hundreds of artifacts. He is very eager to work with University professionals and is dedicated to saving the Mouse River valley from proposed dams. He sees archaeology as an effective method to accomplish this purpose.
- Recorded by: Richard Fox Date 9/26/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV413
3. Site Name (s) Judy Knutson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 20 T 162 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Mouse River Park, proceed on west valley road north for approximately 5 miles passing two farm houses on the right side of road. Site is located approximately $\frac{1}{2}$ mile passed second farm house on right side immediately adjacent to the valley road and also to the river in a plowed field.
8. A. General description of site: Occupation site in a plowed field composed of scattered lithics and bison bone.
- B. Condition of site: Fair to poor
9. Owner's name/address: John W. Knutson, Tolley, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rising water of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Since most of site destroyed by periodic inundation, it no longer meets NRHP criteria and no further work is recommended.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction -----
Soil conditions: Cultivated
Soil Texture: Clayey loam

Site Number 32RV413

17. Environment, Cont.

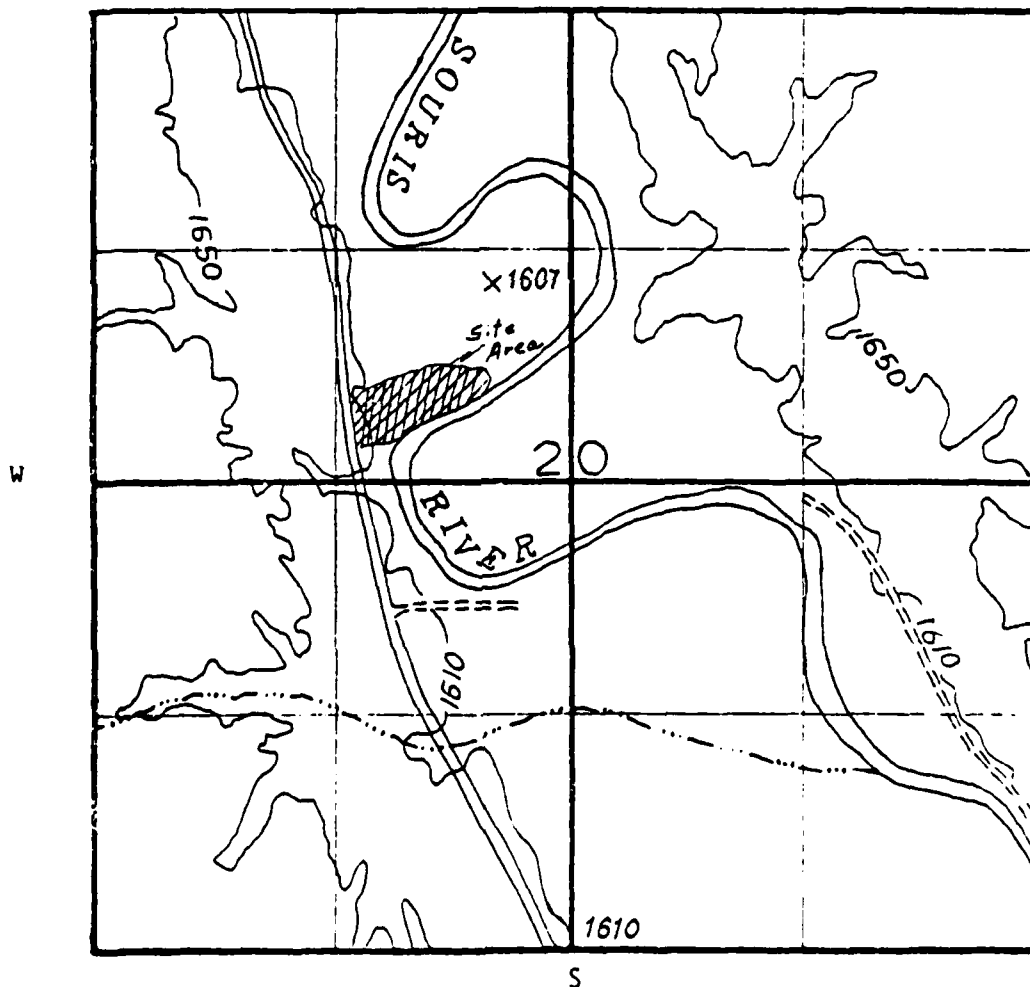
Ground Cover: Summer fallow (under cultivation)Terrain: Flat floodplain adjacent to the river18. Local contact person or organization: Judy Knutson (Mrs. Mervin Knutson)19. Photos: No B/W XColor XPrints Slides Comments/ID code (One of each)Negatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. GoodDate Revised by: Date

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Occupation composed of scattered cultural debris.
23. Collection: Time spent collecting: 2 hr(s). Materials collected: 2 quartzite (river cobble) choppers; 1 Knife River flint modified flake; flakes of Swan River chert, Knife River flint, grey chert, quartzite
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Broken bison bone and fire-cracked rock.
- Collections observed: Material 1 small side-notched projectile point, Knife River flint flakes.
- Owner/address: Judy Knutson (Mrs. Mervin Knutson)
24. Site size: (Meters, feet-yards, acres) 50 meters X 100 meters
How determined: Paced Eyeballed Taped Other Map scale
25. Surface Features Observed: None
26. Comments/References: Cultural debris is very scattered and is located near an old river channel. Site is probably not worthy of a test as an informant indicated that the last flood washed much of the cultural material from the site.
- Recorded by: Kent N. Good Date 1-1-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV414
3. Site Name (s) Davidson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 33 T 162 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Mouse River Park, proceed on valley road ($\frac{1}{2}$ mile west of park)
for approximately 2 $\frac{1}{2}$ miles. Site is adjacent to the valley road and immediately
adjacent to the north end of the refuge boundary.
8. A. General description of site: Site is in a small plowed field and is composed of
scattered bison bone, fire-cracked rock, shatter and lithics. It is situated on
west bank of Mouse River and south and adjacent to an unnamed small spring run-
off drainage.
- B. Condition of site: Good to fair
9. Owner's name/address: Godfrey Davidson, Tolley, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Flooding by the increased capacity of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site is located on a flat floodplain, which has been undisturbed
but will be flooded and therefore the site should be tested.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction Northeast
Soil conditions: Under cultivation
Soil Texture: Clayey loam

Site Number 32RV414

17. Environment, Cont.

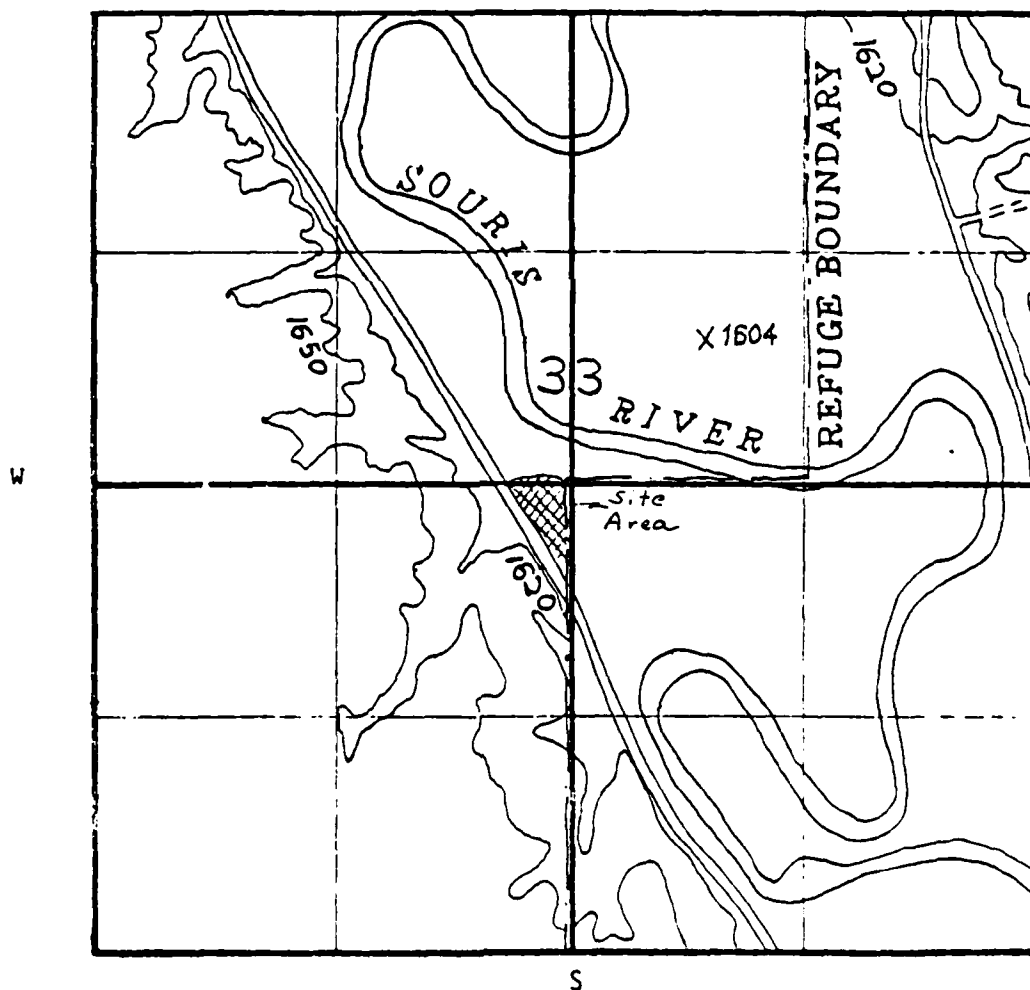
Ground Cover: Summer fallow (under cultivation)Terrain: Flat floodplain18. Local contact person or organization: NA19. Photos: No B/W 1 Color 1 Prints 1 Slides 1 Comments/ID code _____Negatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. GoodDate 11-2-77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Occupation (composed of scattered lithics, artifacts, bone, fire-cracked rock in a plowed field).
23. Collection: Time spent collecting: 2 hr(s). Materials collected: 1 basaltic chopper; 1 Swan River chert biface; 1 Knife River flint end scraper; 1 quartzite (river cobble) hammerstone; 1 Knife River flint projectile point; flakes of Swan River chert, Knife River flint, basalt, light brown chalcedony, TRSS.

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Bison bone, fire-cracked rock

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 100 meters X 100 meters

How determined: Paced Eyeballed Taped Other Map scale

25. Surface Features Observed: NA

26. Comments/References: Site is in a small field surrounded by a large area undisturbed by agricultural activities. Site will be flooded and thus, should be tested.

Recorded by: Kent N. Good

Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV415
3. Site Name (s) McCarroll Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 17 T 162 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Mouse River Park, proceed on West valley road north for approximately 5 3/4 miles. Site is in section seventeen (17) on east side of a spring fed lake adjacent to the Mouse River in a plowed field.
8. A. General description of site: Occupation site composed of scattered bison bone, bear bone, ceramics, flakes, and artifacts.
- B. Condition of site: Good to fair.
9. Owner's name/address: E.G. McCarroll, Tolley, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rising water of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested since cultural debris is fairly concentrated and varied ---site will be inundated.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction Northwest
Soil conditions: Under recent cultivation
Soil Texture: Clayey loam

17. Environment, Cont.

Ground Cover: Under recent cultivation

Terrain: Flat floodplain adjacent to the river and adjacent to a spring fed lake.

18. Local contact person or organization: ----

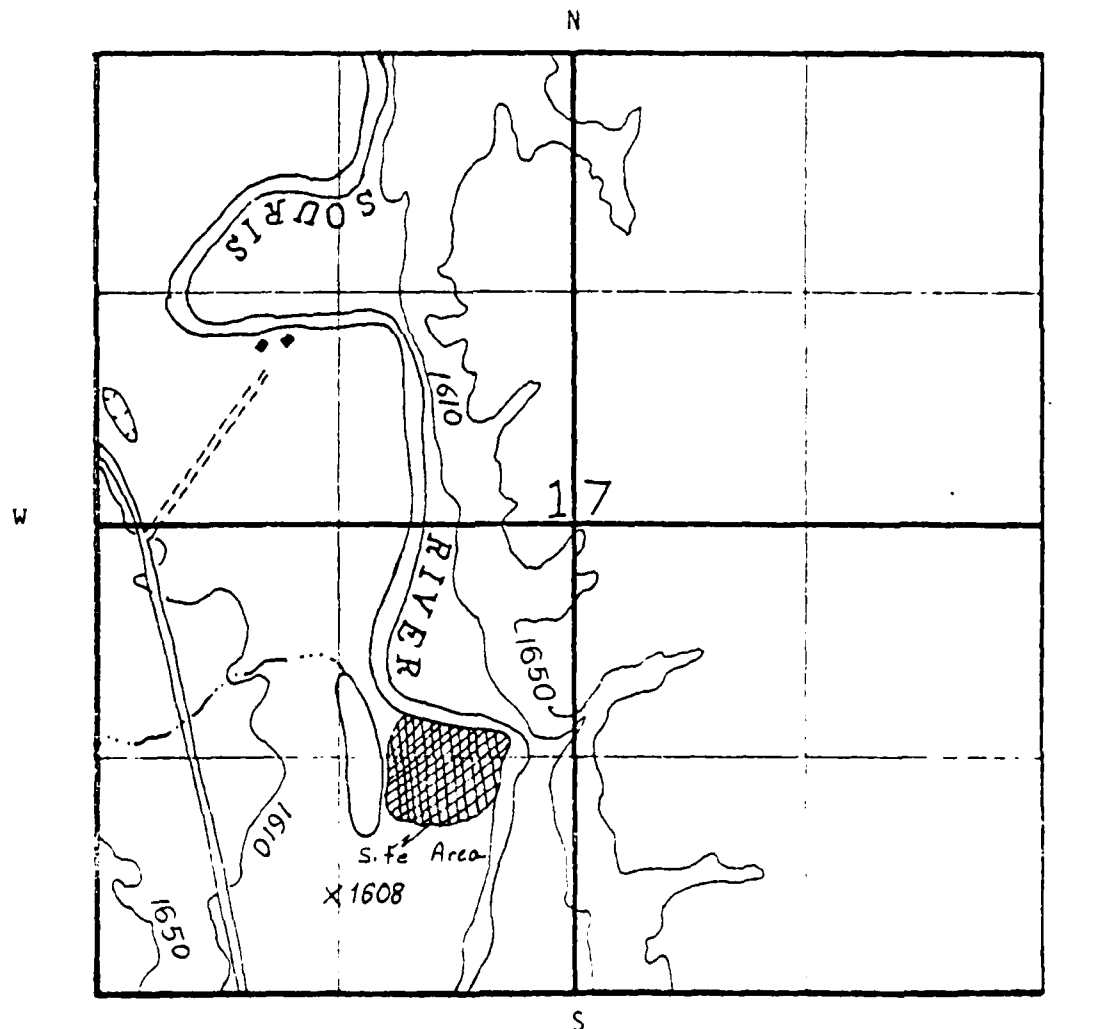
19. Photos: No B W X Color X Prints S Slides C Comments/ID code -----

Negatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section



Recorded by: Kent N. Good

Date -----

Revised by: -----

Date -----

21. Preliminary cultural assessment: Woodland (evidenced by pottery)
22. Site Type: Occupation - composed of scattered cultural debris consisting of bison and bear faunal remains, lithics, artifacts, and ceramics.
23. Collection: Time spent collecting: 2 hr(s). Materials collected: Swan River chert knife (1), core (1), projectile point (2), modified flake (1), 1 basaltic chopper, 5 body sherds; flakes of Swan River chert, Knife River flint and burnt chalcedony, 2 femoral heads (Bison bison or Bos), 1 right PM, (Bison bison or Bos), canine right mandible fragment, 1st phalange and 2nd phalange of Canis sp.

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Bison bone, fire-cracked rock, long bones, scapula, bison teeth.

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 200 meters X 100 meters

How determined: Paced Eyeballed ☒ Taped Other

25. Surface Features Observed: One small lens disturbed by plow

26. Comments/References: Site should be tested. It is one of three sites recorded that includes ceramics, may represent a semi-permanent occupation site, that will be inundated by raising water of Lake Darling.

Recorded by: Kent N. Good

Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV410
3. Site Name (s) Yale Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 17 T 162 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Mouse River Park, take the west valley road, proceed north for approximately 6 miles to the E.G. McCarroll ranch. Travel through the yard across the Mouse River to top of ridge on a flat. Trail runs through the site which is composed of eight (8) jumbled tipi rings.
8. A. General description of site: Tipi rings composed of circular configuration of stones - with associated lithics and shatter. Site is in a pasture on bluffs overlooking the Mouse River adjacent and to the west.
B. Condition of site: Good to fair - cattle have jumbled the tipi rings.
9. Owner's name/address: E.G. McCarroll
10. Occupant's name/address: Roger Yale - Rural Tolley, North Dakota
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Not in danger
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be mapped and tested -- threatened by cattle disturbance and bluff erosion.
17. Environment: Elevation 1650 Nearest Water: Type River
Name Mouse River Distance 200 meters Direction West
Soil conditions: Pasture - heavily grazed - short prairie grasses
Soil Texture: Sandy, gravelly loess

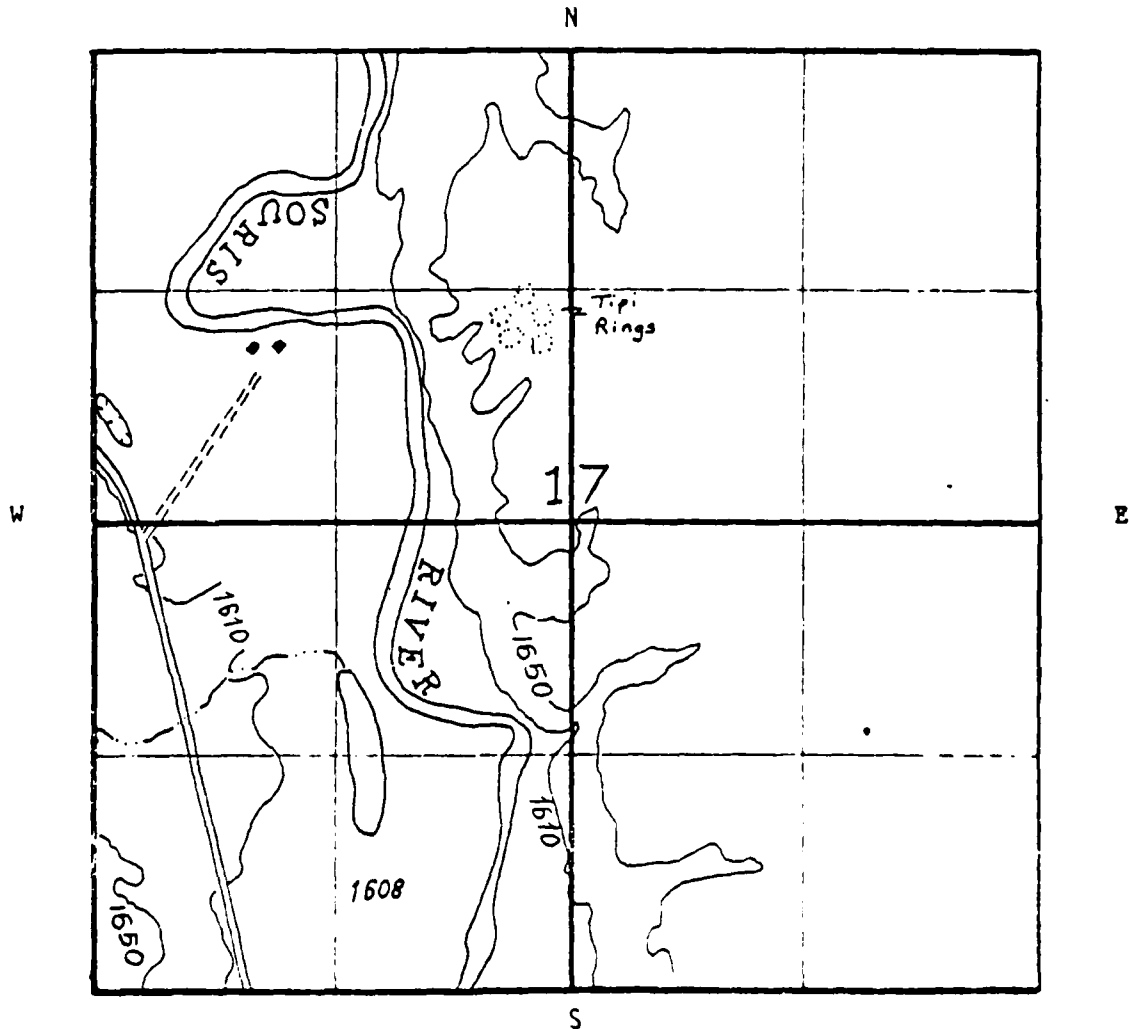
Site Number 32RV416

17. Environment, Cont.

Ground Cover: Short prairie grasses - heavily grazedTerrain: Bluffs above Mouse River - flat area.18. Local contact person or organization: Roger Yale -(son-in-law of E.G. McCarroll)19. Photos: No B/W XColor XPrints Slides Comments/ID code (3 of each)Negatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Kent N. GoodDate Revised by: Date

21. Preliminary cultural assessment: Plains Nomadic

22. Site Type: Tipi rings - eight rings, associated lithics and shatter

23. Collection: Time spent collecting: One hr(s). Materials collected:

Flakes of Knife River flint, Swan River chert

1 Swan River chert biface

1 quartzite (river cobble) chopper

Artifacts stored at: Dept. of Anthropology/Archaeology, LND

Materials observed, but not collected: None

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 100 meters X 100 meters

How determined: Paced Eyeballed ☒ Taped Other

25. Surface Features Observed: Eight (8) circular configurations of stone forming

tipi rings, also, grazing activities are slowly destroying the rings.

SEE continuation sheet for tipi ring dimensions.

26. Comments/References: Site is not in danger of being inundated, but might be in danger
of bluff erosion from proposed lake. Therefore, site should be mapped. Site
should also be tested because it is unusual to find lithic debris around tipi
ring sites.

Recorded by: Kent N. Good Date 11-1-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32RV416

Tipi Ring Dimensions:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	12	4.3 meters
2	28	4.0 meters
3	33	3.6 meters
4	33	5.1 meters
5	23	4.3 meters
6	18	4.6 meters
7	15	4.8 meters
8	21	4.4 meters

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV417
3. Site Name (s) Flats Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 8 T 158 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Mohall, travel south on county road #9 for 16.8 miles, then turn west on field trail for 1 mile, turn south for $\frac{1}{4}$ mile, turn west for $\frac{1}{4}$ mile and south for $\frac{1}{4}$ mile until reaching abandoned farm. From the farmyard walk southwest for approximately $\frac{1}{4}$ mile until reaching edge of flat area. Tipi rings are near the edge of the pasture.
8. A. General description of site: Tipi ring site - composed of approximately 6 tipi rings - small in diameter (3-4 meters). Located on a flat prairie overlooking the Mouse River. No cultural material is observable, however, buck grass obscures the surface from view - rocks are well sodded-in and are difficult to observe.
B. Condition of site: Fair to poor - rings jumbled by cattle
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rise in water level of Lake Darling/Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Test selected portions to determine extent of site; map and test for NRHP significance and/or salvage potential if site is to be inundated.
17. Environment: Elevation 1615 Nearest Water: Type Lake/River
Name Lake Darling/Mouse River Distance Adjacent Direction West
Soil conditions: Pasture/grassland
Soil Texture: Sandy gravel

Site Number 32RV417

17. Environment, Cont.

Ground Cover: Prairie grass and small forbes

Terrain: Flat prairie

18. Local contact person or organization: NA

19. Photos: No X B/W Color Prints Slides Comments/ID code _____

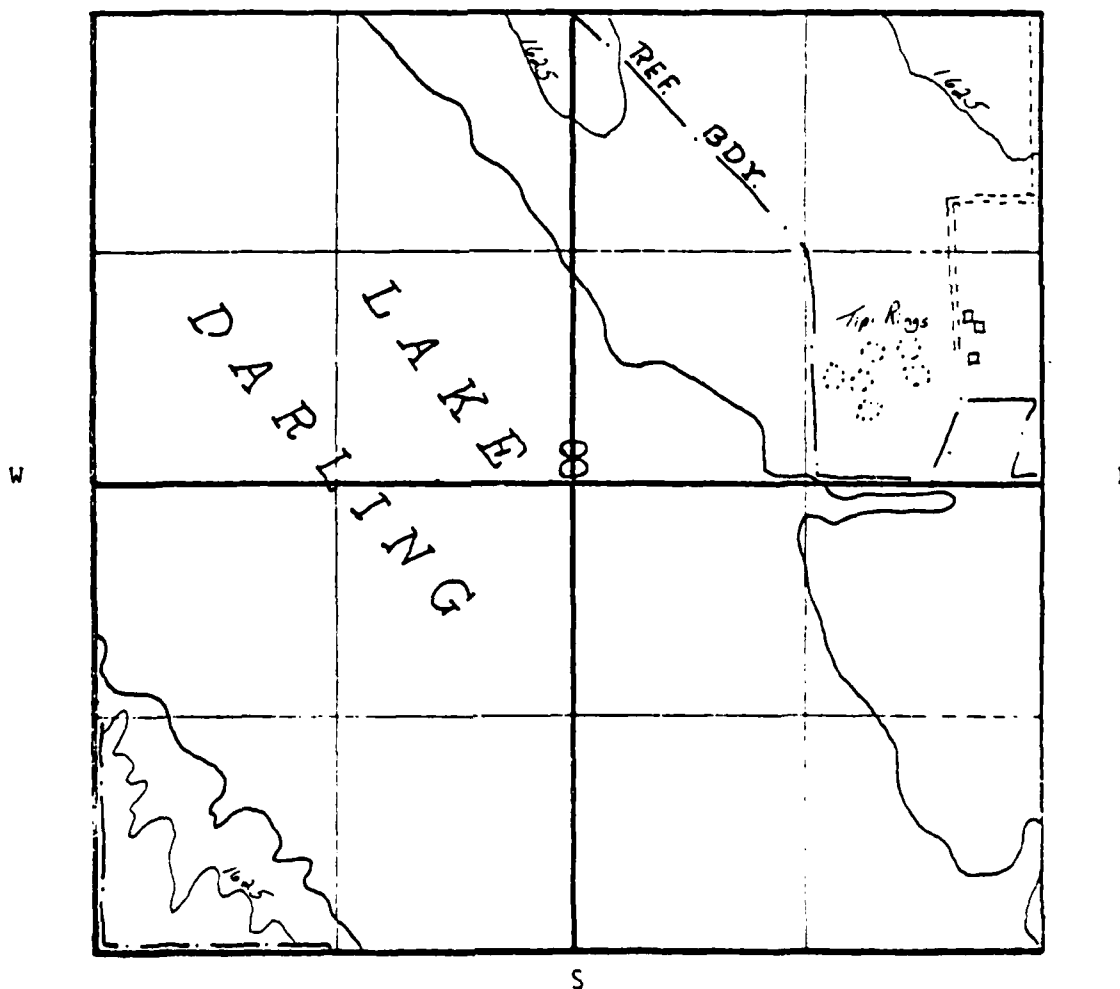
Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



Recorded by: Kent Good

Date _____

Revised by: _____

Date _____

Continuation form: Archaeological Sites

Site Number 42RV417

21. Preliminary cultural assessment: Plains Nomadic - cultural identity unknown22. Site Type: Tipi rings23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: None
(5 people)Artifacts stored at: NAMaterials observed, but not collected: Tipi rings (6)Collections observed: Material NoneOwner/address: NA24. Site size: (Meters, feet-yards, acres) 5 acresHow determined: Paced Eyeballed ☒ Taped Other25. Surface Features Observed: Tipi rings - stones in 3 of the 6 are well sodded and hard to see.26. Comments/References: Site was discovered in conjunction with Burlington Survey - other than the rings, there was no other cultural evidence on the surface or in the cutbanks and rodent backfill. Site is in heavy grass making visual inspection difficultRecorded by: Richard Fox Date 11/11/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32RV417

Tipi Ring Dimensions:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	14 (may be more)	3.0 meters
2	10 (may be more)	3.8 meters
3	jumbled	-
4	jumbled	-
5	jumbled	-
6	jumbled	-

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV418
3. Site Name (s) Big Bull Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 6 T 158 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the intersection of County Roads 9 and 16 proceed south for 5 miles. Then turn right (west) and proceed on farmer's access road for 2 miles. Proceed south on foot along section line (of sections 5 and 6) for $\frac{1}{2}$ mile. Then proceed west for approximately 200 meters. Tipi rings (7 total) are scattered throughout field. An old roadbed passes 50 meters to the south of one large ring.
8. A. General description of site: Two rings are sticking out of the surface. 3 rings are well sodded. There may be other rings along the flat to the south of the five definite rings.
- B. Condition of site: Undisturbed
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☒ No ☐
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included None
16. Recommendations: If site is threatened with inundation, it should be mapped and tested.
17. Environment: Elevation 1620 Nearest Water: Type River
Name Mouse River Distance 800 meters Direction West
Soil conditions: Range land
Soil Texture: Sandy gravel

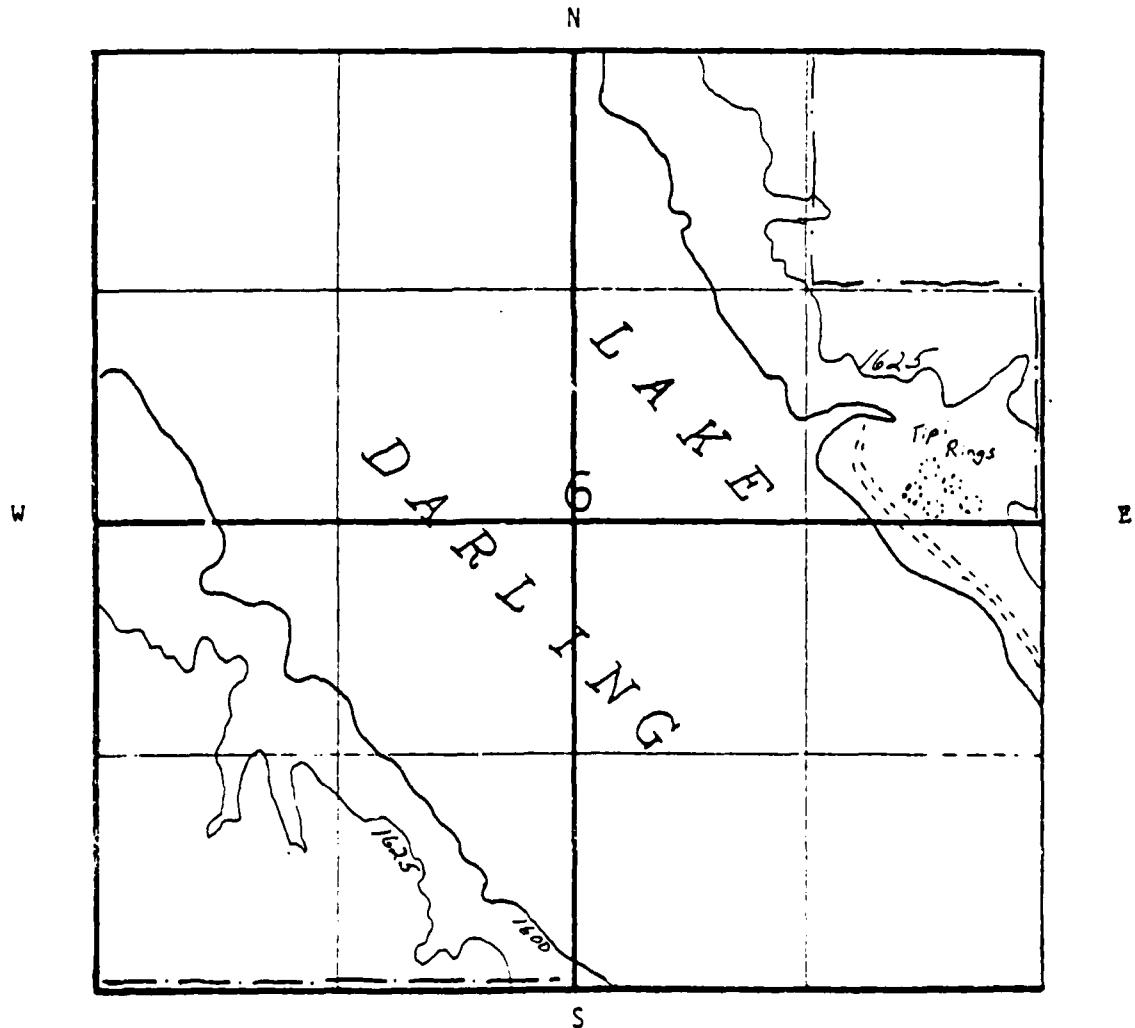
Site Number 32RV418

17. Environment, Cont.

Ground Cover: Short grass, prairie grasses, forbesTerrain: Flat with one percent slope toward valley18. Local contact person or organization: U.S. Army Corps of Engineers Hdqts., near dam19. Photos: No X B/W Color Prints Slides Comments/ID codeNegatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard FoxDate 4-1-77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Plains Nomadic - small lodges may indicate pre-house.

22. Site Type: Tipi ring (occupation)

23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: NA:
No cultural material observable, may be due to lush prairie grass cover, or lack of material as usually observed with this type of site.

Artifacts stored at: NA

Materials observed, but not collected: NA

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 100 meters X 50 meters

How determined: Paced Eyeballed Taped Other Taken from map by scale

25. Surface Features Observed: Five (5) tipi rings scattered along edge of flat area adjacent to the lake. More are probably hidden by grass cover. Stones are well sodded in and are very difficult to observe.

26. Comments/References: Rings have been obliterated by grazing.

No cultural material observed in the nearby cutbank.

Site is in danger of being inundated by rising water if Burlington Dam becomes a reality.

Recorded by: Kent Good

Date 4-21-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORMPage 4Site 32RV418Tipi Ring Dimensions:Ring Number:# of Rocks:Diameter:

1	51	4.8 meters
2	21	4.6 meters
3	25	4.8 meters
4	42	5.0 meters
5	20	4.2 meters

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville
2. Site Number 32RV419
3. Site Name (s) Funk Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: S $\frac{1}{2}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 30 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Greene, North Dakota, travel through town toward the southeast into a pasture along the west bank of Lake Darling. Tipi rings are along vehicle trail, two on the right side and two on the left side approximately 200 yards apart. Two more are located on the left side of road due south of the last two.
8. A. General description of site: Six tipi rings in a flat area along Lake Darling (Mouse River). Two tipi rings are very apparent and the remainder are quite jumbled due to grazing of the pasture. There are also 2 rings (3.4 and 3.5 meters, with 25 rocks each) just to north of Greene Church which is north of the Funk Site. There is also one small ring (1.6 meters in diameter, 22 rocks) with a depression in the middle.
B. Condition of site: Fair to poor
9. Owner's name/address: Don Funk - Greene, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☒ No ☐ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Rise in Lake Darling water level (Burlington Dam)
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site is endangered by rising water of Lake Darling and also by the dam construction -- also by gravel mining operations; map and test.
17. Environment: Elevation 1615 Nearest Water: Type Lake/River
Name Lake Darling/Mouse River Distance Adjacent Direction East
Soil conditions: Pasture
Soil Texture: Gravel

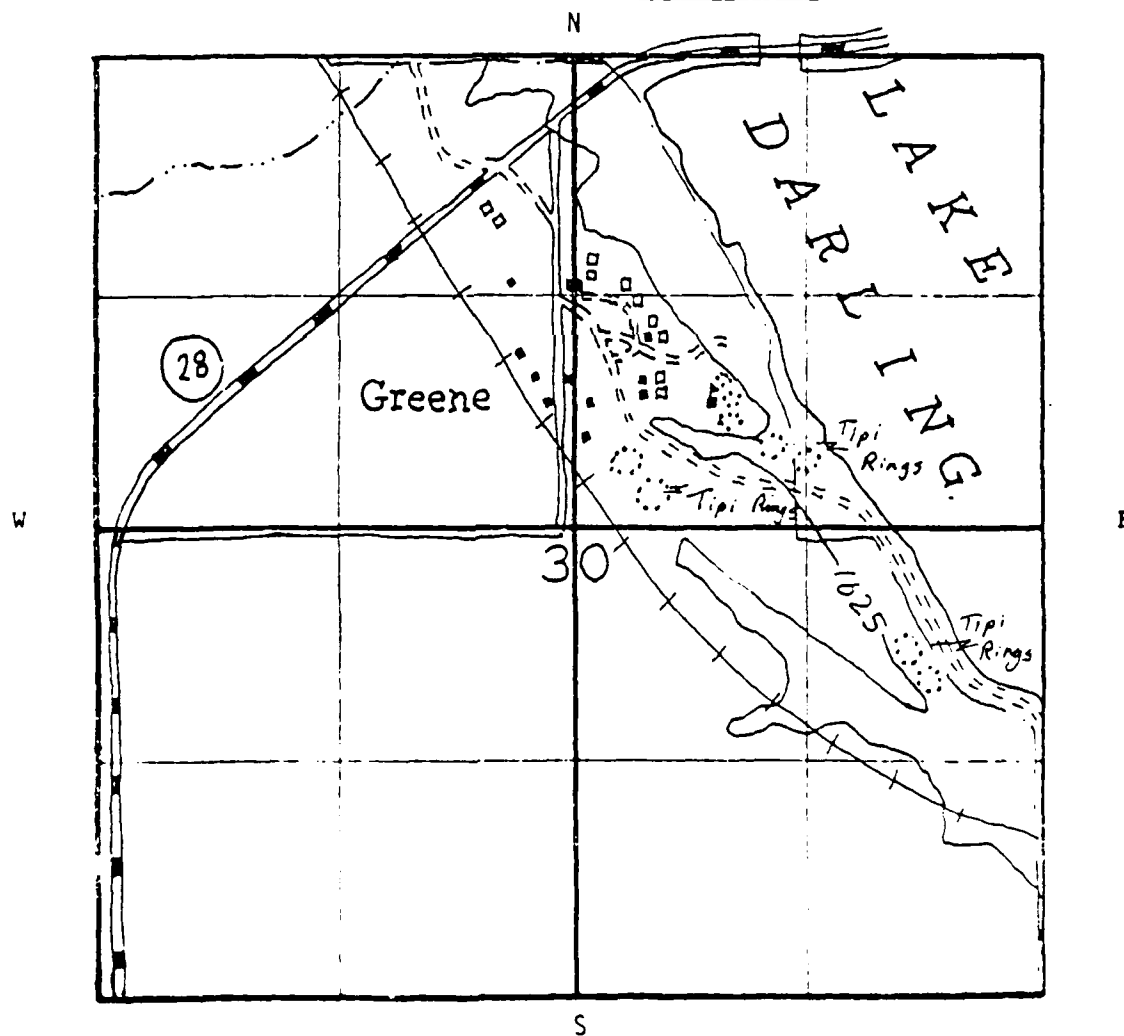
Site Number 33RW419

17. Environment, Cont.

Ground Cover: Short prairie grass - scattered forbesTerrain: Flat area near edge of river18. Local contact person or organization: NA19. Photos: No X B/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Kent Good Date Revised by: Date

21. Preliminary cultural assessment: Plains Nomadic (specific tribe indeter

22. Site Type: Tipi Ring

23. Collection: Time spent collecting: One hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: 1 calcaneus (may be historical) bone

Collections observed: Material NA

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 350 meters/50 meters

How determined: Paced Eyeballed Taped Other Scale from USGS map

25. Surface Features Observed: Tipi rings formed by fairly large, lichen covered rocks arranged in circular fashion, presumably to hold down hide covers.

26. Comments/References: Site in fairly good condition, at least two rings are very distinct. Site should be mapped and tested as it is in danger of being destroyed by both the rising water of the lake as well as possible borrow pits.

Recorded by: Kent Good Date 8-21-87

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32RV419

Tipi Ring Dimensions:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	89	7.2 meters
2	56	6.1 meters
3	36	4.9 meters
4	15	4.4 meters
5	38	4.4 meters
6	36	4.8 meters
7	25	3.4 meters
8	25	3.5 meters
9	22	1.6 meters

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

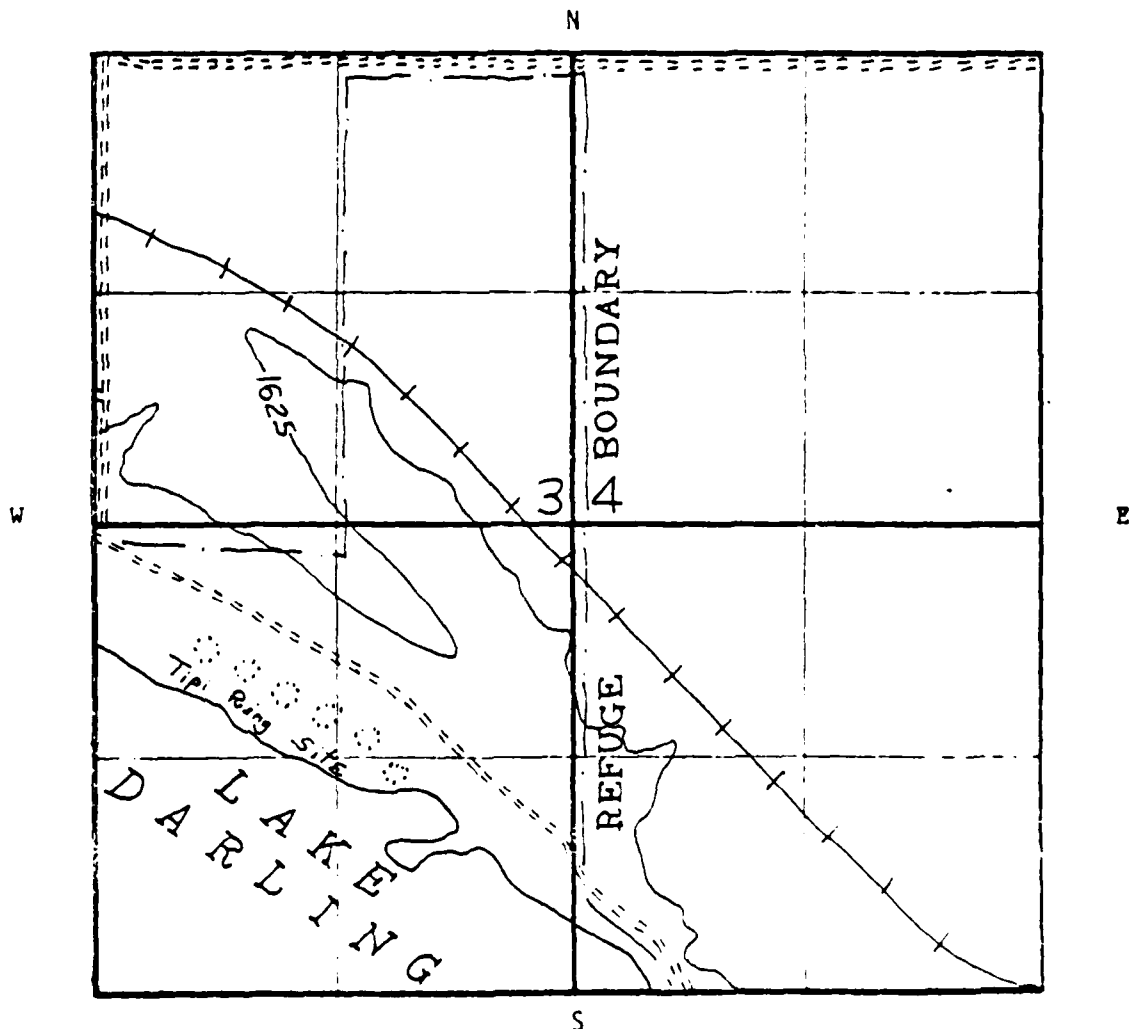
1. County Renville 2. Site Number 32RV420
3. Site Name (s) Pale Moon Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: N $\frac{1}{2}$, SW $\frac{1}{4}$ Sec. 34 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the Lake Darling bridge at Greene, North Dakota, proceed north on North Dakota #28 for 1.2 miles (just past bench marker 1686). Turn right (east) onto section road and proceed two miles to the school #1. Then turn south and proceed for 2.5 miles to the Upper Souris Refuge boundary marked by elevation 1626. From there proceed to the southeast for approximately 150 meters. Site is located on large flat.
8. A. General description of site: Site is located on a 45 acre flat overlooking Lake Darling to the southwest. The flat has a heavy grass cover making it hard to find the rings. Most of the rings appear to be located near the SW edge of the flat just before it slopes down into Lake Darling. The view is unrestricted for several miles to the southwest through the north. Good view of Mouse River valley.
B. Condition of site: Undisturbed but difficult to see because of grass.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included None
16. Recommendations: Site should be mowed, mapped and tested to determine NHP and or salvage potential as site is threatened by inundation and/or slumping and erosion.
17. Environment: Elevation 1615 Nearest Water: Type River
Name Mouse River Distance 500 meters Direction Southwest
Soil conditions: Undetermined - too much grass cover
Soil Texture: Undetermined - too much grass cover

17. Environment, Cont.

Ground Cover: Short prairie grass, berry bushes, forbesTerrain: Flat18. Local contact person or organization: U.S. Army Corps of Engineers, at the dam site19. Photos: No xB/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = one sectionRecorded by: Richard Fox Date: _____

Revised by: _____ Date: _____

21. Preliminary cultural assessment: Plains Nomadic - cultural affiliation unknown

22. Site Type: Tipi rings

23. Collection: Time spent collecting: 4 men/ 1/2 hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: NA

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) _____
How determined: Paced Eyeballed Taped Other Estimated from 40 acre land locator

25. Surface Features Observed: 11 definite tipi rings, heavy grass is probably obscuring others.

26. Comments/References: Some small weathered bone and a rock cairn were discovered approximately 1/4 mile east of flat. Also some depressions (3.5 meters in diameter; 25 centimeters deep - approximately).

Recorded by: Richard Fox

Date 6-28-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32RV420

Tipi Ring Dimensions:

<u>Ring Number:</u>	<u># of Rocks:</u>	<u>Diameter:</u>
1	20	4.3 meters
2	15	4.4 meters
3	29	4.6 meters
4	15	5.0 meters
5	23	4.7 meters
6	39	4.7 meters
7	27	4.7 meters
8	47	5.5 meters
9	46	5.1 meters
10	40	6.4 meters
11	54	4.7 meters

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV421
3. Site Name (s) Almost Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: E $\frac{1}{2}$, W $\frac{1}{2}$ and W $\frac{1}{2}$, E $\frac{1}{2}$ of SE $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 19 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Site is located on the flat north of the gravel pit that abuts the north side of North Dakota Highway 28. Access is from Highway 28 on the west side of Lake Darling.
8. A. General description of site: Located on a gently sloping flat. The flat is covered with thousands of embedded rocks making identification of tipi rings difficult. There are three fairly discernable rings and possibly there are others. The site may have once been used as pastureland (before dam construction of 1934) which may have jumbled up the rings. Another ring (#4) is located on the flat just to the north of the intermittent drainage.
B. Condition of site: Poor
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Untd. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: No further work is necessary due to very disturbed condition of site.
17. Environment: Elevation 1625 Nearest Water: Type River
Name Mouse River Distance 600 meters Direction East
Soil conditions: Undisturbed
Soil Texture: Sandy loam

17. Environment, Cont.

Ground Cover: Short grass, prairie grass

Terrain: Gently sloping (1-2%) toward Lake Darling

18. Local contact person or organization: Wildlife Refuge Hdqt., at the Dam

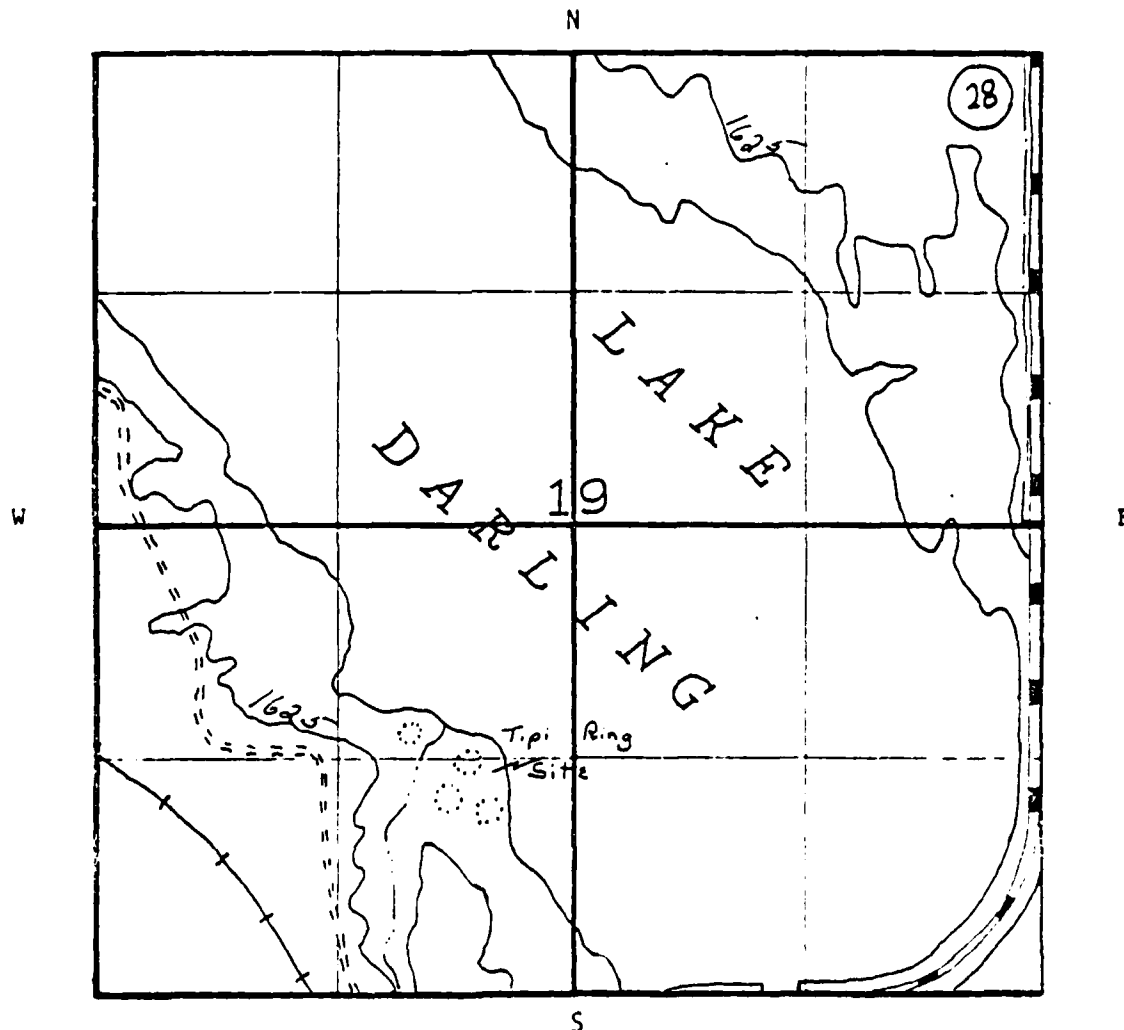
19. Photos: No X B/W Color Prints Slides Comments/ID code _____

Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section



Recorded by: Richard Fox

Date 11-27-77

Revised by: _____

Date _____

Continuation form: Archaeological Sites

Site Number 3280421

21. Preliminary cultural assessment: Plains Nomadic - cultural affiliation unknown22. Site Type: Tipi ring23. Collection: Time spent collecting: 4 men/0.3 hr(s). Materials collected: NoneArtifacts stored at: NAMaterials observed, but not collected: NoneCollections observed: Material NoneOwner/address: NA24. Site size: (Meters, feet-yards, acres) 2 acresHow determined: Paced Eyeballed ☒ Taped Other 25. Surface Features Observed: 4 tipi rings, stones well embedded

26. Comments/References: These rings appear to have been disturbed and are very difficult to locate because of the rocks randomly embedded throughout the flat. No further work is necessary because of the disturbed and poorly preserved condition of the tipi rings.

Recorded by: Richard FoxDate 9-27-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV422
3. Site Name (s) Pepsi Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: W $\frac{1}{2}$, NW $\frac{1}{2}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 30 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: Site is located in pasture just to the east of the easternmost access road into Greene, North Dakota. The access road proceeds south from North Dakota Highway #28.
8. A. General description of site: Site is located in flat and rolling pastureland that abuts North Dakota Highway #28 to the north and Lake Darling to the east. There are three small, low rock covered ridges that run north-south in the pasture. The rings are located in the swales between the ridges. Site is located approximately 800 meters north of the Funk Tipi Ring Site.
B. Condition of site: Undisturbed
9. Owner's name/address: Don Funk, Greene, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam and perhaps private gravel operations
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be mapped and tested, since endangered by rising water of lake and dam construction.
17. Environment: Elevation 1615 Nearest Water: Type River
Name Mouse River Distance 400 meters Direction East
Soil conditions: Pastureland
Soil Texture: Sandy loam

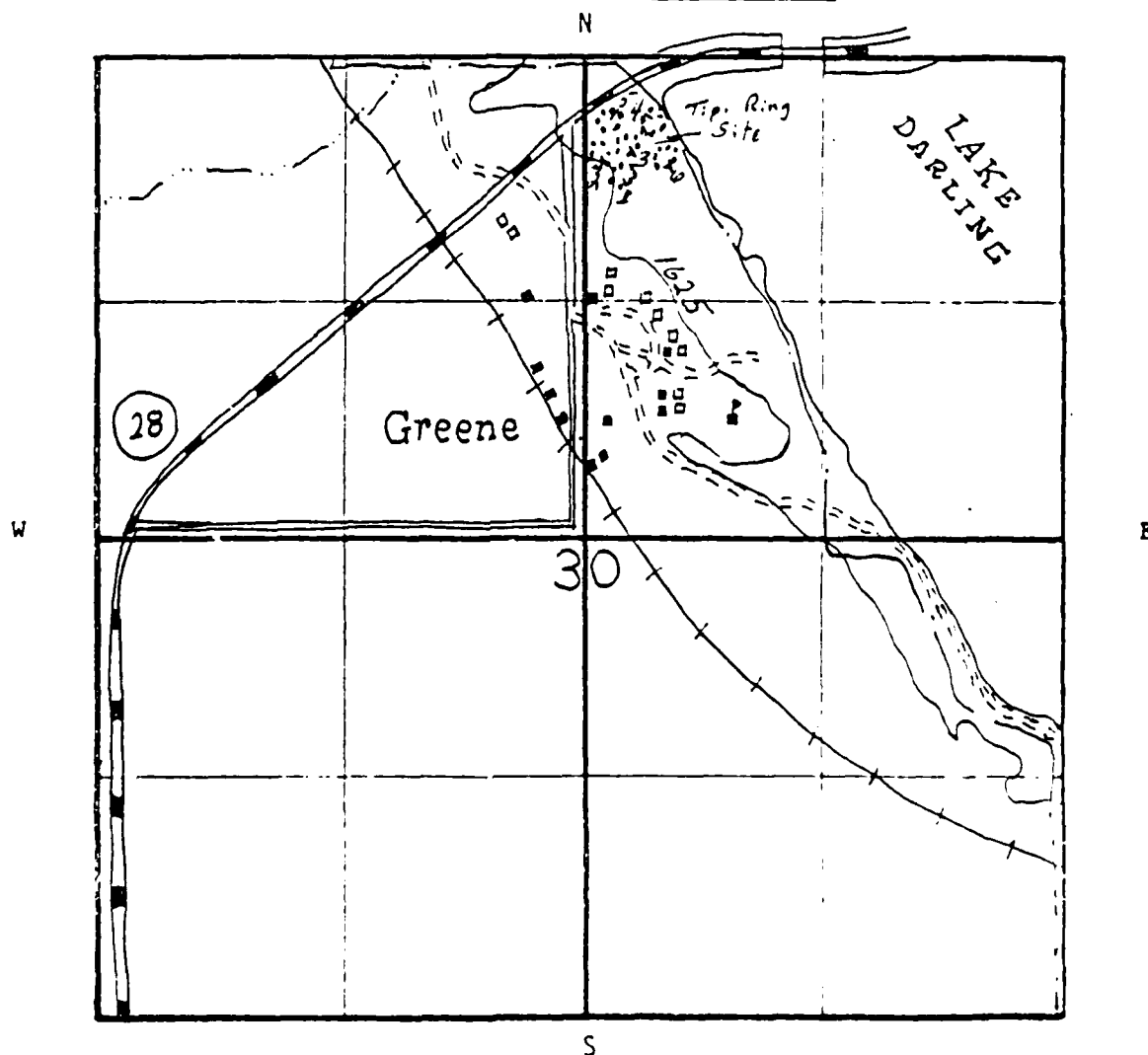
Site Number 32RV422

17. Environment, Cont.

Ground Cover: Pastureland - short grass, prairie grassesTerrain: Flat and rolling - max relief approximately 4 meters18. Local contact person or organization: Don Funk, Greene, North Dakota19. Photos: No x B/W Color Prints Slides Comments/ID codeNegatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard Fox Date 11/1/77

Revised by: _____ Date _____

21. Preliminary cultural assessment: Plains Nomadic - cultural affiliation unknown

22. Site Type: Tipi ring - 6 rings

23. Collection: Time spent collecting: 4 men/0.5 hr(s). Materials collected: None

Artifacts stored at: NA

Materials observed, but not collected: NA

Collections observed: Material None*

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Three acres

How determined: Paced Eyeballed x Taped Other

25. Surface Features Observed: Six tipi rings

26. Comments/References: It is suspected that construction of the roadbed for Highway #28 may have destroyed part of this site.

Distances	King #1 to #2	24 meters
	Ring #2 to #3	21 meters
	Ring #3 to #4	47.5 meters
	Ring #3 to #5	22 meters
	Ring #4 to #6	75 meters

Recorded by: Richard Fox

Date 7-2-81

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV423
3. Site Name (s) Lone Stone Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Greene Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 18 T 160 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the bridge crossing Lake Darling at Greene, North Dakota, proceed northerly on North Dakota Highway 28 for 1.2 miles until you come to the bench marker (elevation 1686) on the west side of the road. Turn west onto unkept refuge access road and proceed for $\frac{1}{2}$ mile to washed out bridge across draw. Proceed northwest on foot for .28 miles to second well-defined flat. Ring is located on a finger of land.
8. A. General description of site: The Lone Ring is located on a finger of land separated by two small SW-NE oriented draws. The access road runs through the upper portion of the flat. This may have destroyed some rings. View of Mouse River Valley to the southwest which extends for several miles. Ring diameter is 4.3 meters with 37 single course rocks.
- B. Condition of site: Undisturbed
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: No further work is recommended.
17. Environment: Elevation 1625 Nearest Water: Type River
Name Mouse River Distance 600 meters Direction Continental
Soil conditions: Undeterminable
Soil Texture: Undeterminable

17. Environment, Cont.

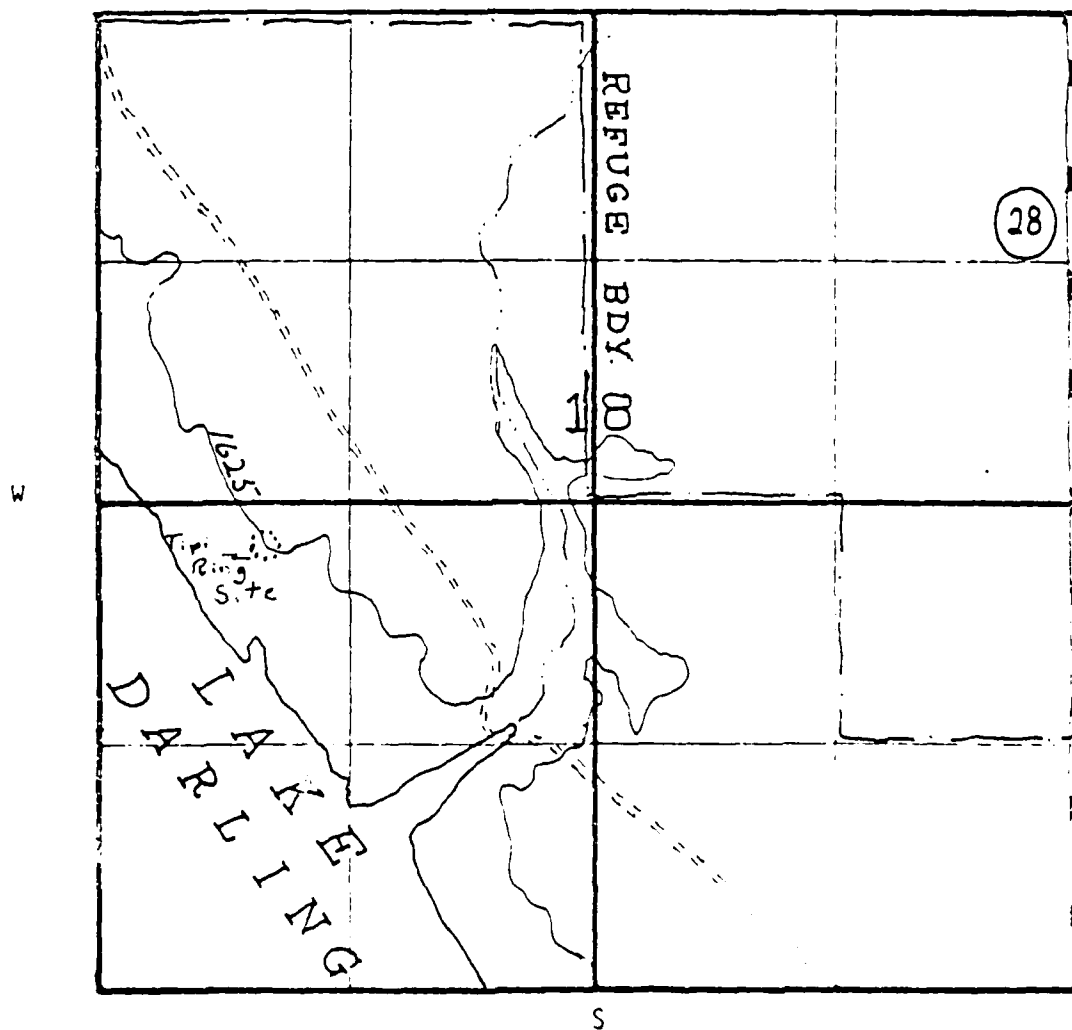
Ground Cover: Short prairie grasses, forbesTerrain: Flat18. Local contact person or organization: Wildlife Refuge, Dam Site19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard Fox

Date _____

Revised by: _____

Date _____

21. Preliminary cultural assessment: Plains Nomadic
22. Site Type: Tipi Ring
23. Collection: Time spent collecting: 3 men/0.2 hr(s). Materials collected: None
- Artifacts stored at: NA
- Materials observed, but not collected: NA
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 4.3 meters in diameter, 37 rocks
How determined: Paced Eyeballed Taped X Other
25. Surface Features Observed: One tipi ring
26. Comments/References:
- Recorded by: Richard Fox Date 4-12-11

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville
2. Site Number 32RV424
3. Site Name (s) Christenson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano, S.W. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 15 T 159 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Grano, North Dakota, travel approximately 2 $\frac{1}{2}$ miles west across to Lake Darling. Travel to fork in road, stop and proceed on foot to SE $\frac{1}{4}$ of Section 15. Restless Rabbit Tipi Ring Site is to the north.
8. A. General description of site: Tipi rings are located on gently sloping land to river. Site seems to have been slightly disturbed by cattle being pastured there. The actual number of rings is difficult to determine because of this cattle disturbance. Three rings are estimated.
- B. Condition of site: Pasture - cattle trodden
9. Owner's name/address: J. Christenson, Grano, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Not in danger
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site not in danger of destruction - on Private land and above 1620 feet.
17. Environment: Elevation 1630 Nearest Water: Type River
Name Mouse River Distance 100 meters Direction East
Soil conditions: Undisturbed pasture
Soil Texture: Ground is covered...pasture.

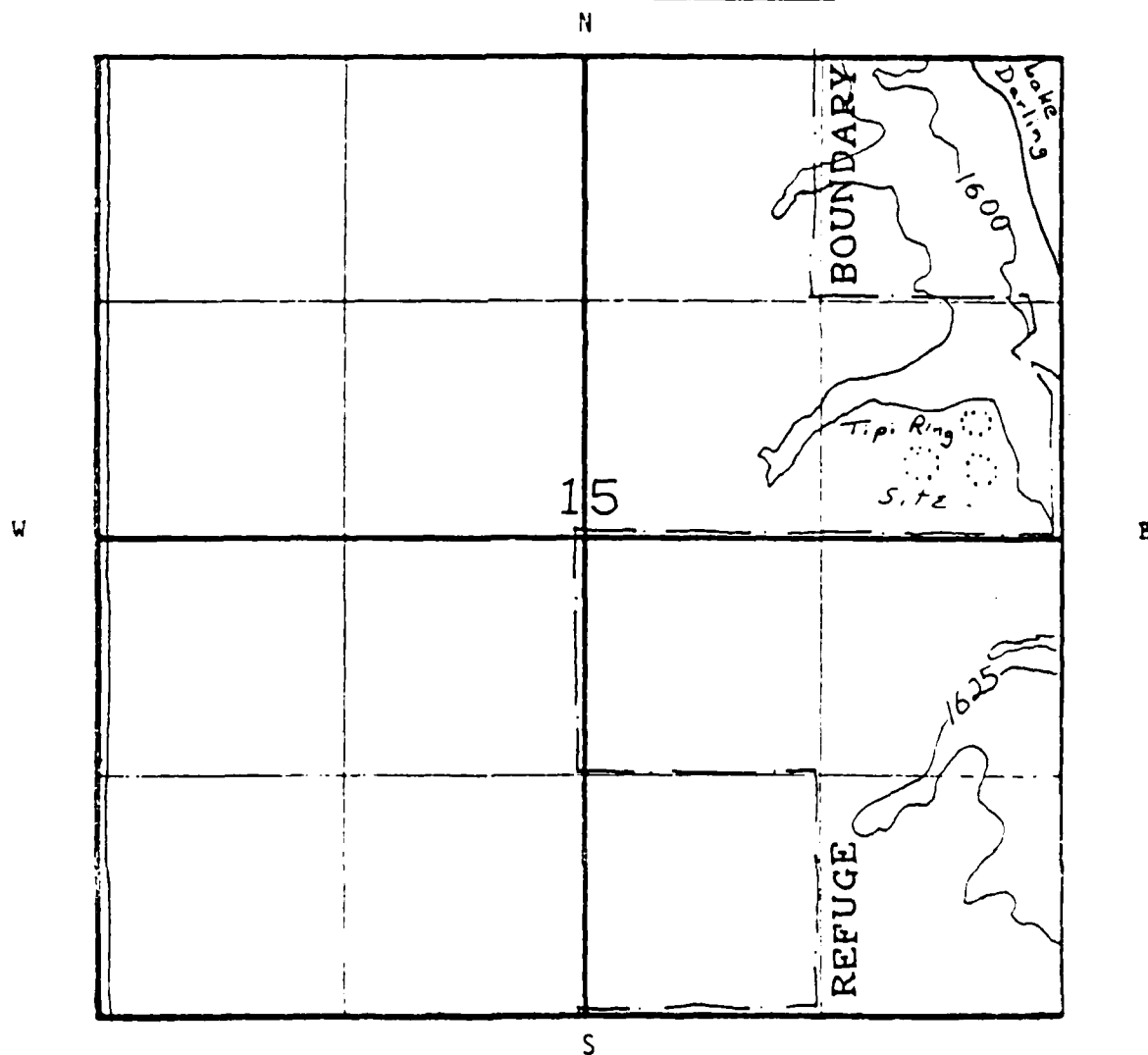
Site Number 32RW42

17. Environment, Cont.

Ground Cover: Prairie grassTerrain: Flat, slightly sloping to water, coulees on north and south sides.18. Local contact person or organization: J. Christenson, Grano, North Dakota19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: John Kjos

Date _____

Revised by: Kent Good

Date _____

21. Preliminary cultural assessment: Plains Nomadic

22. Site Type: Tipi rings

23. Collection: Time spent collecting: NA hr(s). Materials collected: NA:

No cultural debris observed.

Artifacts stored at: NA

Materials observed, but not collected: NA

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) See tipi ring data - Number 26:Comments

How determined: Paced Eyeballed Taped X Other

25. Surface Features Observed: Three stone circles (tipi rings)

26. Comments/References: Site is above 1620 feet and is probably safe from inundation.

Ring #1: 34 rocks 5.0 meters in diameter

Ring #2: 31 rocks 5.5 meters in diameter

Ring #3: 26 rocks 6.75 meters in diameter

Recorded by: John Kjos

Date 11/1/77

Page 1

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV425
3. Site Name (s) Windy Point Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 17 T 158 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Lake Darling Dam proceed west across dam, take first right turn and travel 1 $\frac{1}{2}$ miles to crossroads. Take right turn proceed on park road for approximately 3 miles to Refuge fence. From here proceed on foot approximately $\frac{1}{2}$ mile to Section 17 - See location.

8. A. General description of site: Tipi ring site - composed of circular configuration of rock. Two tipi rings fairly distinct and a rock cairn located across a small coulee.

B. Condition of site: Fair to poor - rocks somewhat jumbled.
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: Henry Bloms (Leasee)
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☒ No ☐ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Not in danger
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site is not in danger of destruction - is on private land - no recommendation needed
17. Environment: Elevation 1675 Nearest Water: Type Lake/River
Name Lake Darling/Mouse River Distance 300 meters Direction East
Soil conditions: Undisturbed - pastureland
Soil Texture: Grass covered

Site Number 32RV425

17. Environment, Cont.

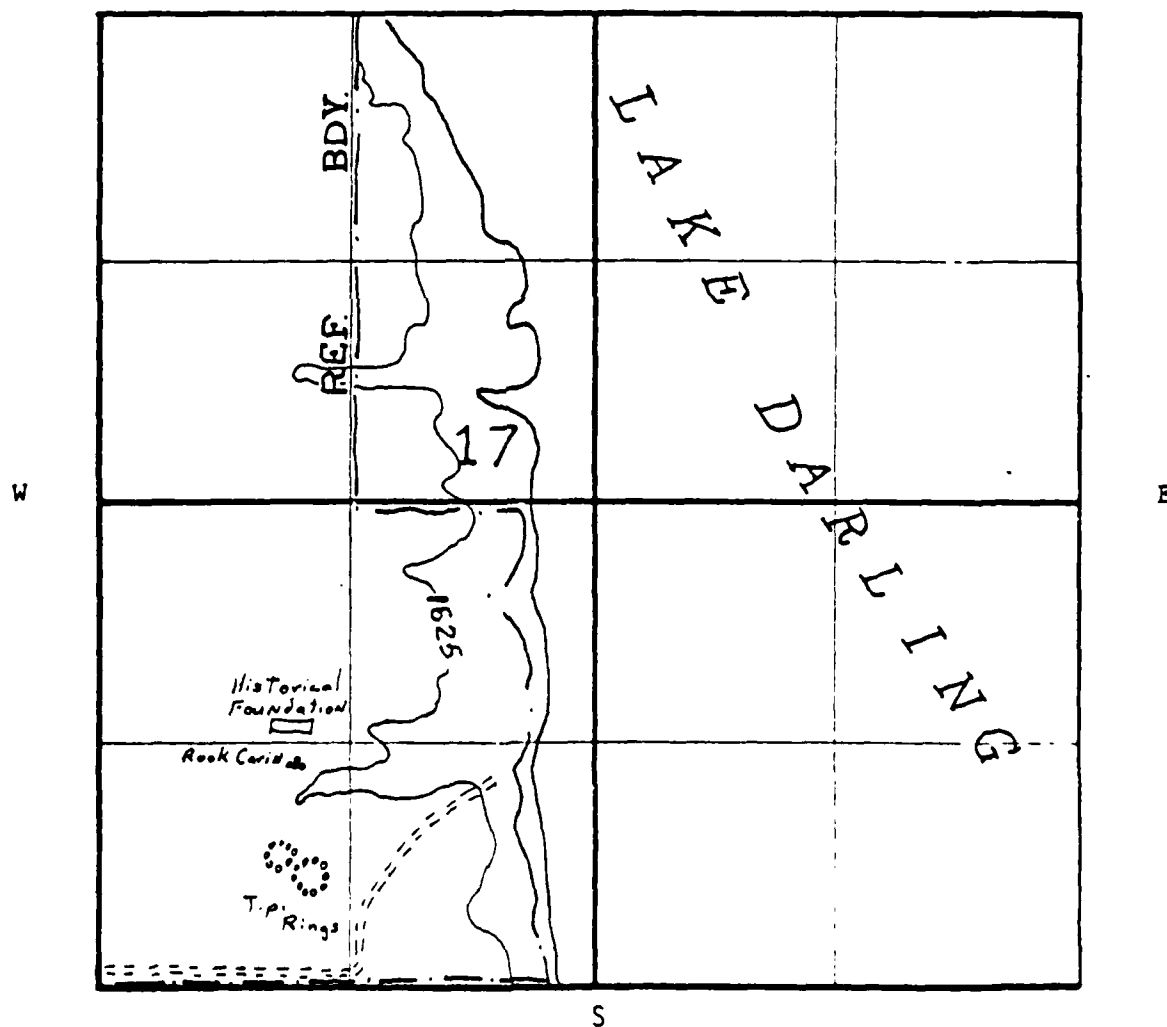
Ground Cover: Prairie grass, a number of large rocksTerrain: Slightly rolling, small coulee immediately north18. Local contact person or organization: NA19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent Good Date 10.1.00

Revised by: _____ Date _____

21. Preliminary cultural assessment: Plains Nomadic
22. Site Type: Tipi Rings - composed of circular configuration of stones
23. Collection: Time spent collecting: NA hr(s). Materials collected: No cultural debris noted
- Artifacts stored at: NA
- Materials observed, but not collected: NA
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 13 meters (edges of tipi rings)
How determined: Paced Eyeballed Taped X Other
25. Surface Features Observed: Tipi rings - circular configurations of stone.
26. Comments/References: Rings are sodded in and rather difficult to discern due to lush grass cover. Rings also have been slightly disturbed due to pasturization.
Ring #1 - 29 rocks; 4.0 diameter
Ring #2 - 35 rocks; 6.0 diameter
- Recorded by: Kent Good Date: 11/11/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV426
3. Site Name (s) Restless Rabbit Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano, S.W. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 15 T 159 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the bridge that crosses Lake Darling at Grano, North Dakota, proceed west for one mile to bench marker (elevation 1606). Turn left and proceed for 1.15 miles to abandoned farmstead on right (west). Take pasture access road and head east for 3/4 mile to cattle feeder. Site is on flat to the south approximately 100 meters.
8. A. General description of site: Site is located on a flat terrace overlooking Mouse River valley to the east. Tipi rings are located on Miller's pastureland and extend east onto the Refuge. Those on the Refuge are obscured by dense prairie grasses though we were able to identify three. Site is approximately 200 meters south of Four Rings Tipi Ring Site (separated by coulee).
- B. Condition of site: Some rings undisturbed, some disturbed by cattle
9. Owner's name/address: Alley and/or Jack Miller & Wildlife Refuge
10. Occupant's name/address: Alley Miller lives in Mohall
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam and damage from cattle
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be mapped and tested; possibly endangered by slumping & erosion; largest tipi ring site & only double-course ring site recorded in study area. A so rock cairns associated.
17. Environment: Elevation 1650 Nearest Water: Type River
Name Mouse River Distance 600 meters Direction East
Soil conditions: In pasture (undisturbed)
Soil Texture: Gravelly loam

17. Environment, Cont.

Ground Cover: Pastureland - grazed prairie grasses

Terrain: Flat and sloping toward valley - never been plowed

18. Local contact person or organization: _____

19. Photos: No B/W XColor XPrints Slides XComments/ID code _____

1 each of rock cairn #1, and tipi ring #9

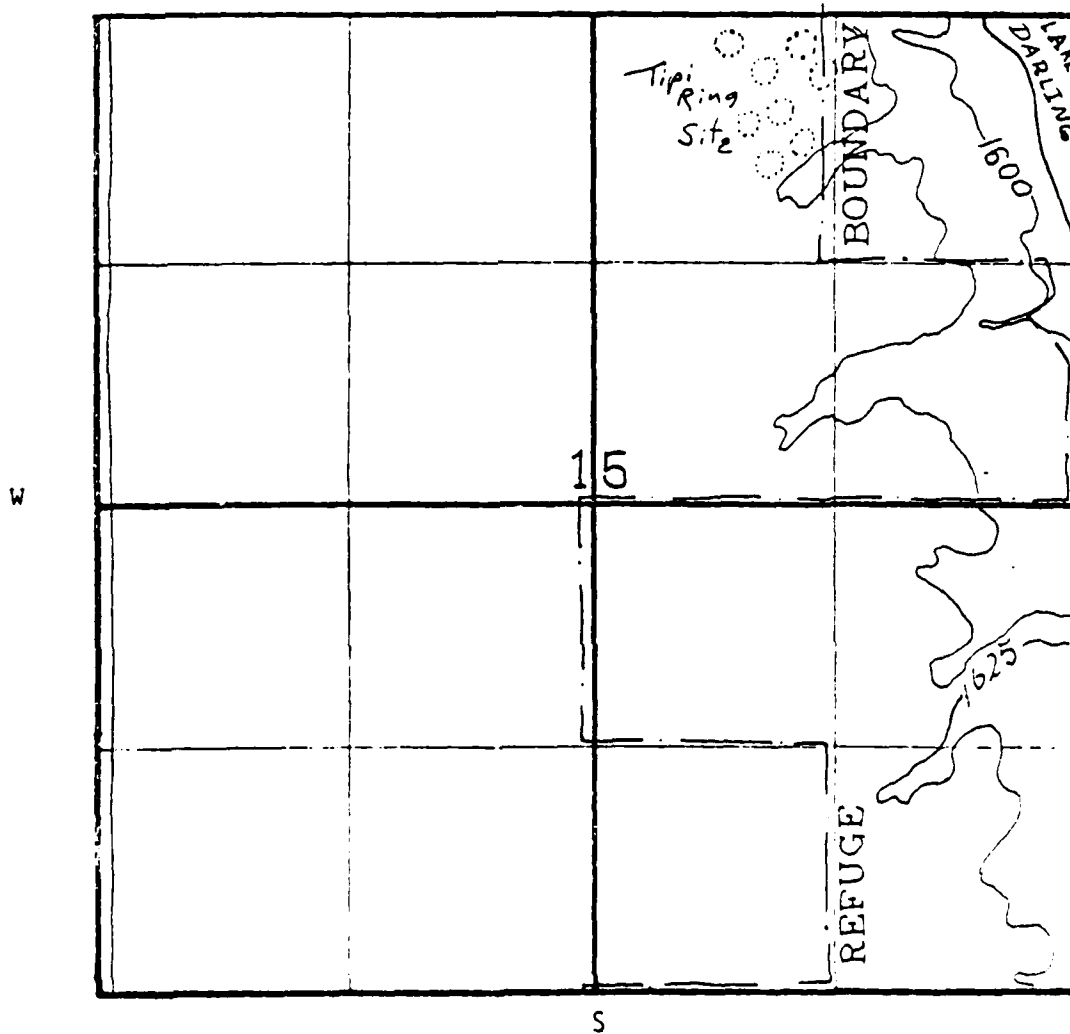
Negatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



Recorded by: Richard Fox

Date _____

Revised by: _____

Date _____

21. Preliminary cultural assessment: Plains Nomadic
22. Site Type: Tipi Ring
23. Collection: Time spent collecting: 4 men/0.5 hr(s). Materials collected: None
- Artifacts stored at: NA
- Materials observed, but not collected: NA
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 100 meters X 100 meters
How determined: Paced Eyeballed x Taped Other
25. Surface Features Observed: Tipi rings. Rings in all cases are composed of deeply embedded stones. Also observed two rock cairns. Cairn #1 consists of over 70 stones embedded in the ground in a circular fashion. The center area is devoid of stones and depressed several centimeters. Arrangement is 30 meters in diameter. Cairn #2 is similar but much smaller.
26. Comments/References: See continuation sheet for tipi ring dimensions.
- Recorded by: Richard Fox Date:

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORM

Page 4

Site 32RV426

Tipi Ring Dimensions*:

<u>Tipi Ring #:</u>	<u># of rocks:</u>	<u>Diameter:</u>
1	30	4.1 meters
2	59	6.0 meters
3	67	5.9 meters
4	27	4.9 meters
5	42	5.2 meters
6	25	4.3 meters
7	54	6.0 meters
8	60	5.4 meters
9	70	4.7 meters
10	56	5.2 meters
11	25	4.2 meters
12	31	4.7 meters
13	59	5.4 meters
14	78	4.3 meters
15	obscured	
16	obscured	
17	obscured	

*Most rings are double course.

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville
2. Site Number 32RW427
3. Site Name (s) Four Rings Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Grano S.W. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 10 T 159 N / R 85 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the bridge that crosses Lake Darling at Grano, North Dakota, proceed west for one mile to bench marker (Elevation 1606). Turn left and proceed for 1.15 miles to abandoned farmstead on right (west of section road). Turn left (east) onto pasture access road and head east for 3/4 mile to cattle feeder. Site is located on flat just northwest of feeder and north of coulee (approximately 100 meters).
8. A. General description of site: Site is located on a flat terrace overlooking Mouse River valley to the east. Rings are located on Miller's pastureland. There were four rings identified. Area has recently been grazed making identification easy. Site is approximately 200 meters north of Restless Rabbit Tipi Ring Site (separated by coulee).
B. Condition of site: Potential for cattle disturbance.
9. Owner's name/address: Jack Miller, Mohall, North Dakota
10. Occupant's name/address: NA
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒
13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Cattle disturbance
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: No further work is recommended.
17. Environment: Elevation 1650 Nearest Water: Type River
Name Mouse River Distance 600 meters Direction East
Soil conditions: Undisturbed.
Soil Texture: Gravelly loam

Site Number 02RV427

17. Environment, Cont.

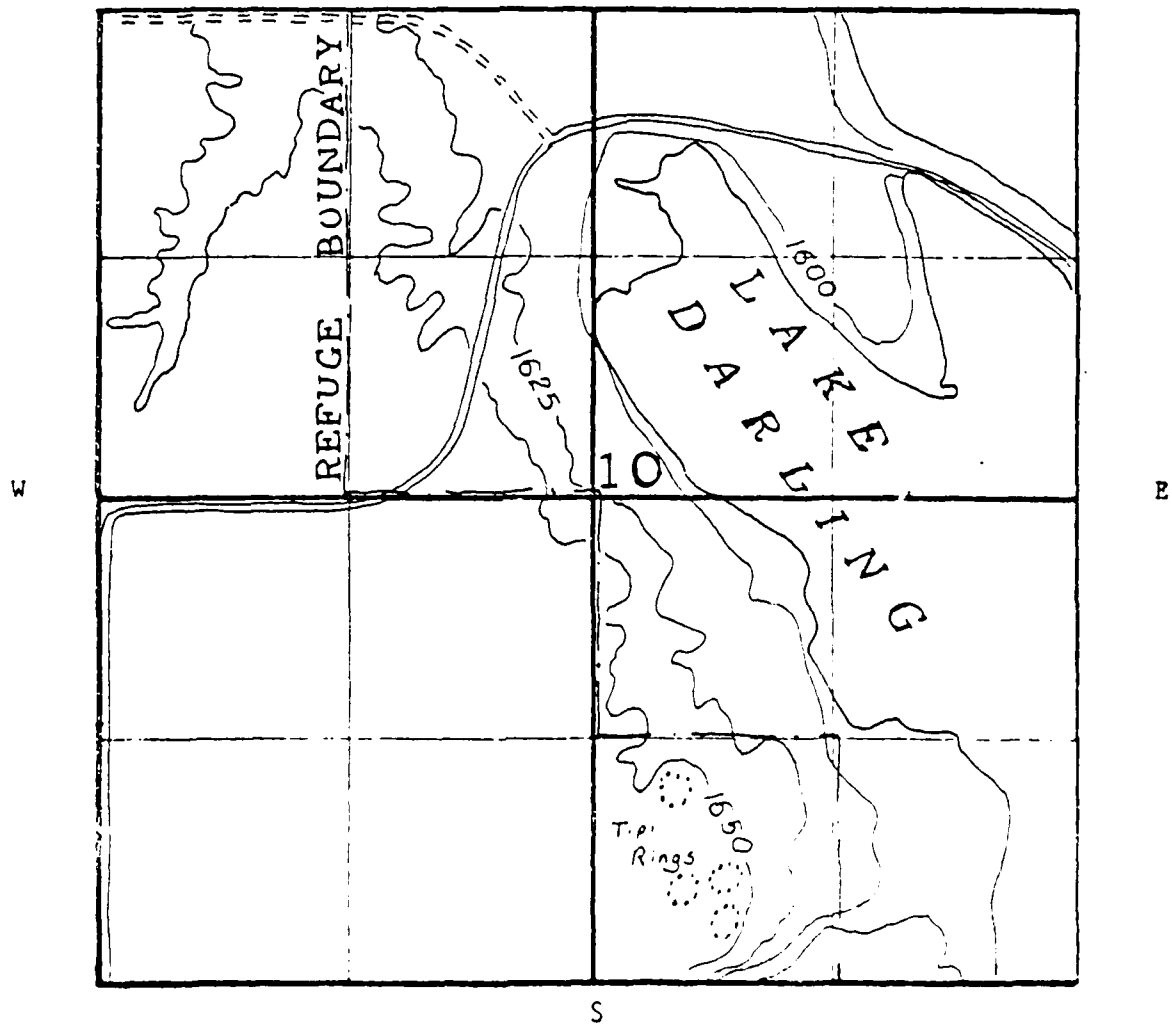
Ground Cover: Short grass prairie, glacial tillTerrain: Flat with a 2% slope toward valley.18. Local contact person or organization: Refuge headquarters, dam site.19. Photos: No X B/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard FoxDate Revised by: Date

21. Preliminary cultural assessment: Plains Nomadic22. Site Type: Tipi rings23. Collection: Time spent collecting: 4 men/0.2 hr(s). Materials collected: NoneArtifacts stored at: NAMaterials observed, but not collected: NoneCollections observed: Material NoneOwner/address: NA24. Site size: (Meters, feet-yards, acres) 30 meters X 80 metersHow determined: Paced Eyeballed ☒ Taped Other25. Surface Features Observed: 4 tipi rings

26. Comments/References:

Tipi Ring Dimensions:

Ring #:	# of Rocks:	Diameter:
1	47	5.5 meters
2	30	4.0 meters
3	78	4.6 meters
4	60	4.9 meters

Recorded by: Richard Fox Date 1-1-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV428
3. Site Name (s) Cold Duck Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Tolley Quadrangle, USGS 7.5 Minute Topo, 1948
6. Location: SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 25 T 161 N / R 86 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the intersection of North Dakota Highway 5 and the Tolley, North Dakota access road, proceed east for 1.8 miles. Then turn right (south) onto gravel road that traverses west bank of Mouse River and proceed along this road for 2 miles. Site is to the east of the Refuge access road (approximately 100 meters) on a flat that overlooks Mouse River and Refuge wetlands.
8. A. General description of site: Site is situated on an old terrace formed by the Mouse River. View of valley to south is several miles. Excellent view of nearby Mouse River to the east. Higher hills are immediately adjacent to the west. Flat is defined to the north by a seasonal drainage (E-W oriented) that drains into Mouse River.
B. Condition of site: Undisturbed
9. Owner's name/address: Department of Interior, Fish & Wildlife Division, Foxholm, N.D.
10. Occupant's name/address: _____
11. Historic Register value: Nat. ☐ State ☐ Untd. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Erosion from Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Preserve as is; no further work recommended at this time.
17. Environment: Elevation 1650 Nearest Water: Type River
Name Mouse River Distance 300 meters Direction East
Soil conditions: Undisturbed with numerous rocks
Soil Texture: Gravelly, sandy loam

Site Number 32RV428

17. Environment, Cont.

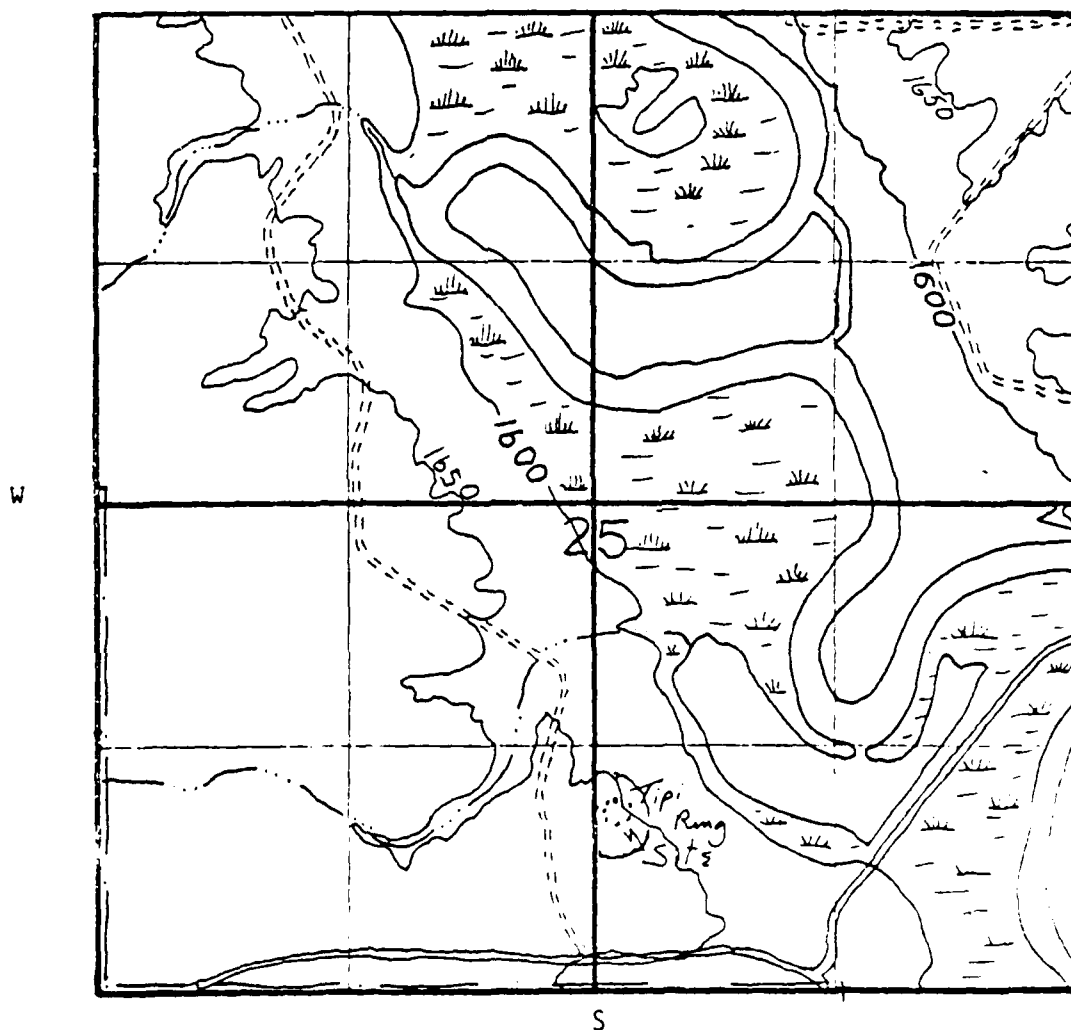
Ground Cover: Small trees (hardwood), buckbrush, native prairie grassesTerrain: Flat terminates abruptly into river valley18. Local contact person or organization: Refuge Headquarters at Dam site.19. Photos: No B/W 1 Color 1 Prints 5 Slides Comments/ID codeOne each looking south.Negatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



S

Recorded by: Richard FoxDate 10/1/77Revised by: Date

21. Preliminary cultural assessment: Plains Nomadic
22. Site Type: Tipi Ring
23. Collection: Time spent collecting: 0.3 hr(s). Materials collected: None
- Artifacts stored at: NA
- Materials observed, but not collected: NA
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) One acre
How determined: Paced Eyeballed X Taped Other
25. Surface Features Observed: One large tipi ring (7.3 meters in diameter, 58 rocks, 27.3 meters in circumference) situated midway between the higher area to the west and flat termination to the east. There do not appear to be any other rings. Rocks are deeply embedded and lichen covered.
26. Comments/References:
- Recorded by: Richard Fox Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Renville 2. Site Number 32RV429
3. Site Name (s) Curtis Ones Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Mouse River Park Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 7 Sec. 7 & 8 T 162 N / R 86 W
Plat: NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 8 Block Lot
UTMG: A. B.
C. D.
7. Access: From Mouse River Park, take west valley road and proceed North for approximately 7 miles. Turn right at the intersection of valley road and a county road and proceed across bridge. Take first right and turn into a plowed field. Proceed past an abandoned cabin traveling approximately 3/8 mile until encountering a coulee, site is immediately past the coulee.
8. A. General description of site: Site lies adjacent to Souris River and adjacent to a seasonal stream. Site is quite large compared to other similar sites in the area. Occupation of flat area and area formed by a loop in the river. Occupation site - scattered cultural debris.

B. Condition of site: Under cultivation
9. Owner's name/address: Curtis Ones, Tolley, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Raising water of Lake Darling
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: In immediate danger of inundation and is continually disturbed by plowing. Should be extensively tested for NRHP and/or salvage potential.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction Northwest
Soil conditions: Under cultivation
Soil Texture: Clayey loam

17. Environment, Cont.

Ground Cover: Under recent cultivation

Terrain: Flat floodplain adjacent the river.

18. Local contact person or organization: Curtis Ones

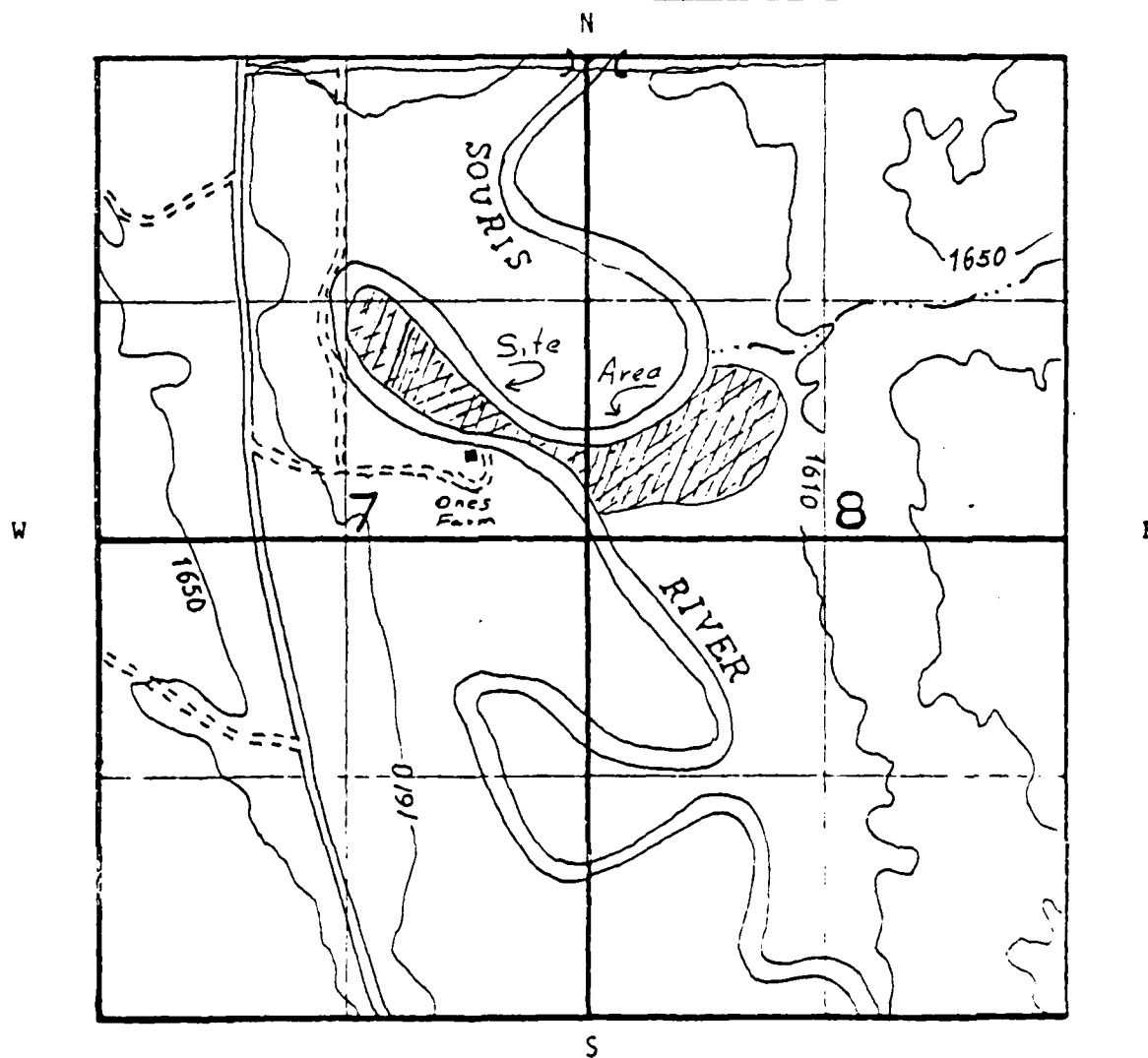
19. Photos: No XB/W Color Prints Slides Comments/ID code

Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section



Recorded by: Kent N. Good Date 11/1/77
 Revised by: Date

21. Preliminary cultural assessment: Woodland
22. Site Type: Occupation - site consists of scattered cultural debris, consisting of stone and bone artifacts, ceramics, animal bone, and charred areas.
23. Collection: Time spent collecting: 1 hr(s). Materials collected: 25 body sherds, 1 split body sherd, 2 rim sherds, 1 quartzite hammerstone, 1 petrified wood biface, 1 Swan River chert biface, 2 projectile points (1 Swan River chert and 1 burnt chalcedony), flake of Swan River chert, Knife River flint, agate (moss), porcellanite, plate chalcedony, 2 Bison bison or Bos femoral heads
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Much fragmentary bison bone - other animal bone. Bone in concentrations.
- Collections observed: Material Landowner has a collection containing a catlinite pipe.
- Owner/address: Curtis Ones, Tolley, N.D.
24. Site size: (Meters, feet-yards, acres) 25 acres
How determined: Paced Eyeballed Taped Other Estimated with USGS map
25. Surface Features Observed: None

26. Comments/References: Site is a large Woodland occupation site. It is the largest of its kind that was recorded during the 1977 field season. Evidence of a fairly lengthy occupation period is in the form of much scattered cultural remains. Depressions are NOT evident; however, the area is now under cultivation. Site should definitely be tested and the collection of the owner (ones) photographed.

Recorded by: Kent N. Good Date 11-1-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD401
3. Site Name (s) Herzig Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 8 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Foxholm, North Dakota, proceed east on Ward County Road #8 for three miles, turn right before reaching bridge across Mouse River. Follow unimproved dirt road for approximately two miles passing a ranch on the right and one on the left. Site is in a plowed field approximately 200 yards from the second ranch house.
8. A. General description of site: Scattered bison bone, with associated artifacts in a plowed field
B. Condition of site: Fair to poor
9. Owner's name/address: Floyd Herzig, Foxholm, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Diversion Tunnel - Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested, as it is in the direct path of the proposed diversion tunnel, to determine NRHP significance.
17. Environment: Elevation 1575 Nearest Water: Type River
Name Mouse River Distance $\frac{1}{2}$ mile Direction East
Soil conditions: Under cultivation
Soil Texture: Dark grey, clayey loam

17. Environment, Cont.

Ground Cover: Under cultivation

Terrain: Flat floodplain

18. Local contact person or organization: NA

19. Photos: No xB/W Color Prints Slides Comments/ID code

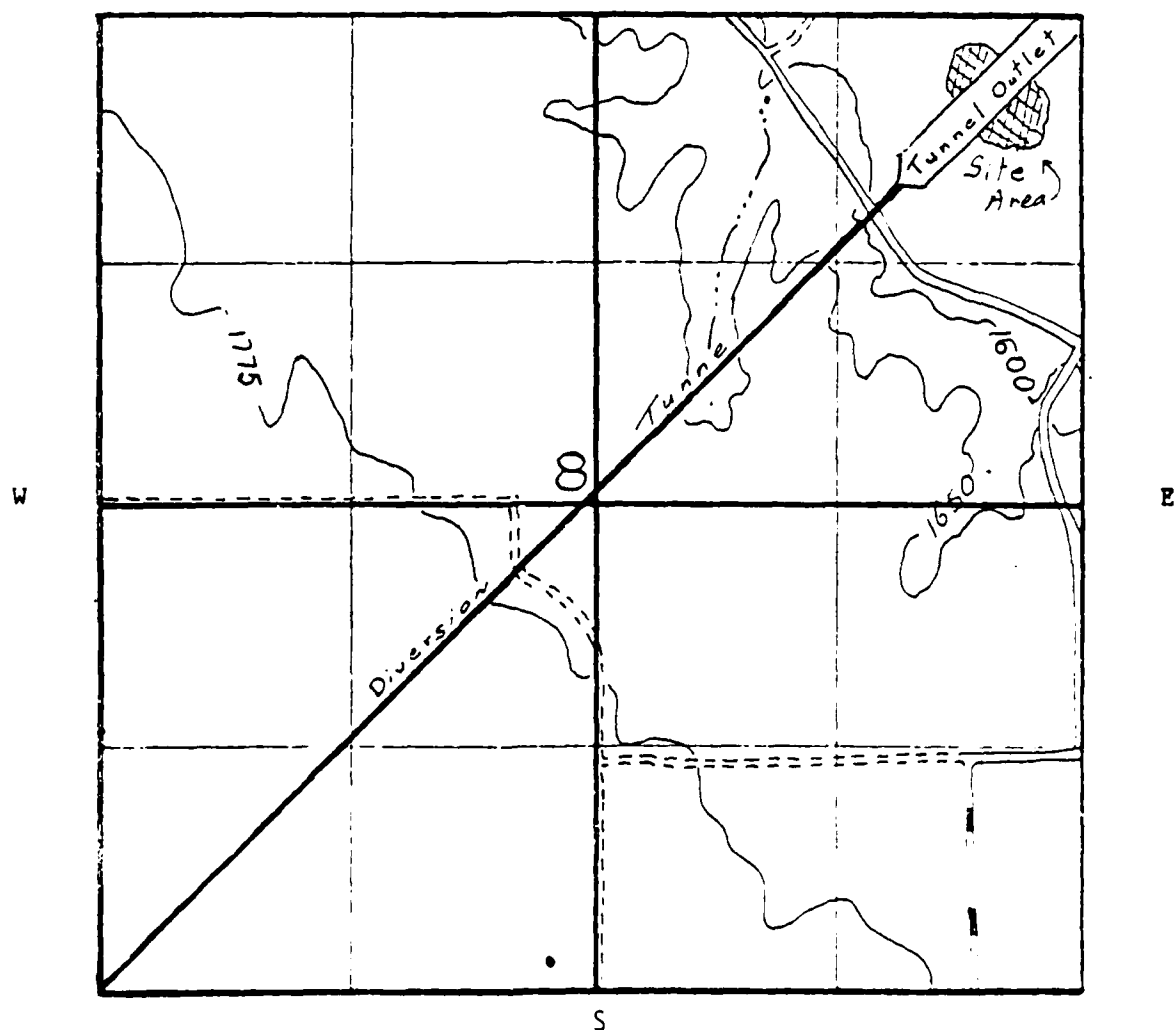
Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



Recorded by: Kent N. Good

Date : : --

Revised by:

Date _____

21. Preliminary cultural assessment: Indeterminate - may be determined through testing.

22. Site Type: Occupation

23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: (5 persons walking plowed field) 2 Knife River flint biface
1 Knife River flint flake

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Scattered bison bone and fire-cracked rock

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 200 meters X 50 meters

How determined: Paced Eyeballed Taped Other From topo map

25. Surface Features Observed: NA

26. Comments/References: Site is rather scattered, but in light of possible construction of the proposed diversion tunnel, the site should be tested. Furthermore, much of the site may be intact in the nearby pasture which is closer to the river. Nothing was observed in the pasture as grass obscured the ground.

Recorded by: Kent N. Good Date 11/11/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____
2. Site Number 32WD402
3. Site Name (s) H.J. Johnson Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 22 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Burlington, North Dakota, travel west side valley road for approximately 3 miles, to the middle of section 22. Proceed on foot to plowed field next to river. Site is presently in a stubble field.
8. A. General description of site: Occupation site composed of thinly scattered bison bone, lithics and artifacts.
- B. Condition of site: Fair to poor (crop obscured ground surface)
9. Owner's name/address: H.J. Johnson, Burlington, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒
13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be revisited after field is plowed as stubble obscures much of the ground surface, for resurvey prior to other recommendations.
17. Environment: Elevation 1575 Nearest Water: Type River
Name Mouse River Distance 200 meters Direction East
Soil conditions: Under cultivation (Stubble - 1977 crop)
Soil Texture: Sandy loam

21. Preliminary cultural assessment: Indeterminate (No diagnostic artifacts or ceramics)

22. Site Type: Occupation (scattered bison bone, lithics, and artifacts)

23. Collection: Time spent collecting: 1 hr(s). Materials collected: One end scraper (Knife River flint), quartzite (river cobble) chopper, quartzite (river cobble) core, and two Swan River chert flakes

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Scattered bison bone, fire-cracked rock

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Indeterminate

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: None

26. Comments/References: Site is in crop with stubble and a lush growth of pigeon grass which obscures the ground. Site should be revisited when the field is plowed (possibly in the spring). This should be accomplished before any assessment as to recommendations is made.

Recorded by: Kent N. Good

Date

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward County 2. Site Number 32WD403
3. Site Name (s) Nygaard Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 14 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Burlington, North Dakota, travel north on Ward County Road #15
for approximately 4 miles to the Lloyd Nygaard farm on left side of road.
Site is in a plowed field adjacent to the farm house and next to the road.
8. A. General description of site: Scattered lithics (flakes and shatter) in
plowed field. Fire-cracked rock and thinnly scattered bison bone also were
observed.
- B. Condition of site: Fair to poor
9. Owner's name/address: Lloyd Nygaard, Rural Burlington, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Flooding by proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested as it is in danger of being inundated by
proposed Burlington Dam
17. Environment: Elevation 1585 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction W
Soil conditions: Plowed field under cultivation
Soil Texture: Sandy loam

Site Number 32WD493

17. Environment, Cont.

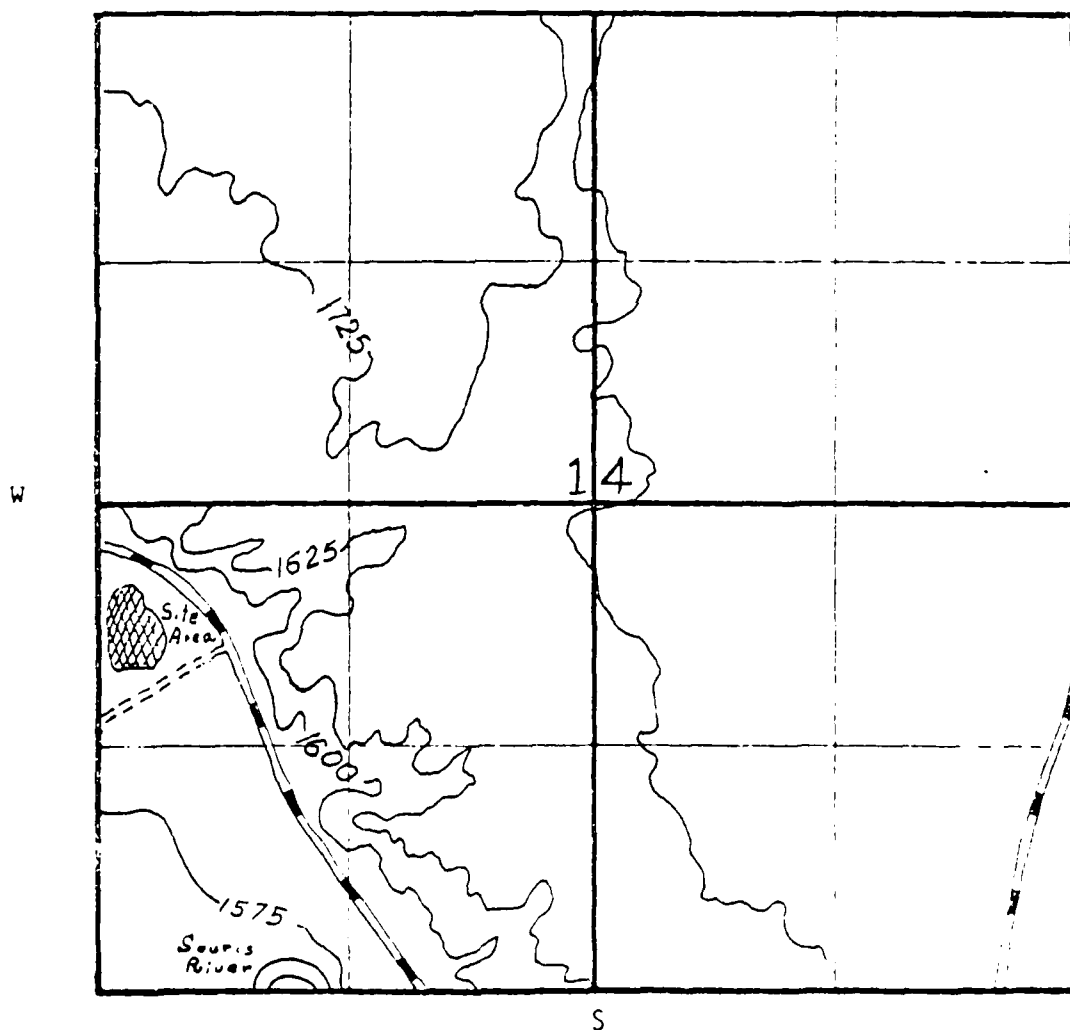
Ground Cover: Under cultivationTerrain: Flat floodplain18. Local contact person or organization: NA19. Photos: No B/W 1 Color 1 Prints Slides Comments/ID codeSlide and print of plowed field.Negatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. GoodDate 11-1-81Revised by: Date

21. Preliminary cultural assessment: Indeterminate as no diagnostic tools or
artifacts were recovered.

22. Site Type: Occupation (composed of flakes and lithic shatter).

23. Collection: Time spent collecting: 1 hr(s). Materials collected:
1 light brown chalcedony modified flake; 1 Knife River flint modified flake;
1 basaltic blade; 1 Swan River chert core; flakes of Swan River chert,
Knife River flint; Tongue River silicified sediment and quartzite.

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Fire-cracked rock and broken bison bone

Collections observed: Material None.

Owner/address: N/A

24. Site size: (Meters, feet-yards, acres) 300 meters X 50 meters

How determined: Paced Eyeballed Taped Other From USGS Topo map

25. Surface Features Observed: NA

26. Comments/References: Site has been heavily collected by curio seekers. Owner
indicated that people had been collecting the site for some length of time.

Recorded by: Kent M. Good Date 1-11-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____ 2. Site Number 32WD404
3. Site Name (s) Schmidt Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: E $\frac{1}{2}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 26 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the bridge at Burlington, North Dakota that crosses the Des Lacs River, proceed northerly on the dirt and gravel road that parallels the Mouse River on the west side of the valley. Proceed on this road for 1 $\frac{1}{2}$ miles. Site is located in a plowed field just several meters east of the road.
8. A. General description of site: Site is situated on a flat (plowed at time of survey) just at the base of the western bluffs of the Mouse River. Much of the land east of the site area is also flat but is in virgin grass land. The site may extend into this area. Site area is also just south of a side drainage of the Mouse River.
- B. Condition of site: Disturbed by plowing.
9. Owner's name/address: Gary Washek and Russ Schmidt
10. Occupant's name/address: Gary Washek, Rural Burlington, North Dakota
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested as tools recovered are McKean Complex. Site is in danger of destruction due to proposed dam construction; See Item #26.
17. Environment: Elevation 1600 Nearest Water: Type River
Name Mouse River Distance 500 meters Direction East
Soil conditions: Plowed
Soil Texture: Sandy gray loam

Site Number 32WD404

17. Environment, Cont.

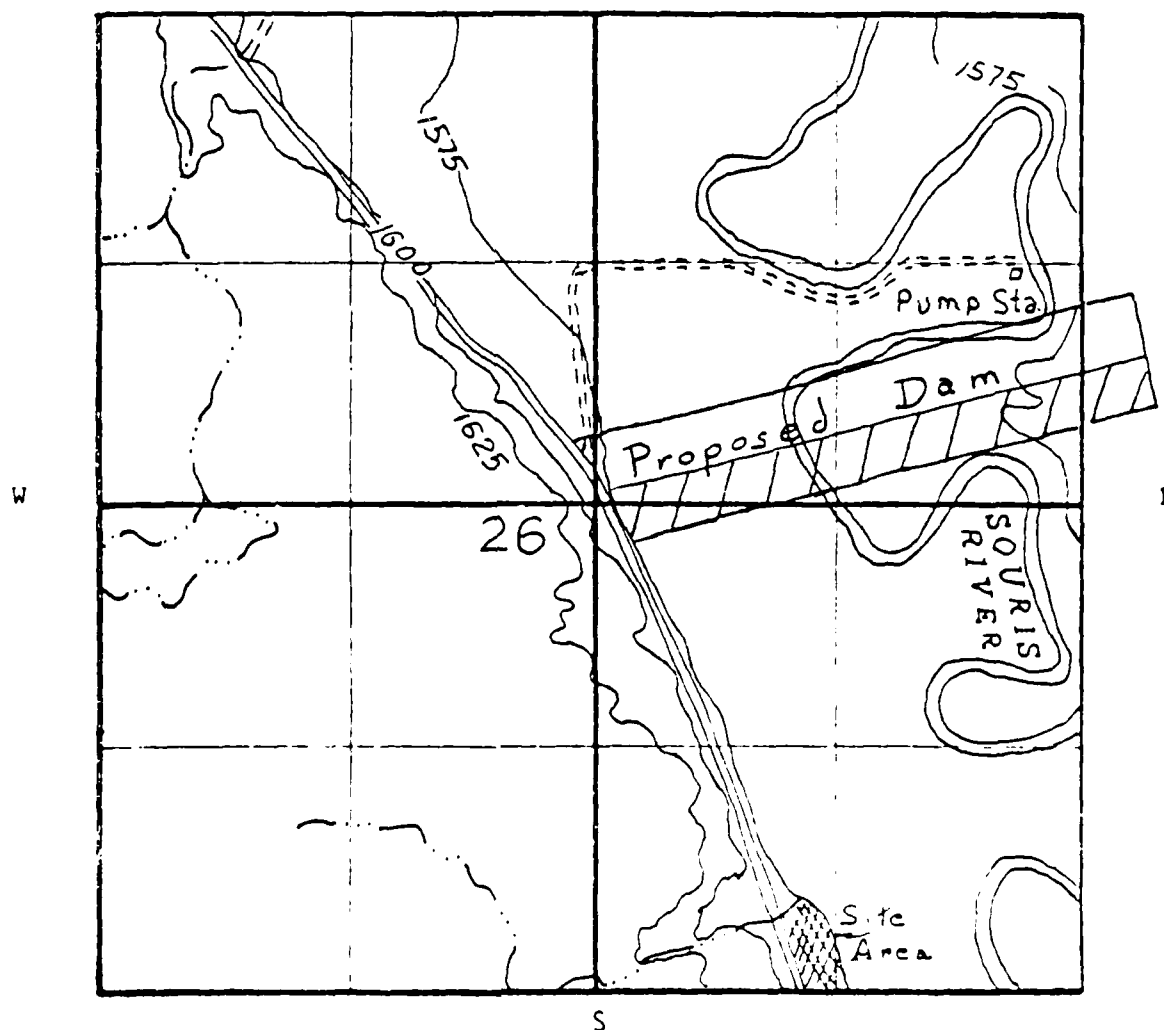
Ground Cover: Plowed field - site may extend easterly into virgin grasslands.Terrain: Flat and sloping toward Mouse River. Mouse River bluffs immediately adjacent to western edge of site. Unimproved road probably has destroyed some portions.18. Local contact person or organization: NA19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Richard Fox

Date _____

Revised by: _____

Date _____

21. Preliminary cultural assessment: May be a multi-component site judging from the variety of projectile points. This suggestion is tenuous, however, because of the poor condition of the specimens.

22. Site Type: Indeterminate

23. Collection: Time spent collecting: 3 men/.75 hr(s). Materials collected: 1 McKean-like specimen (?) - 1 Swan River chert projectile point;
1 broken porcelanite projectile point - corner-notched (?)
1 broken Knife River flint biface
flakes of Swan River chert, Knife River flint, hellow jasper ?, porcellanite

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Several pieces of butchered bone
(unidentifiable)

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Indeterminate

How determined: Paced Eyeballed Taped Other

25. Surface Features Observed: None

26. Comments/References: We also observed numerous pieces of butchered bone in a plowed field approximately 500 meters east of the site. The plowed field was in a very narrow meander (west side) of the Mouse River. No other cultural materials (ie., lithics, ceramics, etc.) were discovered in association with the bone.

*If site is NOT to be disturbed, it should be preserved intact.

If is IS to be disturbed - testing is recommended to determine

NRHP significance

Recorded by: Richard Fox

Date 11-13-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County _____ Ward _____
2. Site Number 32WD405
3. Site Name (s) Stromberg Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NE1/4, SE1/4, SE1/4, SW1/4 Sec. 4 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Foxholm, North Dakota, travel east approximately 3.5 miles on Ward County #8. Turn right on valley road, Ward County #15, for approximately 1 mile. Site is approximately 200 meters south of Stromberg's buildings.
8. A. General description of site: Occupation site indicated by the presence of fire-cracked rock, lithic debris and scattered broken lithic tools. Bison bone is scattered over the site.
- B. Condition of site: Under cultivation
9. Owner's name/address: Myron Stromberg, Foxholm, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒
13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Areas adjacent to the area under cultivation should be tested.
17. Environment: Elevation 1580 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction W
Soil conditions: Under cultivation
Soil Texture: Clayey loam

Site Number 32WD465

17. Environment, Cont.

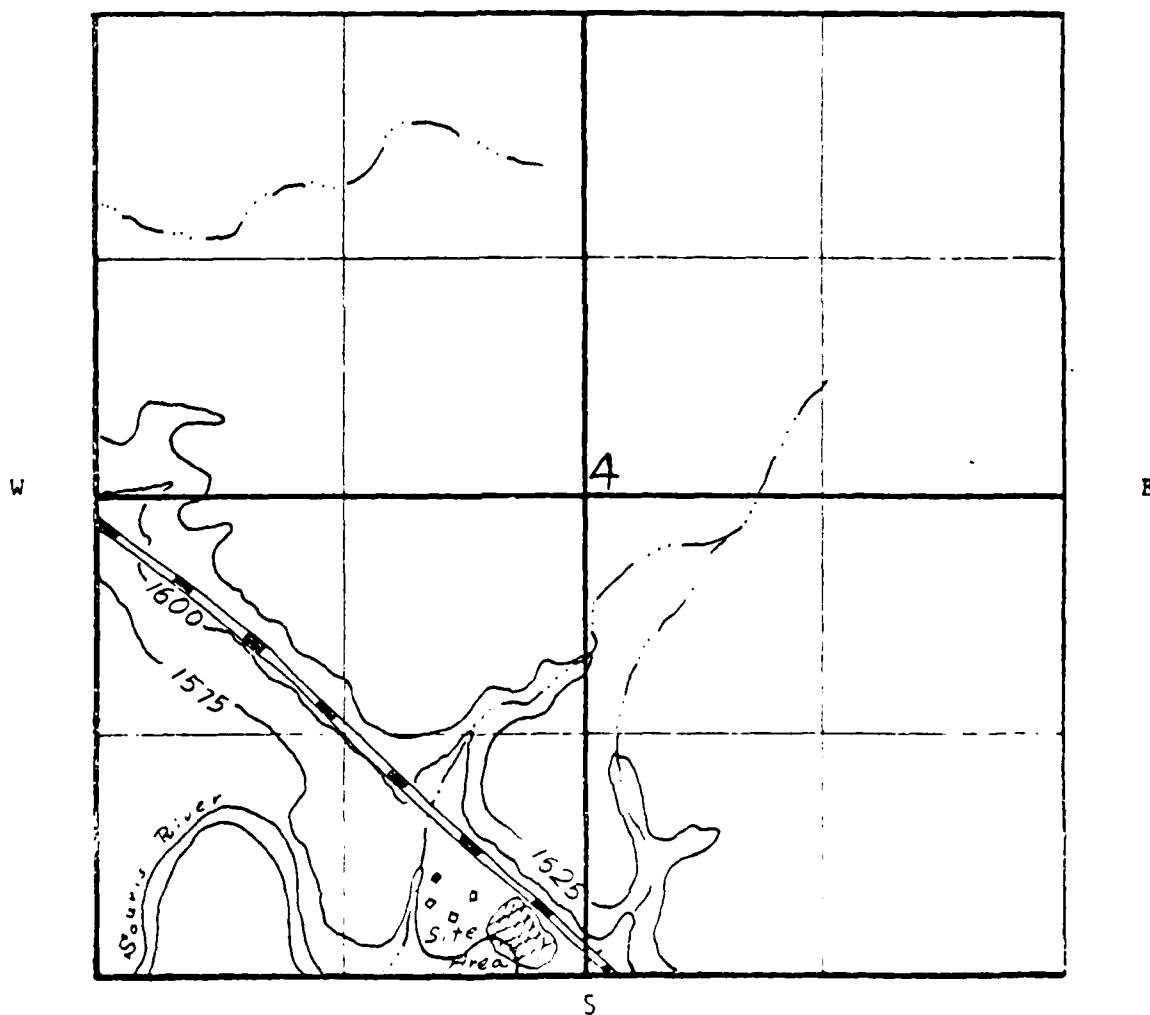
Ground Cover: Under cultivation (summer fallow)Terrain: Slightly hilly floodplain18. Local contact person or organization: NA19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. Good

Date _____

Revised by: _____

Date _____

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Occupation
23. Collection: Time spent collecting: 1 hr(s). Materials collected: 1 Knife River biface, 2 Swan River chert bifaces; 1 quartzite (river cobble) core; flakes of Swan River chert, Knife River flint, quartzite
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: fire-cracked rock, bone, shatter
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 200 meters X 100 meters
How determined: Paced Eyeballed Taped Other From USGS Topo map
25. Surface Features Observed: None
26. Comments/References: Unusually large quantity of fire-cracked rock in respect to the amount and types of other artifacts, bone is rather scarce; shatter in large quantity
- Recorded by: John Kjos Date 10-22-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD406
3. Site Name (s) Pritschet II Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 5 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Foxholm, North Dakota, travel east approximately 3 $\frac{1}{2}$ miles on Ward County #8. Turn right on valley road (Ward County #15) for approximately $\frac{1}{2}$ mile. Site is in a plowed field adjacent the river (See Number 6).
8. A. General description of site: Site is composed of widely scattered bison bone, fire-cracked rock, all located in a plowed field.
- B. Condition of site: Fair
9. Owner's name/address: John and Richard Pritschet, Foxholm, N.D.
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Burlington Dam proposed project
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested in 1974 or 1975, next to plowed field (since it will be inundated) for NRHP and/or salvage potential.
17. Environment: Elevation 1575 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction
Soil conditions: Under cultivation and in pasture
Soil Texture: Clayey loam

Site Number 32WD-06

17. Environment, Cont.

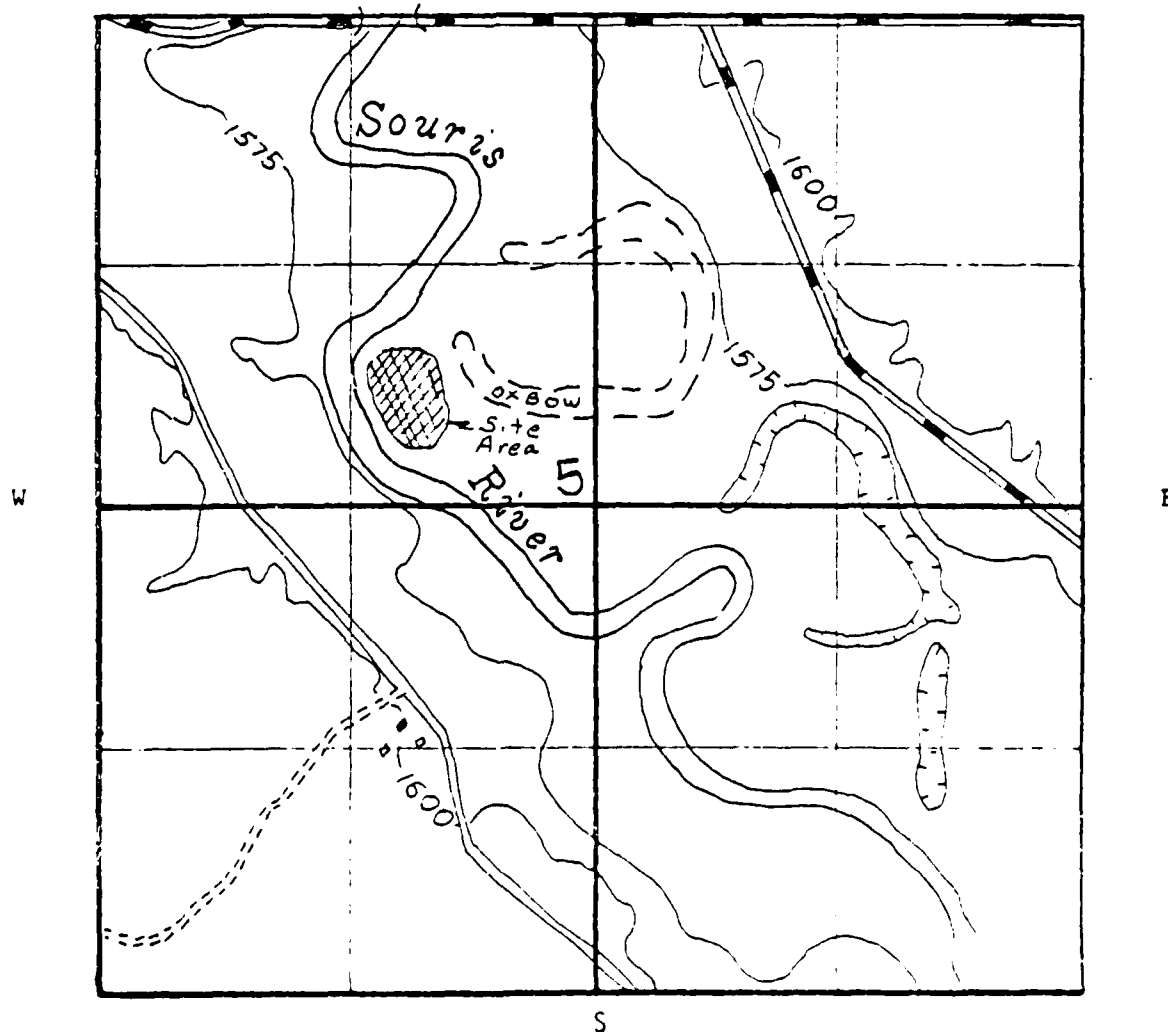
Ground Cover: Plowed field (summer fallow)Terrain: Flat floodplain adjacent the Mouse River18. Local contact person or organization: NA19. Photos: No XB/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. GoodDate 10/17/01Revised by: Date

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Occupation - composed of fire-cracked rock, scattered lithics, tools, and widely scattered bison bone.
23. Collection: Time spent collecting: 1 hr(s). Materials collected: 1 light brown chalcedony end scraper; 1 quartzite (river cobble) hammerstone and 1 core; flakes of Swan River chert, Knife River flint, quartzite and procellanite
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Fire-cracked rock, bison bone.
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 500 meters X 300 meters
How determined: Paced Eyeballed Taped Other From USGS Topo map
25. Surface Features Observed: NA
26. Comments/References: Although bison bone was quite abundant, it is scattered over a wide area. Lithics and tools are thinly scattered, however plowing may have just penetrated cultural zone. Condition of the field makes it very difficult to collect since it is very cloddy due to plowing. Site should be tested in undisturbed adjacent area.

Recorded by: Kent N. GoodDate: 11/11/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD407
3. Site Name (s) Washek Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ Sec. 25 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Burlington, North Dakota, travel approximately 2 miles north on Ward County #15 to the Washek farm on the west side of the road. Site is in a plowed field north of the farm house approximately 400 meters.
8. A. General description of site: Scattered lithics, bison bone, and shatter exposed in a plowed field.
- B. Condition of site: Fair to poor.
9. Owner's name/address: Gary Washek, Rural Burlington, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam construction area.
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: SEE Item #26.
17. Environment: Elevation 1580 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction East
Soil conditions: Under cultivation
Soil Texture: Sand/loam

Site Number 32WD407

17. Environment, Cont.

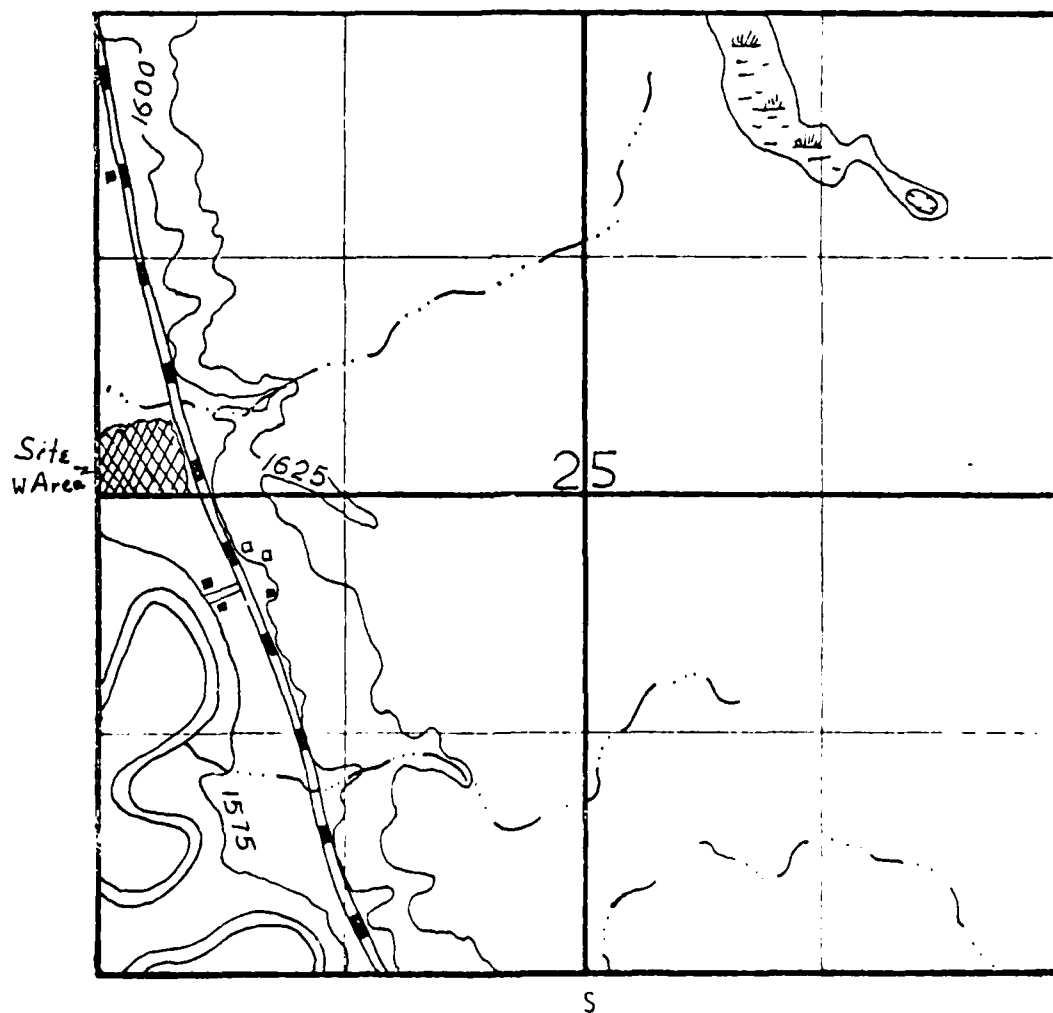
Ground Cover: Under cultivation (summer fallow)Terrain: Slightly hilly floodplain18. Local contact person or organization: NA19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Recorded by: Kent N. Good Date 10-20-77

Revised by: _____ Date _____

21. Preliminary cultural assessment: Indeterminate
22. Site Type: Occupation - composed of scattered lithics, bison bone and shatter.
23. Collection: Time spent collecting: 1 hr(s). Materials collected: 1 Knife River chert core; 1 Knife River flint modified flake; flakes of Swan River chert, Knife River flint, and light brown chalcedony
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Large river cobble and broken (shatter) bison bone.
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 200 meters X 100 meters
How determined: Paced Eyeballed Taped Other From USGS Topo map
25. Surface Features Observed: NA
26. Comments/References: This site is remarkably similar to 32WD405 and 32WD406. We have recommended limited testing in these areas. If these prove fruitless, then there is no reason to probe the subsurface at the Washek Site. If substantial deposits are found at the other two sites, then tests might be necessary here because the site will be inundated. Any other recommendations should be forthcoming after inspecting 32WD405 and 32WD406.
- Recorded by: Kent N. Good Date 10-20-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD408
3. Site Name (s) Big Critter Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Carpio N.E. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: E $\frac{1}{2}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 6 T 157 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From the access road to the Refuge Hdqts., proceed east on paved road for .13 miles. Then turn right (south) and proceed on service road (official use only) for $\frac{1}{4}$ mile. Then turn right (west) and proceed on unimproved road that leads to abandoned camp/picnic area for .15 miles. Site area with additional embedded bone is located approximately 10-20 meters to your left (southerly) near a lone bush.
8. A. General description of site: Site is located on a large flat that abuts the Mouse River. Flat is dissected by an old river channel. Faunal and lithic evidence came from the portion of the plot that lays between the old channel and the present river. There are several gravel pits in the area.
- B. Condition of site: Virgin prairie grasses, undisturbed
9. Owner's name/address: Upper Souris National Wildlife Refuge, Dept. of Int., Foxholm, N
10. Occupant's name/address: NA
11. Historic Register value: Nat. ☐ State ☐ Undt. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam, Proposed Borrow area (previous).
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Senneider
Other surveys in which included NA
16. Recommendations: Site area should be mowed and selectively tested to determine NRHP and/or salvage recommendations.
17. Environment: Elevation 1590-1605 Nearest Water: Type River
Name Mouse River Distance Adjacent Direction West
Soil conditions: Undisturbed
Soil Texture: Undetermined

Site Number 32WD408

17. Environment, Cont.

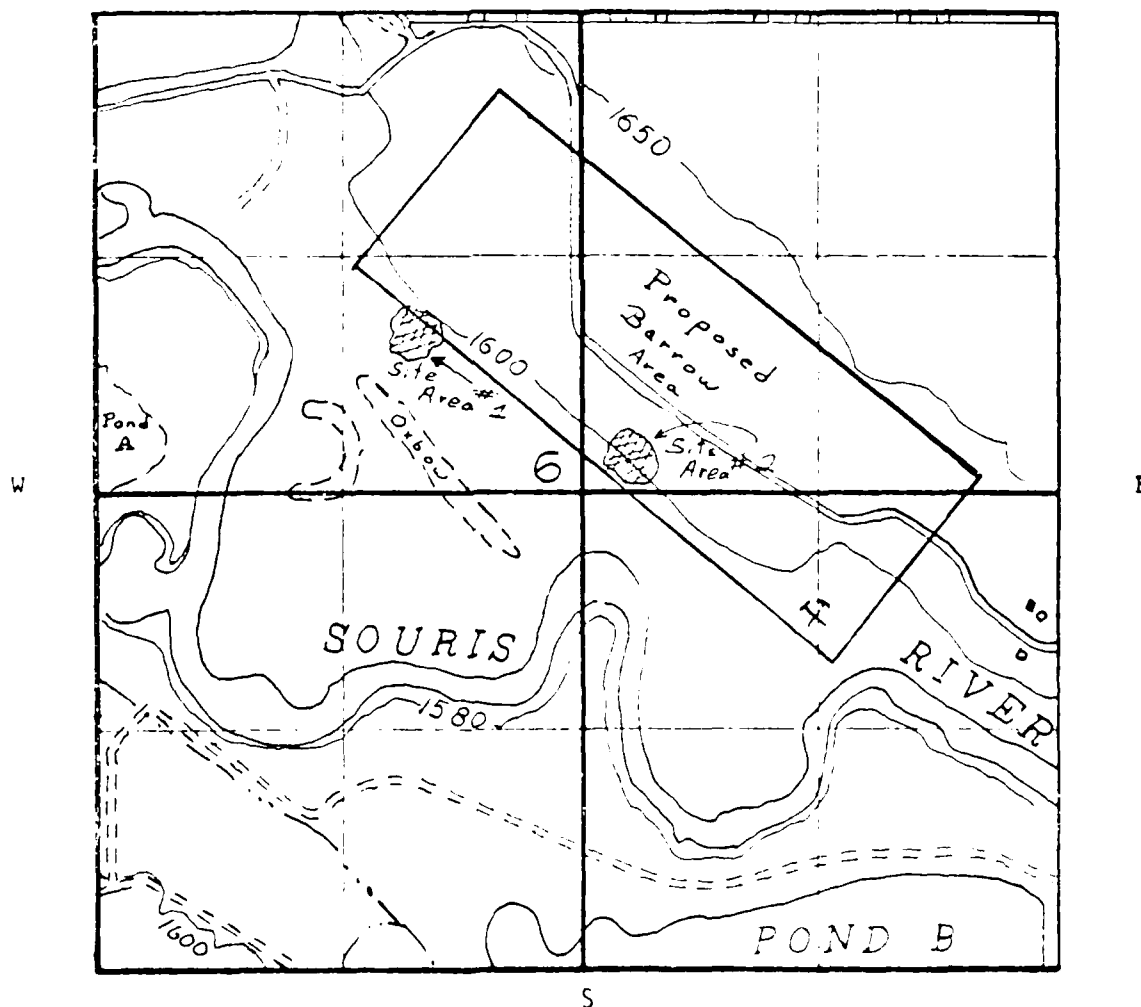
Ground Cover: Dense stands of 1' to 2' high western wheatgrass, buck brushTerrain: Flat and sloping slightly to the Mouse River18. Local contact person or organization: Refuge Headquarters at dam site19. Photos: No XB/W Color Prints Slides Comments/ID code Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N

Drawn by: Richard FoxDate 11/1/77Checked by: Date

21. Preliminary cultural assessment: Indeterminate

22. Site Type: Butchering or kill area (?)

23. Collection: Time spent collecting: 3 men/0.4 hr(s). Materials collected: Flakes of Knife River flint and Swan River chert;

Equus caballus: numerous bones, mandible (1), maxillary (1)

Artifacts stored at: Anthropology/Archaeology Department, UND

Materials observed, but not collected: Vertebrae and other bones that are embedded and obscured by the prairie grasses - perhaps 1 individual.

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) Indeterminate - should consider entire lower

flat as potential site until demonstrated
How determined: Paced Eyeballed Taped Other otherwise

25. Surface Features Observed:

None - the bone and flakes were discovered in two different areas. Area #2 is located approximately 75-100 meters south of a fence (in disrepair) in the form of a square (square is approximately 35 feet²). Area #1 is located just to the south of road that leads to abandoned picnic area in the trees near the river. See sketch map.

26. Comments/References: This site is obscured by dense prairie grasses. The 3 flakes found were found in several of the scarce burrow backfill areas throughout the site. Although only a few flakes were found, it is believed that the thick grasses are obscuring significant subsurface cultural deposits. There remain additional bone pieces that are deeply embedded in the sod. Some of the cancellous bones were laying on the surface. They exhibit gnawing (coyotes ?) at the cancellous areas. It is suspected that these were removed from the sod by predators.

Recorded by: Richard Fox

Date 12-21-77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD409
3. Site Name (s) Gardner Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Carpio, N.E. Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: NW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 34 T 157 N / R 84 W
Plat: Block Lot
UTMG: A. B.
C. D.
7. Access: Proceed east on Ward County #8 for 2.95 miles from Foxholm, North Dakota.
Site is located on both sides of road on plowed flats.
8. A. General description of site: Site is located in what is presently a plowed field that is dissected by Ward County Road #8. The field is an alluvial flat on the west side of the Mouse River. There is a small amount of butchered bison bone scattered about, particularly on north side of #8. There is additional bone on plowed flats to the north on both sides of Mouse River.
- B. Condition of site: Disturbed by plowing.
9. Owner's name/address: Upper Souris National Wildlife Refuge, Dept. of Int., Foxholm, N.D.
10. Occupant's name/address: NA
11. Historic Register value: Nat. ☐ State ☐ Undt. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Proposed Burlington Dam and plowing.
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Site should be tested as it is in danger of inundation by proposed Burlington Dam.
17. Environment: Elevation 1575 Nearest Water: Type River
Name Mouse River Distance 20 meters Direction East
Soil conditions: Plowed field
Soil Texture: Clayey loam

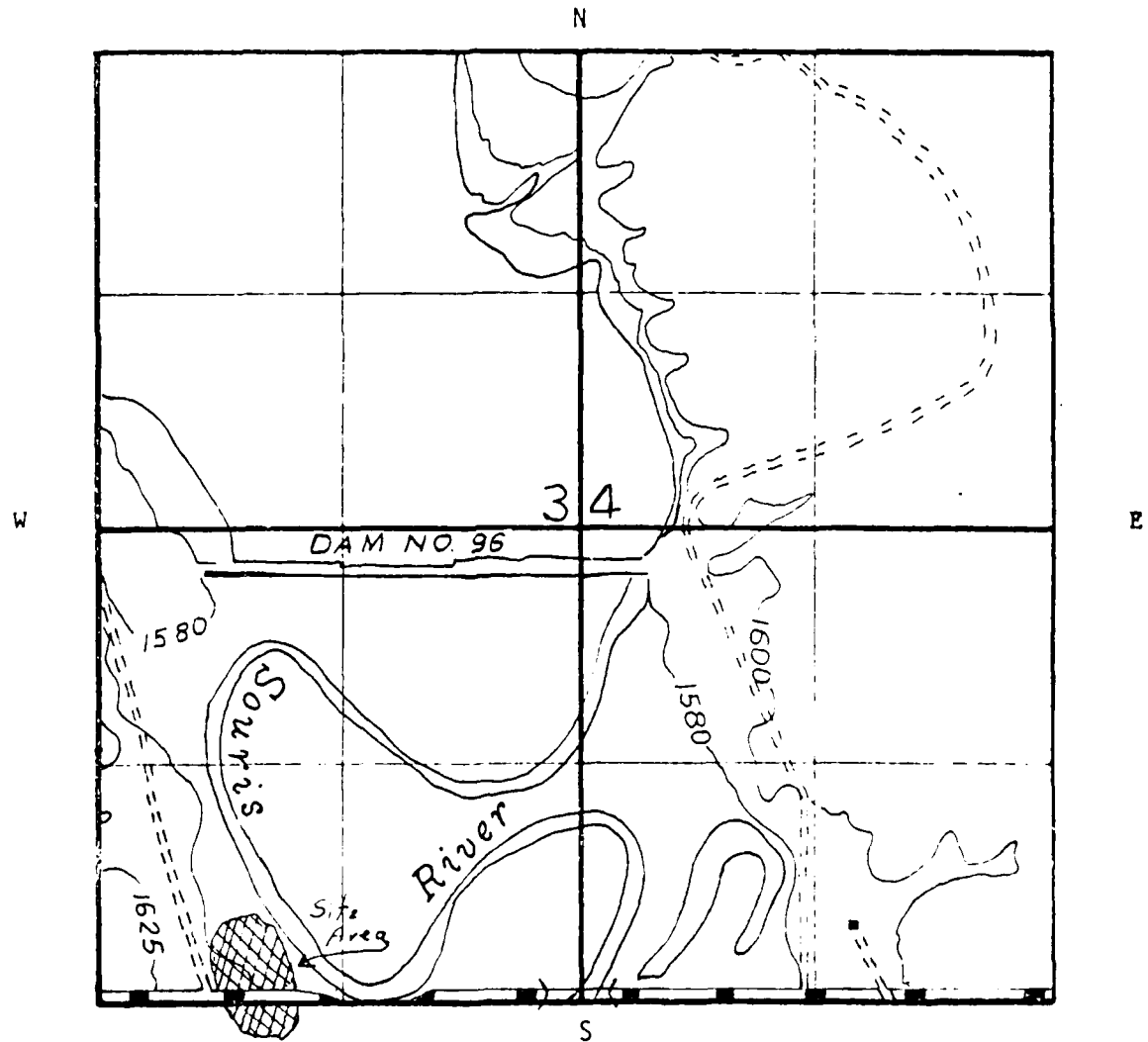
Site Number 32WD469

17. Environment, Cont.

Ground Cover: BareTerrain: Flat18. Local contact person or organization: Refuge Headquarters - Dam site19. Photos: No X B/W Color Prints Slides Comments/ID code _____Negatives stored at: NA

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Richard FoxDate 10 11 77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Unknown
22. Site Type: Probably a butchering area.
23. Collection: Time spent collecting 4 men/0.3 hr(s). Materials collected:
1 Swan River chert biface; flakes of Knife River flint and quartzite;
1 antler tine (possible knapping tool).
- Artifacts stored at: Anthropology/Archaeology Department, UND
- Materials observed, but not collected: Butchered bison bone.
- Collections observed: Material None.
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) 150 meters X 75 meters
How determined: Paced Eyeballed ☒ Taped Other
25. Surface Features Observed: None
26. Comments/References: Flat has probably been inundated periodically by flooding of
Mouse River.
- Recorded by: Richard Fox Date 10/11/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Base Data Form

1. County Ward 2. Site Number 32WD411
3. Site Name (s) Hoelscher Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Burlington Quadrangle, USGS 7.5 Minute Topo, 1949
6. Location: N $\frac{1}{2}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ Sec. 3 T 156 N / R 84 W
Plat: _____ Block _____ Lot _____
UTMG: A. _____ B. _____
C. _____ D. _____
7. Access: From Foxholm, North Dakota, travel east on Ward County #8 for approxi-
mately 4 $\frac{1}{2}$ miles until reaching first ranch house on right hand side of road.
From ranch house, travel approximately 1 mile south through a cattle lane until
reaching a pasture (through two gates). First ring is approximately 40 meters
south of second gate. Remaining rings to the west of gate.
8. A. General description of site: Three tipi rings in a pasture with no associated
cultural material. One ring is in good condition. The other two rings are
jumbled.
- B. Condition of site: Good to fair
9. Owner's name/address: Ernest Hoelscher, Foxholm, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☒ None ☐ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Site is not endangered.
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: None - site is not endangered.
17. Environment: Elevation 1740 Nearest Water: Type River
Name Mouse River Distance 1 kilometer Direction West
Soil conditions: Pasture
Soil Texture: Sandy loess intermixed with gravel.

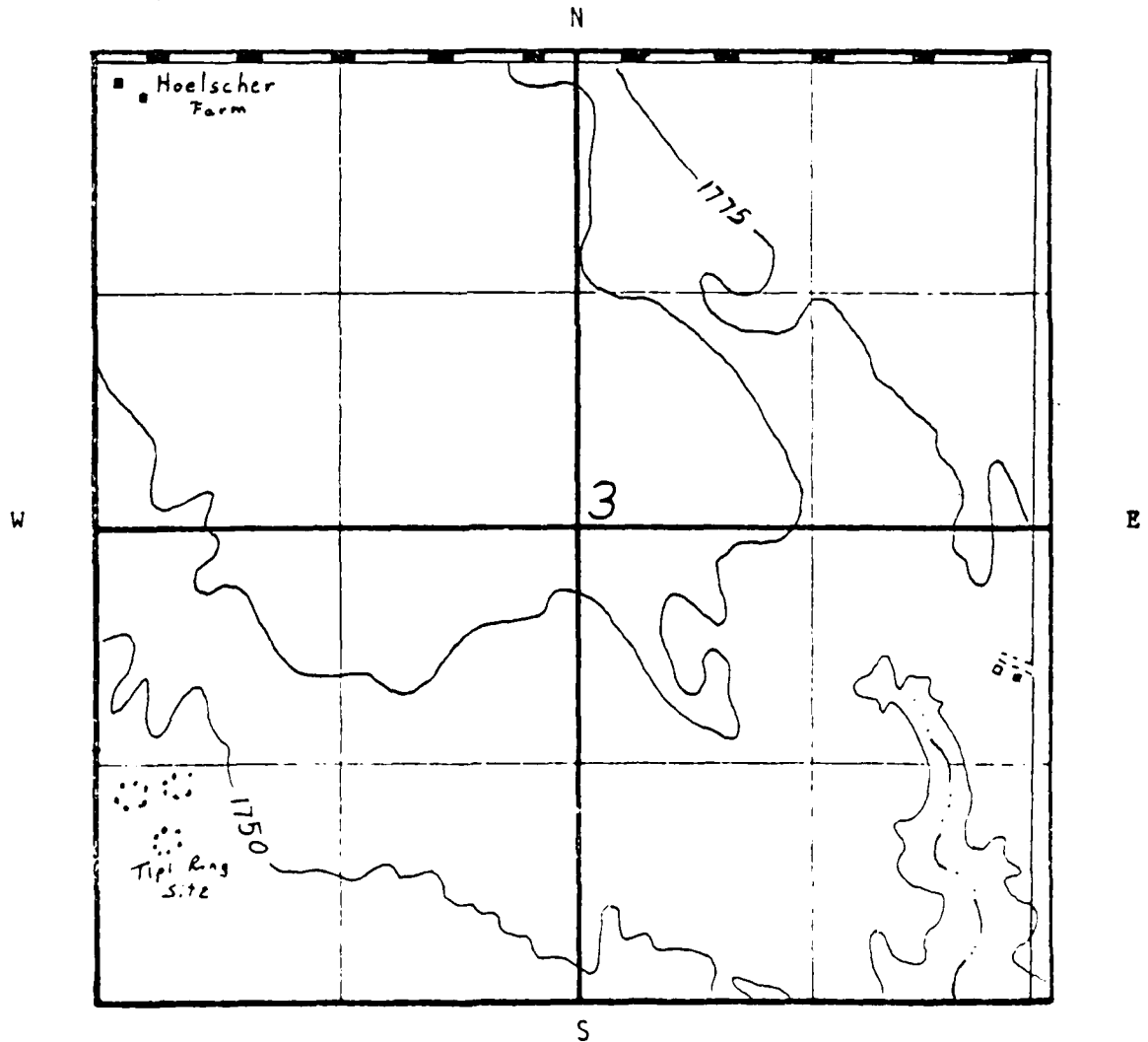
Site Number 32WD411

17. Environment, Cont.

Ground Cover: Short prairie grasses and forbes (heavily grazed)Terrain: Flat area immediately before river bluffs18. Local contact person or organization: Ernest Hoelscher19. Photos: No B/W 1 Color 1 Prints Slides Comments/ID code Slides of square tipi ring.Negatives stored at: Anthropology/Archaeology Department, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 sectionRecorded by: Kent N. GoodDate 10/19/77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Plains Nomadic

22. Site Type: Tipi rings - composed of three circular configurations of stone.

23. Collection: Time spent collecting: 1/2 hr(s). Materials collected: _____
None observed.

Artifacts stored at: NA

Materials observed, but not collected: NA

Collections observed: Material None

Owner/address: NA

24. Site size: (Meters, feet-yards, acres) 300 meters between Ring #1 and Ring #2.

How determined: Paced Eyeballed ☒ Taped Other

25. Surface Features Observed: Three circular configurations of stone, slightly jumbled by grazing activities.

26. Comments/References: A square configuration of stone is in association with the tipi rings which has been interpreted as being a rock foundation to a grainery. An associated rock cairn is also observable near the tipi rings, but it has not been determined whether or not it is prehistoric. The site is not in danger of being destroyed.

Recorded by: Kent N. Good

Date 10/19/77

NORTH DAKOTA CULTURAL RESOURCES SURVEY
CONTINUATION FORMPage 4Site 32WD411

Rock Cairn: 26 visible rocks, 1.8 meters E-W X 1.4 meters N-S.

Tipi Ring Dimensions:

Ring Number:	# of Rocks:	Diameter:
1	39 (jumbled)	5.0 meters
2	(jumbled)	--
3	(jumbled)	--

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Page 1

Base Data Form

1. County Ward 2. Site Number WWD412
3. Site Name (s) Foxholm Overlook Tipi Ring Site
4. Type of Resource: A. Archaeological ☒ Historical ☐ Architectural ☐ Paleontological ☐
B. District ☐ Site ☒ Building ☐ Structure ☐ Object ☐
5. Map Reference: Des Lacs Quadrangle, USGS 7.5 Minute Topo, 1950
6. Location: NW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 31 T 157 N / R 85 W
Plat: Block Lot
UTMG: A. B.
C. D.
7. Access: From Foxholm, North Dakota, proceed for 0.32 miles from bridge that crosses Des Lacs River in a northeasterly direction. Road is paved to edge of town, then graveled. Turn left and proceed up the bluffs for approximately 100 meters. This road parallels a fence line; cross fence at yellow buried cable sign and walk west for 20 meters. Tipi ring is situated on a finger of land.
8. A. General description of site: Large tipi ring is situated on a finger of land that protrudes southerly into Des Lacs River valley. Affords excellent view of (several miles) up and down valley and uplands beyond. There are 56 rocks composing the ring and measurement is 6.5 meters in diameter. Rocks are well embedded.
- B. Condition of site: Undisturbed.
9. Owner's name/address: George Gorde, Foxholm, North Dakota
10. Occupant's name/address: Same
11. Historic Register value: Nat. ☐ State ☐ Untd. ☐ None ☒ On Reg. ☐ In District ☐ District ☐
12. Open to public: Yes ☐ No ☒ 13. Preservation Underway: Yes ☐ No ☒
14. Endangered by: Not endangered
15. Survey Project: Title Lake Darling/Burlington Dam Director Fred Schneider
Other surveys in which included NA
16. Recommendations: Leave site undisturbed.
17. Environment: Elevation 1760 Nearest Water: Type River
Name Des Lacs River Distance 700 meters Direction South
Soil conditions: Virgin prairie
Soil Texture: Gravelly loam

Site Number 32WD412

17. Environment, Cont.

Ground Cover: Pasture, short prairie grasses

Terrain: Bluff overlook, ring on a slight sloping finger of land.

18. Local contact person or organization: _____

19. Photos: No B/W X Color X Prints Slides Comments/ID code _____

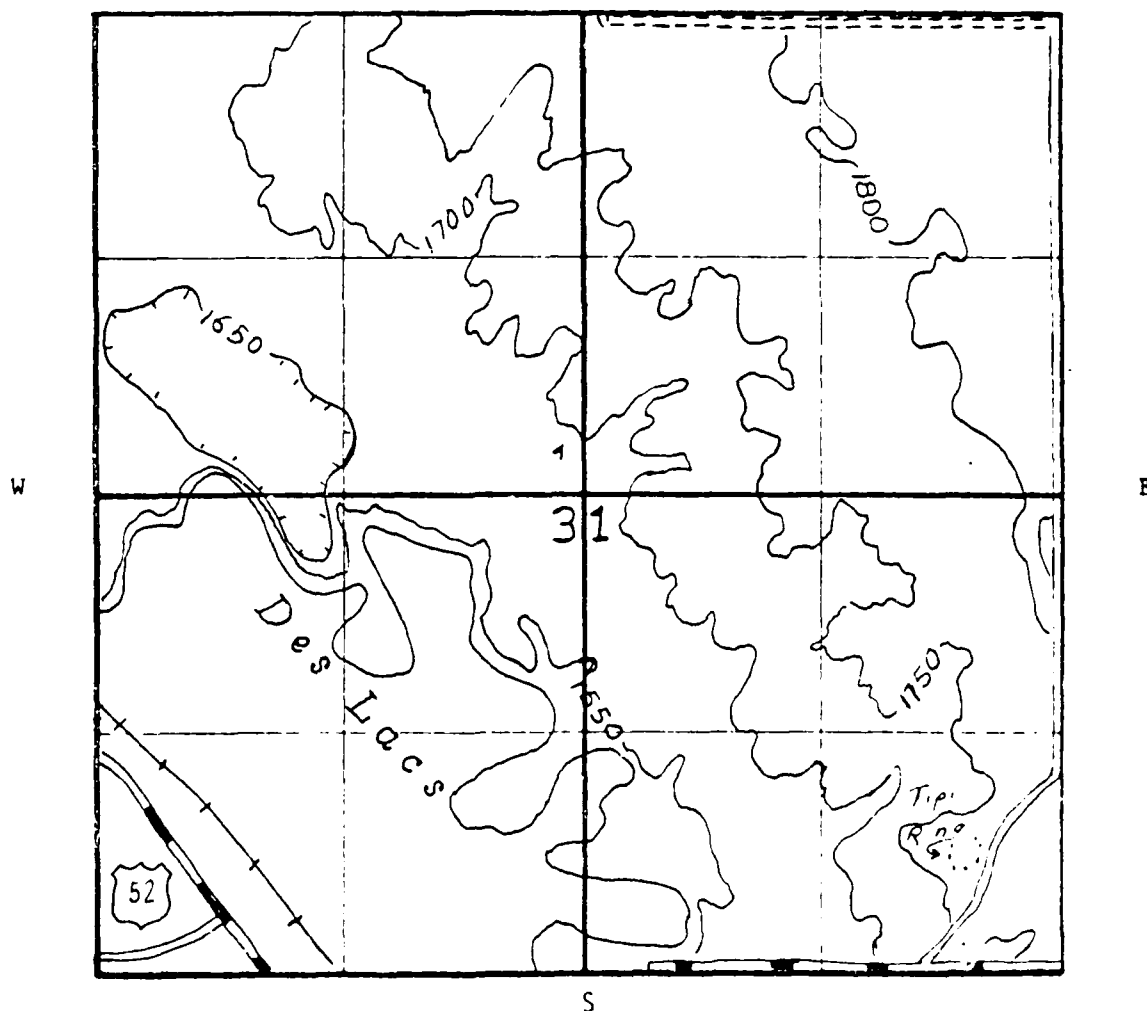
Negatives stored at: Department of Anthropology/Archaeology, UND

In space below attach and identify a picture or contact print of the site.

20. Sketch Map of Site:

Scale: Large square = 1 section

N



Recorded by: Richard Fox

Date 11/14/77

Revised by: _____

Date _____

21. Preliminary cultural assessment: Plains Nomadic
22. Site Type: Tipi ring (one ring)
23. Collection: Time spent collecting: 4 men/0.2hr(s). Materials collected: None
- Artifacts stored at: NA
- Materials observed, but not collected: None
- Collections observed: Material None
- Owner/address: NA
24. Site size: (Meters, feet-yards, acres) See Item 8.
How determined: Paced Eyeballed Taped ☒ Other
25. Surface Features Observed: One tipi ring - See Item 8.
26. Comments/References: This ring was noticed while returning from work and is not
in conjunction with or in an area effected by the proposed Burlington Project.
- Recorded by: Richard Fox Date 10-19-77