



US Army Corps
of Engineers
Omaha District

AD-A206 966

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Cultural Resource Reconnaissance of U.S. Army Corps of Engineers Land
Alongside Lake Sakakawea in Dunn County, North Dakota

Volume 2: Appendix B (32DU723) through Appendix M

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by

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With contributions by: Loren Horton, Everett White,
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November 1988

Prepared for

U.S. Army Corps of Engineers, Omaha District
Contract Number DACW45-85-C 0304

Archeology Laboratory of the Center for Western Studies,
Augustana College, Sioux Falls, SD

Archeological Contract Series Number 23

99

CULTURAL RESOURCE RECONNAISSANCE

OF

U.S. ARMY CORPS OF ENGINEERS LAND

ALONGSIDE LAKE SAKAKAWEA

IN

DUNN COUNTY, NORTH DAKOTA

VOLUME 1: MAIN REPORT

by

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NOVEMBER 1987

Prepared for
U.S. ARMY CORPS OF ENGINEERS, OMAHA DISTRICT
CONTRACT NUMBER DACW45-85-C-0304

ARCHEOLOGY LABORATORY OF THE CENTER FOR WESTERN STUDIES,
AUGUSTANA COLLEGE, SIOUX FALLS, SD

ARCHEOLOGICAL CONTRACT SERIES NUMBER 23

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REPORT DOCUMENTATION PAGE			READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) CULTURAL RESOURCE RECONNAISSANCE OF U.S. ARMY CORPS OF ENGINEERS LAND ALONGSIDE LAKE SAKAKAWEA IN DUNN COUNTY, NORTH DAKOTA		5. TYPE OF REPORT & PERIOD COVERED Final 8/85-11/87	
7. AUTHOR(s) R. Peter Winham, Kerry Lippincott, L. Adrien Hannus and Edward J. Lueck		6. PERFORMING ORG. REPORT NUMBER ALCWS Contract Series: 23	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Archeology Laboratory of the Center for Western Studies, Augustana College, 2032 South Grange Ave., Sioux Falls, South Dakota 57105		8. CONTRACT OR GRANT NUMBER(s) DACW45-85-C-0304	
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Department of the Army, Omaha District Corps of Engineers, 1612 U.S. Post Office & Courthouse, Omaha, Nebraska 68102-4978		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE November 1987	
		13. NUMBER OF PAGES 2,426 Vol. 1=652 Vol. 2=1,774	
		15. SECURITY CLASS. (of this report)	
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report)			
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)			
18. SUPPLEMENTARY NOTES			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		Plains Woodland	
Archeology	Dunn County	National Register	Preservation
Artifact Scatters	Eagle Trapping	North Dakota	Reconnaissance
Cairns	Historic	Paleoindian	Stone Circles
Campsites	Lake Sakakawea	Plains Archaic	Survey
Cultural Resources	Late Prehistoric	Plains Village	Trunk Burials
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)			
A cultural resource reconnaissance of the right (south) bank of Lake Sakakawea in Dunn County, North Dakota, including Corps lands alongside the inundated Little Missouri River, was undertaken by the Archeology Laboratory of the Center for Western Studies, Augustana College, Sioux Falls, SD for the U.S. Army Corps of Engineers, Omaha District, between July 1985 and June 1986. The area surveyed was approximately 35 square miles, and included over 190 miles of shoreline. The survey located 163 new sites and evaluated 32 previously recorded sites. (continued)			

20. ABSTRACT (continued)

The majority of the sites were classified as artifact scatters and rock cairns. Two earthlodge villages are present in the survey area. Eagle trapping pits, prehistoric stone circles (tipi rings), Historic Native American trunk burials and cemeteries, and various Euro-American historic sites were also represented.

Sites were analyzed for locational patterns and a management plan was developed. Shoreline and badlands erosion are the major adverse effects occurring at a number of sites, several of which are considered potentially eligible for nomination to the National Register of Historic Places.

ABSTRACT

A cultural resource reconnaissance of the right (south) bank of Lake Sakakawea in Dunn County, North Dakota, including Corps lands alongside the inundated Little Missouri River, was undertaken by the Archeology Laboratory of the Center for Western Studies, Augustana College, Sioux Falls, SD for the U.S. Army Corps of Engineers, Omaha District (contract no. DACW45-85-C-0304), between July 1985 and June 1986. The area surveyed was approximately 35 square miles, and included over 190 miles of shoreline. The survey located 163 new sites and evaluated 32 previously recorded sites.

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ACKNOWLEDGEMENTS

A survey of this magnitude involves interacting with numerous people during the project's organization and implementation. We would like to acknowledge the help and cooperation of the following groups and individuals: The Fort Berthold Tribal Council (particularly tribal chairman, Alyce Spotted Bear, and council members, John Charging, Pete Coffey, Sr., and Edmund White Bear); U.S. Army Corps of Engineers Archeologists, Becky Otto (Omaha, NE) and Virginia Gnabasik (Riverdale, ND); staff at the North Dakota Heritage Center (especially Signe Snortland-Coles, Chris Dill and Lynea Geinert); and staff at the Soil Conservation Service offices in Killdeer and Stanley, ND and at the Dunn County Courthouse in Manning. Rebecca L. Johnson provided excellent illustrations; Glen Wika offered advice on the SPSS program; Dr. John Gregg analyzed some skeletal material; and Bill Soeffing added his expertise to the computer analyses. We thank John Butterbrodt for supplying and operating the boat in 1985.

F.A. Calabrese, Director of the Midwest Archeological Center at Lincoln, Nebraska, generously permitted use of the Center's photocopying equipment. Thomas W. Haberman, South Dakota Archaeological Research Center, loaned us the Center's copy of the report of his 1974 investigations. Patrick Hemmy of the Bureau of Indian Affairs (Aberdeen Area Office) helped us obtain copies of several reports concerning the Fort Berthold Reservation. Thanks also go to the operators of the campgrounds at which the crews were based - Slater's Resort and McKenzie Marina.

Special thanks to Karen Fox and Adeline Brunsell at the Acquisition and Disposal Section of the Bureau of Indian Affairs, New Town, for their help with plat maps and ownership records; and to Al McKay and Noah Williams of the Three Affiliated Tribes for ownership and access assistance. The following individuals provided information on sites and finds from the area: Father Stephen, Gerard Baker and Warren Renburger. The following landowners gave access permission to the survey crews: Frank and Lois Benson, Henry Bolman, Kingdon Blackhawk, Cynthia Frederiche Danks, Anton Fettig, Albert Fox, Angus Fox, Pete Frederichs, Tony Hale, Leonard James, Wilfred Kisse, Bob Lincoln, Keith Mandan, Doug McGrady, Lonnie Spotted Bear, Irvin Voigt and Mr. Walker.

Solicitation number DACW45-85-R-0005 was issued by the U.S. Army Corps of Engineers, Omaha District, in May 1985. The scope-of-work (Appendix H) defined the project to be undertaken as a "cultural resources reconnaissance (Class II Inventory) of the right (south) bank of Lake Sakakawea in Dunn County, North Dakota" (Figures 1 and 2). The reconnaissance was to consist of a literature search, a 100 percent field examination, data analysis and a comprehensive report. The Archeology Laboratory of the Center for Western Studies (ALCWS) submitted a proposal in response to this solicitation (Appendix I) which outlined a specific research and management plan for the work. The award of this contract (DACW45-85-C-0304) was made on August 1, 1985.

Type and Purpose of Investigation

The type of investigation reported here is a 100 percent field survey reconnaissance of a relatively narrow strip of land that extends along the edge of Lake Sakakawea in Dunn County. The field examination undertaken was an intensive pedestrian survey, with crew spacing varying somewhat depending on the terrain, surface visibility and perceived site potential. On terraces, survey transects were no more than 30 meters apart, but in dissected terrain, such as badlands regions, a more judgemental survey approach had to be followed to take account of access and site potential.

This investigation was conducted for the purpose of meeting the Omaha District's obligations to Federal Preservation legislation and associated implementing regulations. The most pertinent laws and regulations governing this investigation are: Public Law 86-523, Reservoir Salvage Act of 1960 as amended by P.L. 93-291; Public Law 89-665, National Historic Preservation Act of 1966 as amended by P.L. 96-515; Public Law 91-190, National Environmental Policy Act of 1969 as amended by P.L. 94-52; Public Law 95-341, American Indian Religious Freedom Act, Executive Order 11593; implementing regulations 36 CFR Parts 60, 63, 66 (draft), and 800 (see scope-of-work, Appendix H).

Specific to this requirement is the need to determine what cultural resources are present on Federal lands so that those resources can be evaluated for National Register eligibility. Further actions are

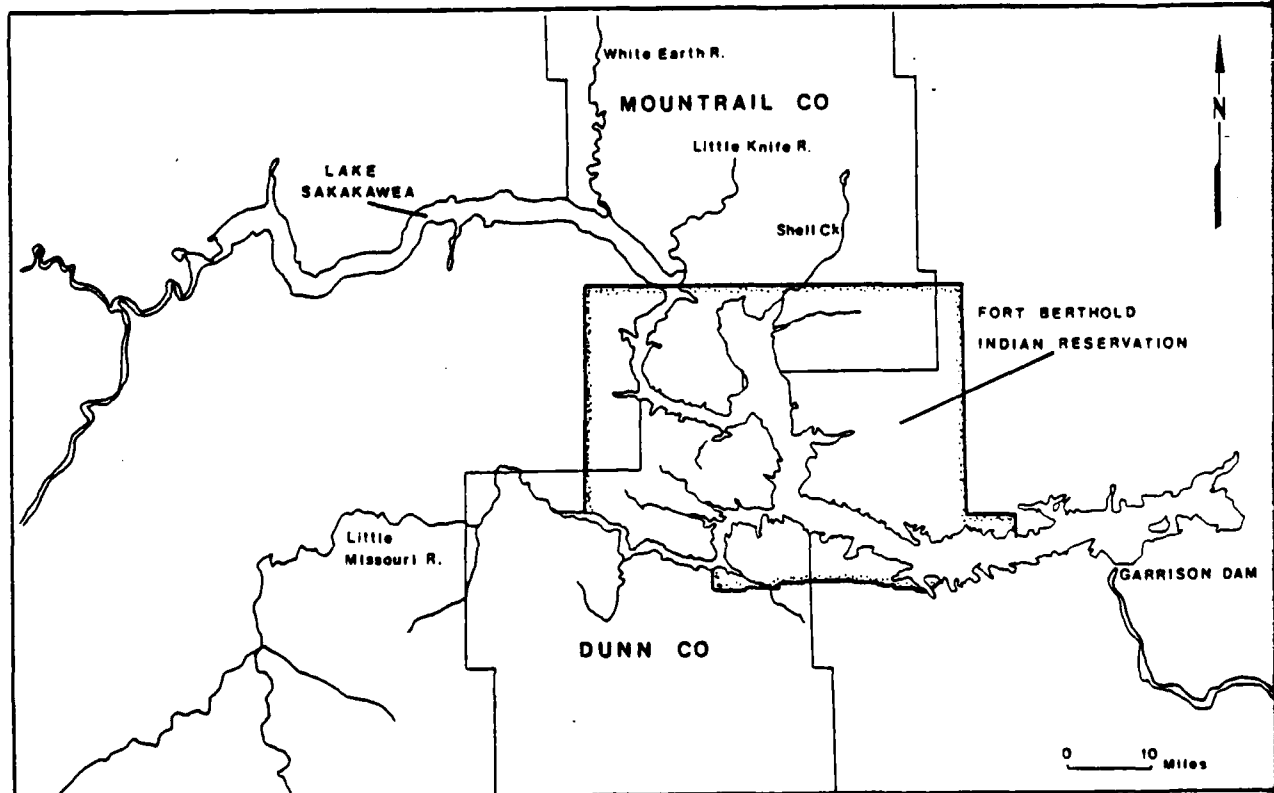
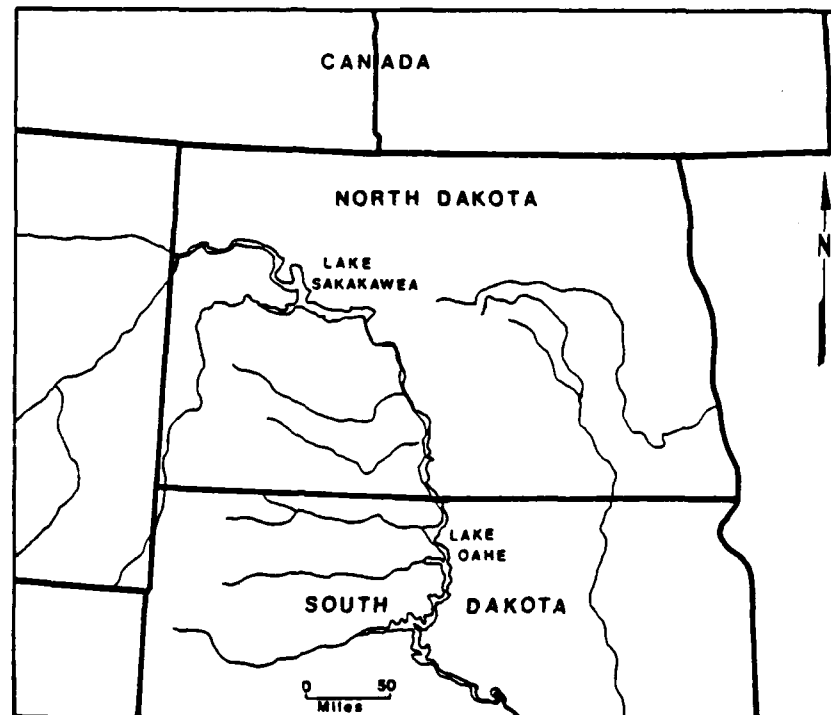


Figure 1. Location of Lake Sakakawea and Dunn County.

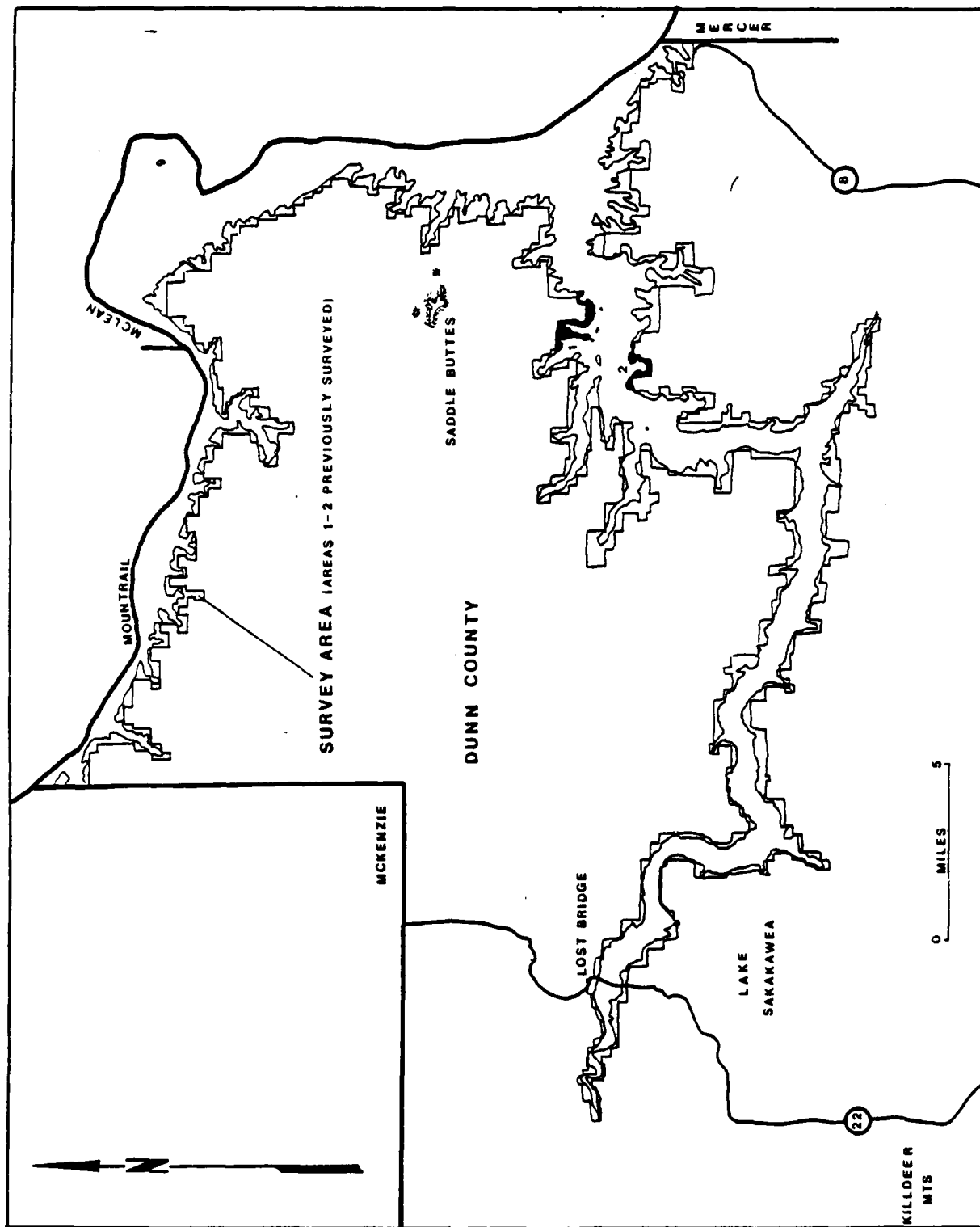


Figure 2. Boundaries of survey area, showing areas previously surveyed.

required to protect, preserve or salvage information from sites which are on the National Register, and to determine the status of sites which are potentially eligible for nomination to the National Register.

Study Area

For the purposes of the current contract, the study area is defined within both local and regional parameters. The local focus is the specific study area which was intensively surveyed. This area incorporates all of the land from the shoreline (1850 ft. amsl) to the U.S. Army Corps of Engineers "take-line" along Lake Sakakawea, in Dunn County (Figure 2 and Appendix A). Excluded from this area are two recreation areas, the McKenzie Bay Area and the Charging Eagle Bay Area, which had been previously surveyed. This study area is estimated to include 22,260 acres or nearly 35 square miles.

The second definition of study area for this project relates to the broader region, dealt with in the literature and background records search - the Middle Missouri subarea. Within this broader area, greatest attention was focused on the Garrison region (Lehmer 1971:Figure 21).

Summary of Procedures and Personnel

A series of activities commenced immediately after the contract was awarded. These activities were designed to most efficiently gain background information on the study area (and specifically on sites known to be within the survey limits) to permit implementation of the survey with as much prior knowledge as possible, yet within a time frame that would allow completion of the project prior to the onset of winter.

Field crews were assembled and background research and correspondence were initiated. Site-specific data were obtained from records curated at Lincoln, NE, Aberdeen, SD, and Bismarck, ND (see below). On August 18, 1985, the field survey began. Initially the field crew consisted of the Field Director, Peter Winham, and crew member, John Butterbrodt. Peter Froelich later joined the crew. In 1985 the crew was based at Slater's Resort within the survey area.

The onslaught of winter weather precluded completion of the survey in 1985; fieldwork resumed in April, 1986. The 1986 survey was conducted variously with one 3-4 man crew or two crews of 2 men. In

1986 the crews first headquartered at McKenzie Marina, moving later to Halliday, ND. Access was relatively good throughout the project area, but since it was principally over private lands, permission had to be obtained from landowners ahead of time. A boat was used to gain access to several islands that were within the project area and to much of the land along the Little Missouri River. However, low water levels precluded use of a boat in the upper reaches of the Little Missouri River.

Field surveying and site recording procedures were standardized between crews with the aid of survey forms, and further coordination was assured through nightly discussions. Surface visibility, combined with numerous natural exposures, was adequate to evaluate the survey area; therefore, only limited exploratory shovel testing was carried out.

Report Organization

This report is presented in two volumes. The first volume provides the narrative account of the project and a site-by-site inventory. The second volume presents the detailed North Dakota state site forms, which include specific locational information, and various appendices listing the basic data and records derived from the project. The list of contents provides the reader with a guide to where the different sections of the report are located. Appendix L provides the reader with a correlation of the temporary site numbers and the official site numbers for use with the archival data.

All of the collected artifacts are curated at the State Historical Society of North Dakota in Bismarck. The original field notes, records, photographic negatives, slides and additional archival data are stored at the U.S. Army Corps of Engineers, Omaha District office, Omaha, Nebraska.

Addendum. Data on four sites recorded in 1986 by UNDAR-West in the Skunk Creek Bay Recreation Area subsequent to the records searches and field survey reported here, are presented in Appendix M.

Physiography

The project area extends along some 190 miles of shoreline on the south (right) bank of Lake Sakakawea in Dunn County, North Dakota, which includes both banks of the lower Little Missouri River. No part of the survey area is more than one-half mile from the artificially created high water level of the reservoir, which flooded the adjacent Missouri River valley and lower part of several tributaries.

Lake Sakakawea was formed by the construction of the Garrison Dam on the Missouri River, near Riverdale, North Dakota. It is situated in western North Dakota, being part of the Great Plains Province (Fenneman 1931), and located within the Williston Basin. Figure 3 illustrates the location of Dunn County in relation to the section, subsections and districts of the Great Plains physiographic province. The survey area includes portions of the Missouri River District and Coteau Slope District.

All of the major physiographic features in the study area are affected, in part, by the reservoir. There are, from west to east along the Missouri River, five inundated lower tributary reaches or valleys - Bear Den Bay, Drags Wolf Bay, Skunk Creek Bay (Plate 1), and Saddle Butte Bay to the north of the Little Missouri River, and Mandan Bay to the south of the Little Missouri River. From east to west along the Little Missouri River there are nine inundated tributary mouths or valleys - McKenzie Bay; Hidatsa Bay; Squaw Creek Bay (Plate 2) and Moccasin Creek Bay (Plate 3) along the north bank; and Water Chief Bay (Plate 4), Bear Creek Bay, Charging Eagle Bay, Wolf Chief Bay and Jim Creek along the south bank.

The topography includes badlands, glaciated uplands and recent alluvial bottomlands. Typically, a cross section of the survey area consists of badlands/river breaks sloping precipitously from an elevation of 2000-2200 feet amsl to the river/lake at 1850 feet amsl. In several areas there are pediment slopes/colluvial slopes that gently incline toward the reservoir and give the impression of terraces, while true terraces are present along portions of the major drainages and of the Missouri River.

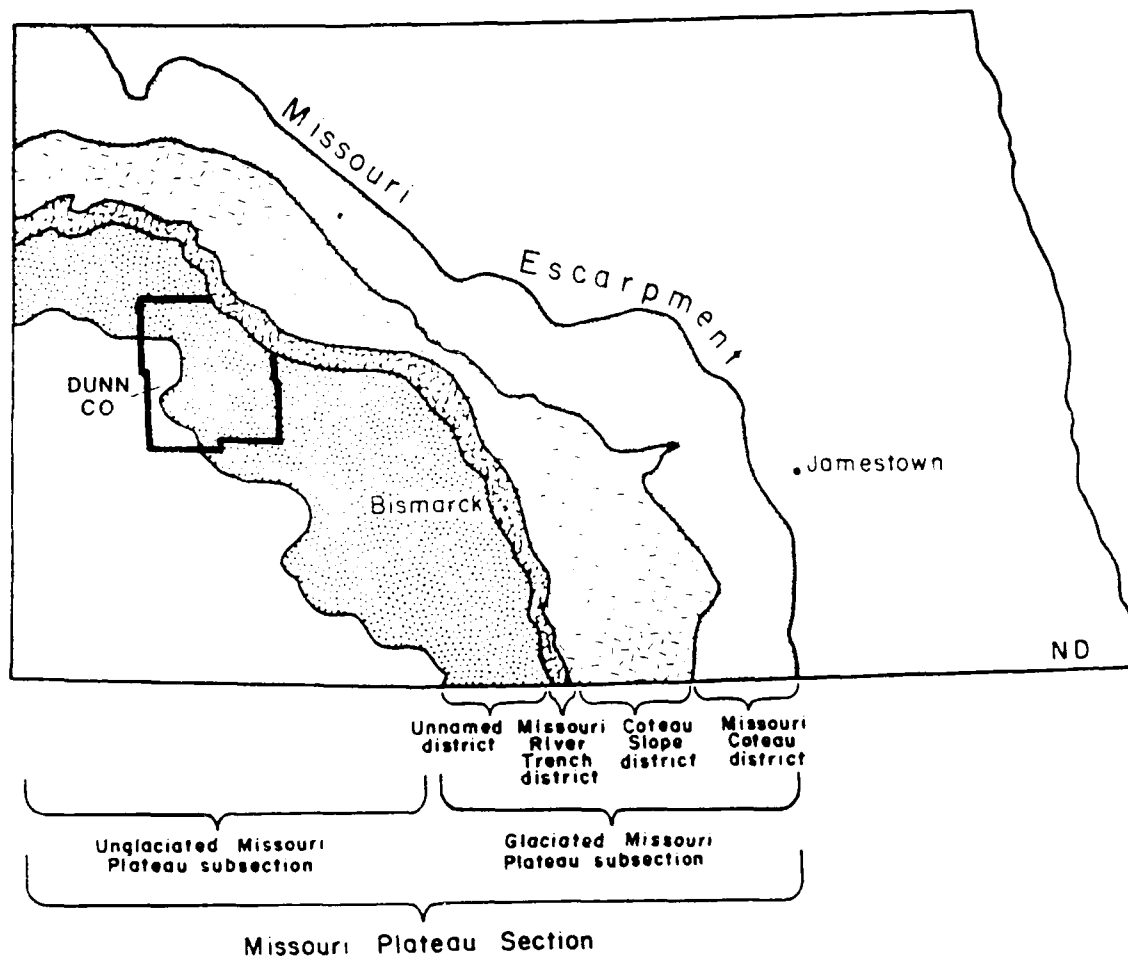


Figure 3. Location of Dunn County in relation to the section, subsections and districts of the Great Plains Physiographic Province (after Wyckoff and Kuehn 1983:Figure 4:11).

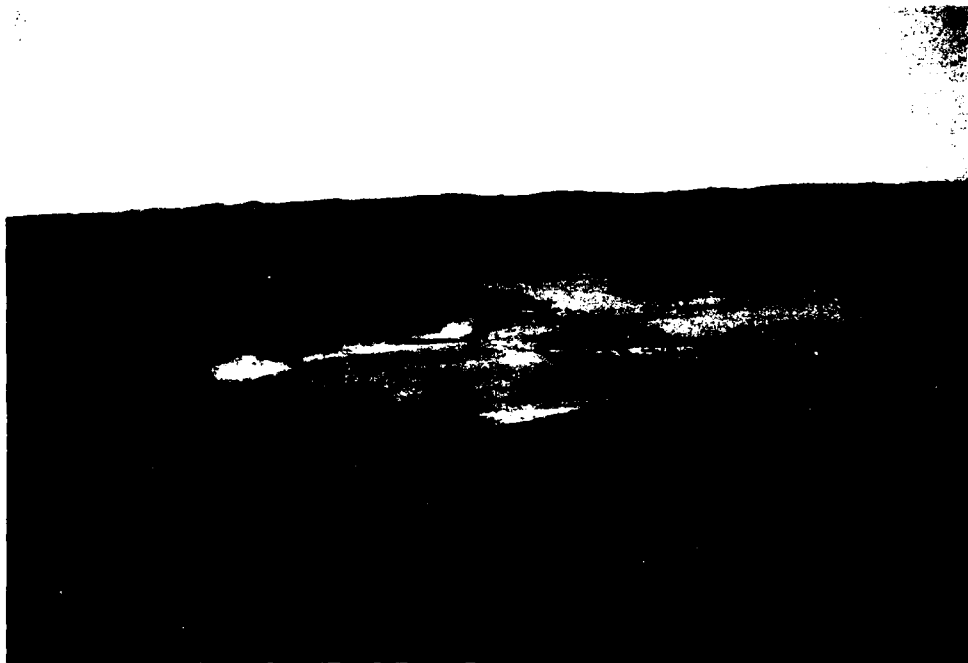


Plate 1. View of inundated tributary at Skunk Creek Bay.



Plate 2. View down Squaw Creek Bay (site 32DU781 on left).



Plate 3. View of Moccasin Creek, with Moccasin Creek Bay in background.

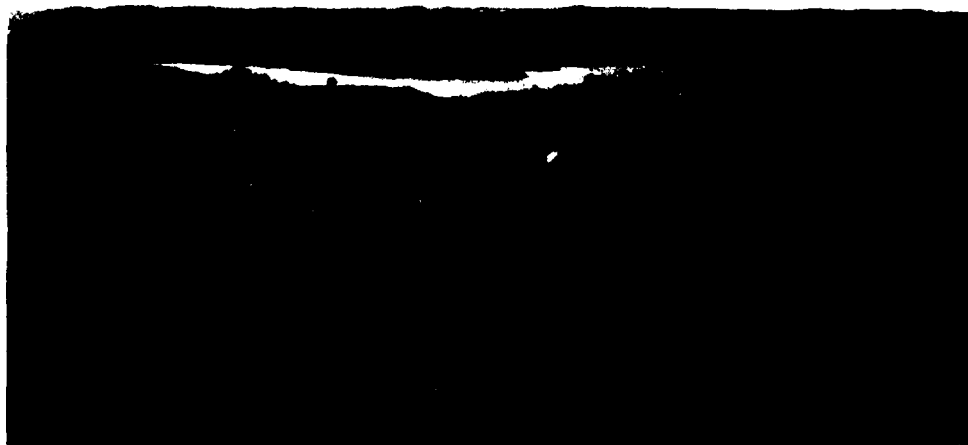


Plate 4. View across portion of Water Chief Bay area.

The physiographic circumstance at the western boundary of the project area, the Dunn/McKenzie County line, is rugged badlands terrain, with elevations reaching 2100 ft. amsl. From the Dunn/McKenzie County line at Bear Den Creek to Independence Point the survey area includes Drags Wolf Bay and Skunk Creek Bay. This area is situated alongside the youngest part of the Missouri River and is correctly identified as a "trench." "This is now the youngest, narrowest, and most rugged part of the Missouri River Valley" (Mountrail County Historical Society 1974:19). From Independence Point to the Little Missouri River the survey area includes Saddle Butte Bay, and from the Little Missouri River to the Dunn/Mercer County line the survey area encompasses Mandan Bay.

The soils of the survey area alongside the now inundated Missouri River consist of four main types: Badland-Cabba-Arikara complex (25-120 percent slopes); Cabba loam (15-45 percent slopes); Cabba-Badland complex (15-120 percent slopes); and Zahl-Williams loam (9-15 percent slopes) (Wright et al. 1982).

Along the Little Missouri River (Plates 5-7) the majority of the bays and major inlets are located to the east, near the mouth of the Missouri River. The only major inlets outside this area are Wolf Chief Bay (Hans Creek) and Jim Creek. Generally the two main soil types along the Little Missouri River are the Cherry-Cabba complex (9-25 percent slopes) and Badland-Cabba-Arikara complex (25-120 percent slopes).

The following soils are encountered along the inlets near the mouth of the Missouri River: Cherry-Vanda complex (3-9 percent slopes, gullied); Wabek gravelly loam (1-15 percent slopes); Cabba loam (15-45 percent slopes); Harriet silt loam (0-1 percent slopes); Cohagen-Vebar-Rock outcrop complex (15-40 percent slopes); Zahl-Williams loam (15-25 percent slopes); and Cohagen-Vebar fine sandy loams (9-25 percent slopes).

Soils present along Hans Creek include: Cherry silt clay loam (6-9 percent slopes); Vanda silty clay (1-3 percent slopes); and Havrelon silt loam and Havrelon silt loam, fan, (1-6 percent slopes). In the Lost Bridge area the following soils are more common: Banks loamy sand (1-3 percent slopes); Trembles variant fine sandy loam; Vanda silt clay (1-3 percent slopes); Cherry silt clay loam (1-9 percent slopes); and Havrelon silt loam (0-1 percent slopes).



Plate 5. View from site 32DU1, facing SE along the Little Missouri River.



Plate 6. View from near Jim Creek facing E along the Little Missouri River.



Plate 7. View from near Jim Creek facing NW up the Little Missouri River.

The general soils circumstance in the survey area can be defined as predominantly shallow, nearly level to very steep soils on uplands. The two soil associations which dominate the area are: the Cabba-Cohagen-Rhoades association [well-drained, somewhat well-drained and moderately well-drained, shallow and deep, moderately coarse-textured and medium-textured soils which formed in material weathered from siltstone and sandstone or which formed in alluvium] and the Cabba-Badland-Cherry association [well-drained, shallow and deep, medium-textured and moderately fine-textured soils which formed in material weathered from siltstone or which formed in alluvium; and badland].

Exceptions to this soil sequence are found around Independence Point (Plate 8) where the William-Amor-Arnegard soil association exists [well-drained, deep and moderately deep, medium-textured soils which formed in glacial till or alluvium or which formed in material weathered from sandstone and siltstone] and at the very west end of the survey area (west of Lost Bridge - Plate 9) where the Havrelon-Banks-Trembles Variant association is present [well-drained, somewhat excessively drained and poorly drained, deep, medium-textured, coarse-textured, and moderately coarse-textured soils that formed in alluvium].

The badlands and "breaks" areas have been influenced most by erosion which has formed, and is continuing to form, the present dissected landscape. While the Wisconsin glaciation was largely north and east of the survey area, isolated lobes did penetrate Dunn County (Figure 4).

Flora and Ecosystems

In North Dakota, sites are assigned to ecosystems as part of the site form record. Stewart and Stewart (1973) describe ecosystems identified in the southwestern part of North Dakota which have been used to classify site locations in recent studies within the survey area (Van Hoy and Nathan 1983). These same ecosystem classifications are used in this report and are briefly outlined below, following the State Historical Society of North Dakota Training Manual (Snortland-Coles and Perry 1986:22-24) and Van Hoy and Nathan's summary (1983:8-10).

The Bottomland Ecosystem includes all land occupied by rivers and streams and their annual floodplains. Flora includes cottonwoods



Plate 8. View of Independence Point.



Plate 9. View facing W from near Lost Bridge towards the west end of the survey area along the Little Missouri River.

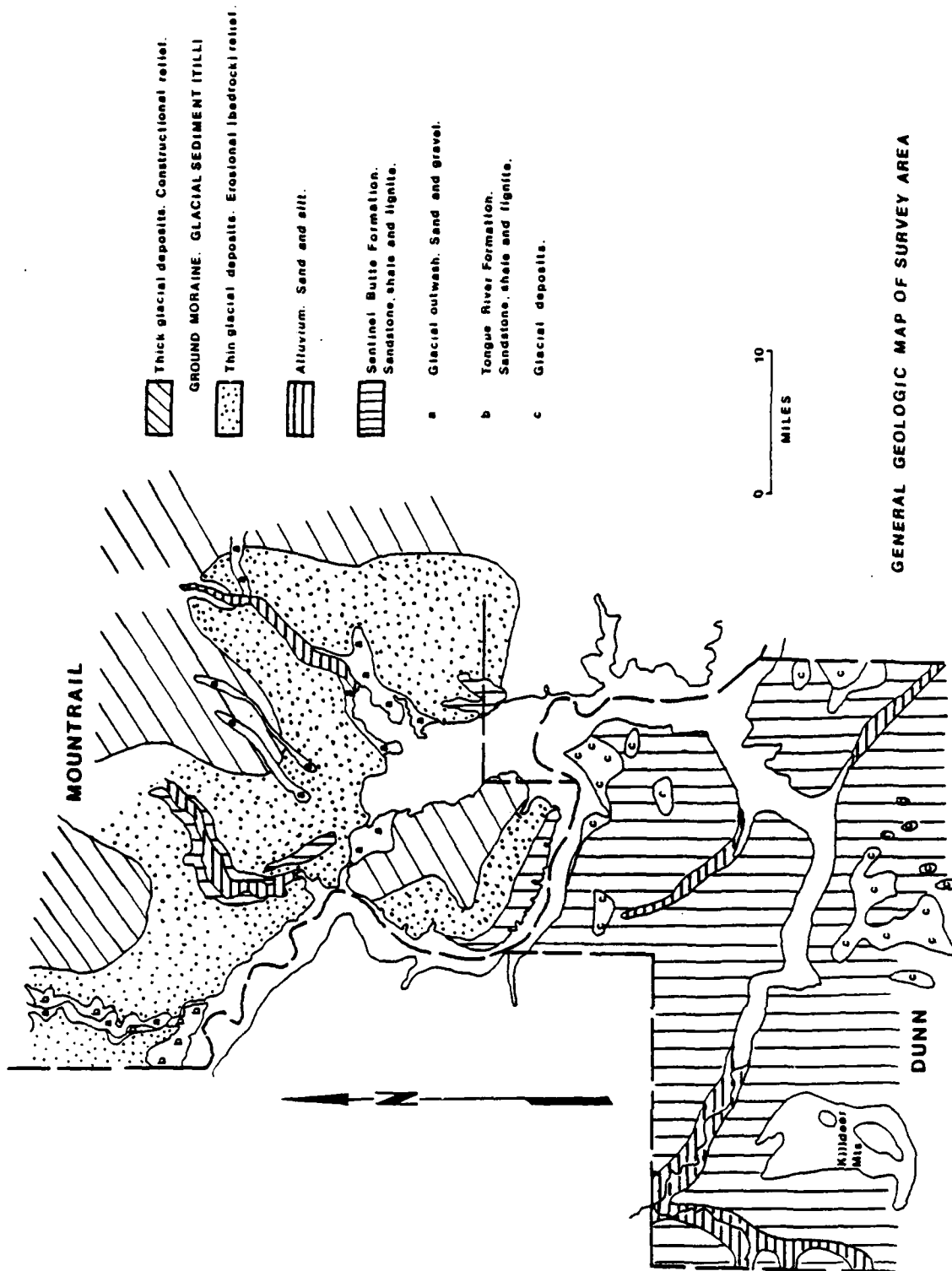


Figure 4. General geologic map of Dunn County survey area (based on Bluemle 1975a).

(Populus deltoides), sandbar willow (Salix interior) and junipers (Juniperus communis), western wheatgrass (Agropyron smithii), green needlegrass (Stipa viridula), big bluestem (Andropogen gerardi), needle-and-thread grass (Stipa comata) and fringed sagewart (Artemisia frigida). Normally this ecosystem is inundated by Lake Sakakawea.

The most widespread ecosystems in the survey area are outlined below.

The Upland Grassland Ecosystem includes "hilly uplands interspersed by rounded hills with steeper-sided knobs of sandstone, siltstone, silty shales, and claystone bedrock" (Stewart and Stewart 1973). Soils are loamy, clayey and sandy and support a sparse, but varied, vegetative community. Flora includes a predominance of little bluestem (Andropogen scoparius) with needle-and-thread grass (Stipa comata), prairie sandreed (Calamovilfa longifolia) and, on thicker soils, western wheatgrass (Agropyron smithii), blue grama (Bouteloua gracilis), green needlegrass (Stipa viridula), and big bluestem (Andropogen gerardi).

The River Breaks Ecosystem, adjacent to major rivers and streams, is comprised of deeply dissected "badlands" often barren of plant life, but occasionally supporting scattered shrubs, grasses and forbs.

The Badlands Ecosystem is similar to, but lies beyond, the River Breaks. Often barren of plant life, some areas can support grasses, juniper (Juniperus communis) and sagebrush.

Additional ecosystems that are defined and that make up a minor portion of the survey area are described as follows.

The Terrace Ecosystem consists of former river bottoms and floodplains that are presently situated adjacent to, but higher than, the present Bottomland Ecosystem. Flora includes a predominance of blue grama (Bouteloua gracilis), western wheatgrass (Agropyron smithii), needle-and-thread grass (Stipa comata), and/or prairie sandreed (Calamovilfa longifolia). The major terraces in the survey area are along portions of the Missouri River, White Earth River, Little Knife River and Shell Creek. A broad, flat to gently-sloping upland plain, at elevations of 2000-2080 ft. amsl, extends inland from much of the survey area boundaries, and is variously referred to as a terrace or upland plain. To distinguish it from the more recent terrace systems, the analysis of the locational data refers to sites on this plain as being on an upland flat.

The Upland Breaks Ecosystem is characterized by hilly and steep uplands with bedrock capped, small rounded hills, vegetated primarily by little bluestem (Andropogon scoparius).

The Rolling Grassland Ecosystem is characterized by undulating and long sloping uplands and diverse vegetation changing with the soils, which can be clayey, sandy or glacial materials. Common plant communities are primarily dominated by wheatgrasses (Agropyron sp.), green needlegrass (Stipa viridula), and big bluestem (Andropogon gerardi). Western wheatgrass (Agropyron smithii) and little bluestem (Andropogon scoparius) may also dominate. Co-dominants with the latter may be prairie sandreed (Calamovilfa longifolia) and threadleaf sedge (Carex filifolia). Blue grama (Bouteloua gracilis) may also be present.

The Hardwood Draw Ecosystem occupies narrow drainages and minor draws, with loamy to sandy loam soils. Plant communities include both overstory and understory complexes or a simple overstory of buffaloberry (Shepherdia sp.) with an understory of shrubs and trees dominated by green ash (Fraxinus pennsylvanica lanceolata).

The Fresh Water Marsh Ecosystem is found in large depressions filled with slightly brackish water, or poorly drained soils vegetated with rushes, sedges, and marsh grasses.

The Toe Slope Ecosystem includes areas on gentle, concave lower slopes or in swales, including slumps, earthflows, and soil creep accumulations, vegetated by mixed grasses, threadleaf sedge (Carex filifolia), prairie junegrass (Koeleria cristata), and various forbs.

The Scoria/Hilly Scoria Ecosystem is characterized by moderately steep, rounded hills, capped with old water-deposited, fused clays called "scoria." Flora is primarily limited to grasses.

A Rockland Ecosystem is also defined, but is not present in the survey area.

Fauna

Throughout the last 10,000 years a wide variety of wildlife would have been present within the study area. A recent study of faunal use based on the descriptions of selected tribal groups within North Dakota, including this study area (Brown, Hanson and Gregg 1983:102-107), lists the following: large mammals - bison (Bison bison), elk (Cervus elaphus), mule deer (Odocoileus hemionus), white-tailed deer (Odocoileus

virginianus), pronghorn antelope (Antilocapra americana), big horn sheep (Ovis canadensis), grizzly bear (Ursus horribilis), mountain lion (Felis concolor), moose (Alces americanus); and small mammals - wolf (Canis lupus), coyote (Canis latrans), fox (Vulpes spp.), kit fox (Vulpes velox), bobcat (Lynx sp.), dog [introduced by man] (Canis familiaris), otter (Mustela lutra canadensis), badger (Taxidea taxus), porcupine (Erethizon epixanthus), beaver (Castor canadensis), racoon (Procyon loter loter), prairie dog (Cynomys ludovicianus), skunk (Mephitis americana), muskrat (Ondatra zibethicus), weasel and ermine (Mustela sp.), mink (Mustela vison), cottontail (Sylvilagus sp.), jack rabbit (Lepus sp.), red squirrel (Sciurus hudsonicus), and ground squirrel (Citellus sp.).

In addition to the mammals, numerous birds and fish were present and hunted by the Native Americans. These included the eagle (Buteoninae), hawk (Buteo sp.), owl (Tytonidae/Stridaidae), prairie-chicken (Tympanuchus cupido), ducks/geese (Anatidae), northern pike, jack fish and yellowhead (Esox lucius sp.), walleye (Stizistiedion vitreum glaudem) and channel catfish (Ictalurus punctatus).

Climate

The climate of North Dakota is described as a typical "continental climate" (Jensen 1972:1), with weather patterns over a period of time characterized by daily and seasonal extremes in temperature, light to moderate precipitation which tends to be irregular in time and coverage, low relative humidity, plentiful sunshine and nearly continuous air movements. Day lengths vary from less than nine hours in December, to more than 16 hours in June.

The general climatic pattern at Dunn Center, ND is described below.

In winter the average temperature is 13 degrees F, and the average daily minimum temperature is 2 degrees....In summer the average temperature is 66 degrees, and the average daily maximum temperature is 80 degrees....Of the total annual precipitation, 14 inches, or 80 percent, usually falls in April through September....Thunderstorms occur on about 30 days each year, and most occur in summer. Average seasonal snowfall is 38 inches....The prevailing wind is from the southwest. Average windspeed is highest, 11 miles per hour, in spring (Wright et al. 1982:3).

Extremes of weather are not uncommon in North Dakota. Tornadoes, wind storms, hail storms and blizzards generally occur an average of several times a year.

Field Survey Conditions

The 1985 field survey season included a typical variety of late summer/autumn weather patterns - sunshine, rain, sleet, snow and severe storms. Similar conditions were met early in 1986. On the whole, the survey conditions were fair to good, but lake wind advisories were all too common.

Human Geography

The effects of human impact on the survey area are most obvious for the recent past, beginning with Euro-American exploitation of the area. Prior to that time the area was utilized by nomadic groups and nearby Plains Village settlers.

Prior to railroad construction, the focus of the exploitation of the area was the Missouri River. The establishment of fur trading posts, military posts, farms, ranches, and towns resulted in numerous changes to the environment, including deforestation, increased pressure on the local floral and faunal resources and the breaking of the natural prairie sod cover for agriculture. The earliest pioneer homes in the study area appeared around A.D. 1900.

Undoubtedly the greatest effect on the study area was the construction of the Garrison Dam, begun in 1947, and the subsequent flooding of 383,000 acres, much of it prime farmland, to create what is now Lake Sakakawea.

Present land use in the study area is centered around agriculture and recreation. Recreational use is especially prevalent around several of the "bays." The nearest major center of population is Killdeer, ND (population ca. 790).

This section focuses on the environmental changes postulated for the study area during the post-glacial Holocene period. Climatic changes experienced in a region through time may significantly affect the topography, as well as the technological and subsistence resource potentials for cultural groups. It has been the oscillating climate that has "played the most important role in regulating many of the other notable changes that have occurred and has certainly been the primary agent regulating geomorphic processes within the study region" (Wyckoff and Kuehn 1983:167).

A series of climatic episodes currently applied in North America is derived from named climatic periods in Europe. While there is some dispute as to whether climatic episodes observed in Europe are similar to those in North America, Figure 5 presents the most recent summary of Holocene climatic episodes and their characteristics as recognized on the Plains. Figure 5 also correlates the named episodes with climatic and sedimentological information in North Dakota presented by Clayton et al. (1976). "Several researchers have noted the chronometric potential of the Oahe formation paleosols depicted in this figure" (Brown, Hanson and Gregg 1983:62).

The Oahe formation consists of four distinct members: the oldest, named the Mallard Island member, is of Late Wisconsin age; the Aggie Brown member is of late Wisconsin/Holocene age; and the Pick City and Riverdale members are of Holocene age.

Paleosols of the Aggie Brown and Riverdale members represent periods when precipitation was adequate to maintain relatively dense vegetation cover, which in turn would have stabilized slopes, reducing erosion and the supply of sediment. Under these conditions soils would have been able to accumulate organic matter and begin maturing. Intervening sediments of the Pick City member and the lighter submembers of the Riverdale member indicate relatively dry periods. During these drier episodes, vegetation would have been sparser, a condition that would foster slope erosion, providing ample sediments to be wind-borne and deposited on adjacent uplands.... The distribution of these postglacial sediments is quite variable...even within adjacent microtopographic areas. Slight variations in slope and

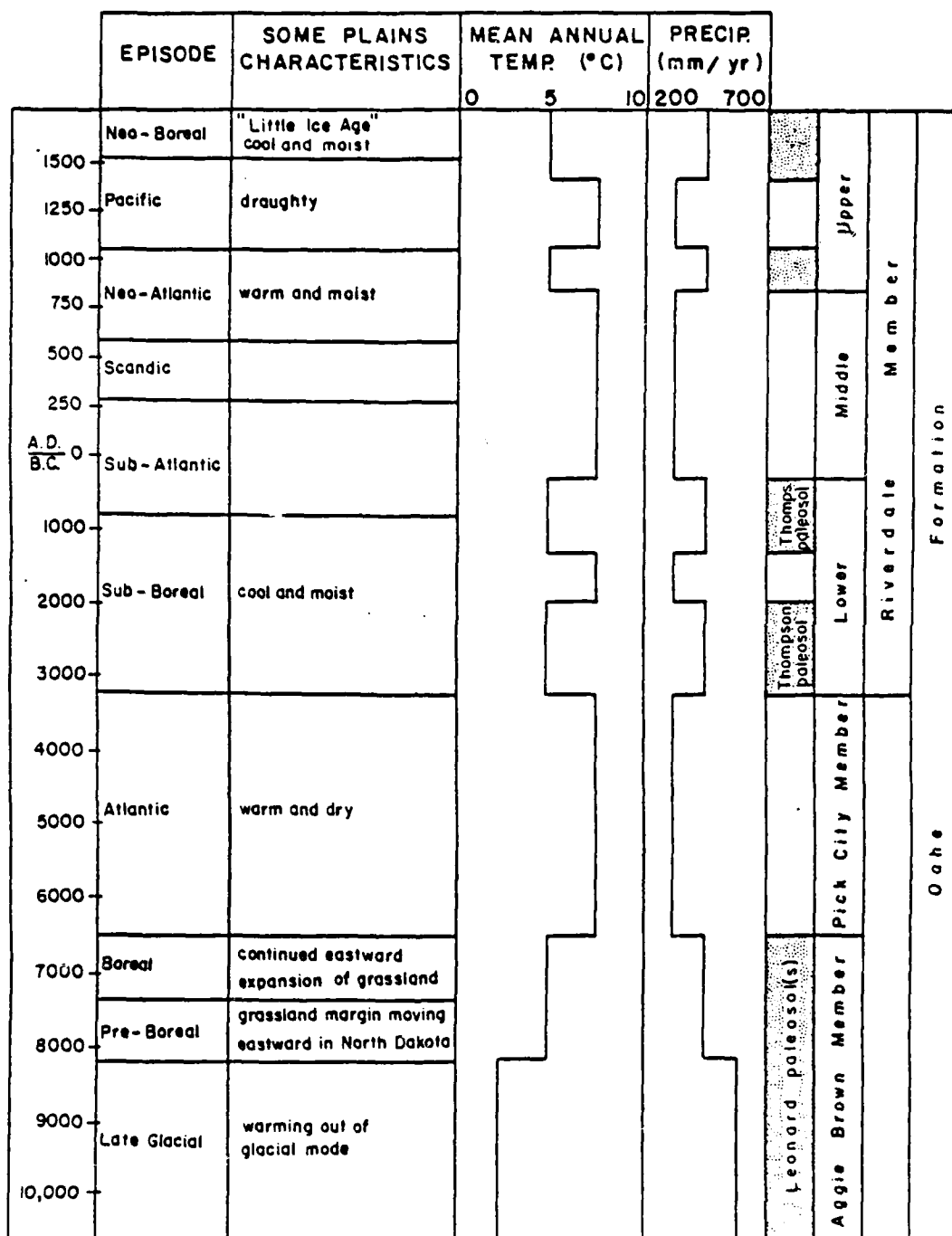


Figure 5. Holocene climatic episodes and some Plains climatic/ ecological characteristics, from Wendland (1978); dates based on Libby half-life. Oahe Formation paleosols and study region climate from Clayton et al. (1976:11) [From Brown, Hanson and Gregg 1983:Figure 3.9].

topographic position with regard to source material are...important in determining the deposition and preservation of eolian sediments (Wyckoff and Kuehn 1983:169).

Clayton and Moran (1979) redefined the Oahe formation by broadening the lithologic definition to include clay, silt, sand and gravel, while maintaining the stratigraphic definition. This means the sediments within the formation need not be wind-deposited, and that differentiation of the four members in the field would be based on color zones, where present and identifiable.

The following summary of the paleoclimate and paleoenvironment of the region is derived largely from Brown, Hanson and Gregg (1983:59-73).

The Late Glacial, Pre-Boreal, and Boreal episodes of the early Holocene together represent a period of warming in the Northern Plains and there is little paleoecological detail yet to differentiate these three episodes. During this period the Laurentide Ice retreated and glacial Lake Souris was present in north-central North Dakota. The Missouri and Little Missouri rivers should have been established in their essentially modern trenches. Grasslands should have been relatively lush and landforms relatively stable. "A spruce-aspen forest covered much of western North Dakota during the period ca. 12,000-10,000 B.P. (Bluemler 1975[a and b]; Kehoe and Kehoe 1968; Moran et al. 1976)...and was gradually replaced by tall grass prairie as the climate warmed and dried" (Wyckoff and Kuehn 1983:149).

The Cochrane readvance of the Laurentide Ice is dated at ca. 5800 B.C. within the Atlantic period, so there is evidence for some fluctuation in temperature, and aridity probably fluctuated too, although the general pattern of the Atlantic was relative aridity. The thick, wind-deposited sediments of the Atlantic age Pick City member of the Oahe formation have depositional analogs to the period of the "Dirty Thirties."

The Dirty Thirties was a period of instability on steep hillslopes in the Little Missouri Badlands of western North Dakota; a layer of sediment 1 or 2 m thick was washed from hillslopes into valley bottoms throughout most of the area....Both before and after the 1930's little sediment was deposited in valley bottoms, gullies were cut, steep hillslopes were stable, and soils were formed on hillslopes (Clayton et al. 1976:8).

During the Sub-Boreal climatic episode there were periods of significant increases in precipitation and decreases in temperature over the Atlantic. One or both of the Thompson paleosols may correlate with the Sub-Boreal, indicating available moisture and landform stabilization. Very limited information is available for the late Sub-Boreal, Sub-Atlantic and Scandic times; what there is suggests climatic fluctuations and lack of stability.

The Neo-Atlantic episode is generally characterized as warm and moist in the Central and Northern Plains, while the Pacific episode is a time of drought. The subsequent Neo-Boreal was cooler and moister, allowing the Plains grasslands to flourish, and was accompanied by an increase in the size of bison herds. The earliest European observers on the Northern Plains witnessed favorable climatic conditions, peak human population densities, and peak cultural complexity. A general summary of changing conditions over the last 15,000 years is provided by Bluemle and Clayton (1982:Figure 8) in a figure reproduced here (Figure 6). This figure indicates the general changes in temperature, precipitation, slope-wash erosion and wind blown sediment deposition through time, and vegetational changes accompanying the climatic changes across North Dakota.

In general, the areas of the study region covered with relatively thick deposits of glacial sediment have undergone little topographic change since the last major blocks of stagnant ice melted, while the climatic fluctuations indicated above have produced changes in erosional and depositional situations in other areas (see Figure 6).

The Badlands region

began to form during the Pleistocene as a result of an increase in gradient in the Little Missouri and its tributaries in direct response to glacial advance (Bluemle 1975[b], 1977; Laird 1950; Leonard 1904, 1916)....In the northern and eastern portions of the Badlands...the Little Missouri has cut a valley approximately 150 m deep, and the area is characterized by high topographic relief (Bluemle 1977). The majority of the presently exposed deposits are fluvial and lacustrine sediments deposited during Paleocene and Eocene epochs (Moran et al. 1976)....Late Pleistocene and Holocene...slope wash and mass-wasting reduced the exposure of the overlying Golden Valley formation and increased the exposure of underlying Fort Union formation members....The Ludlow, Bullion Creek (formerly

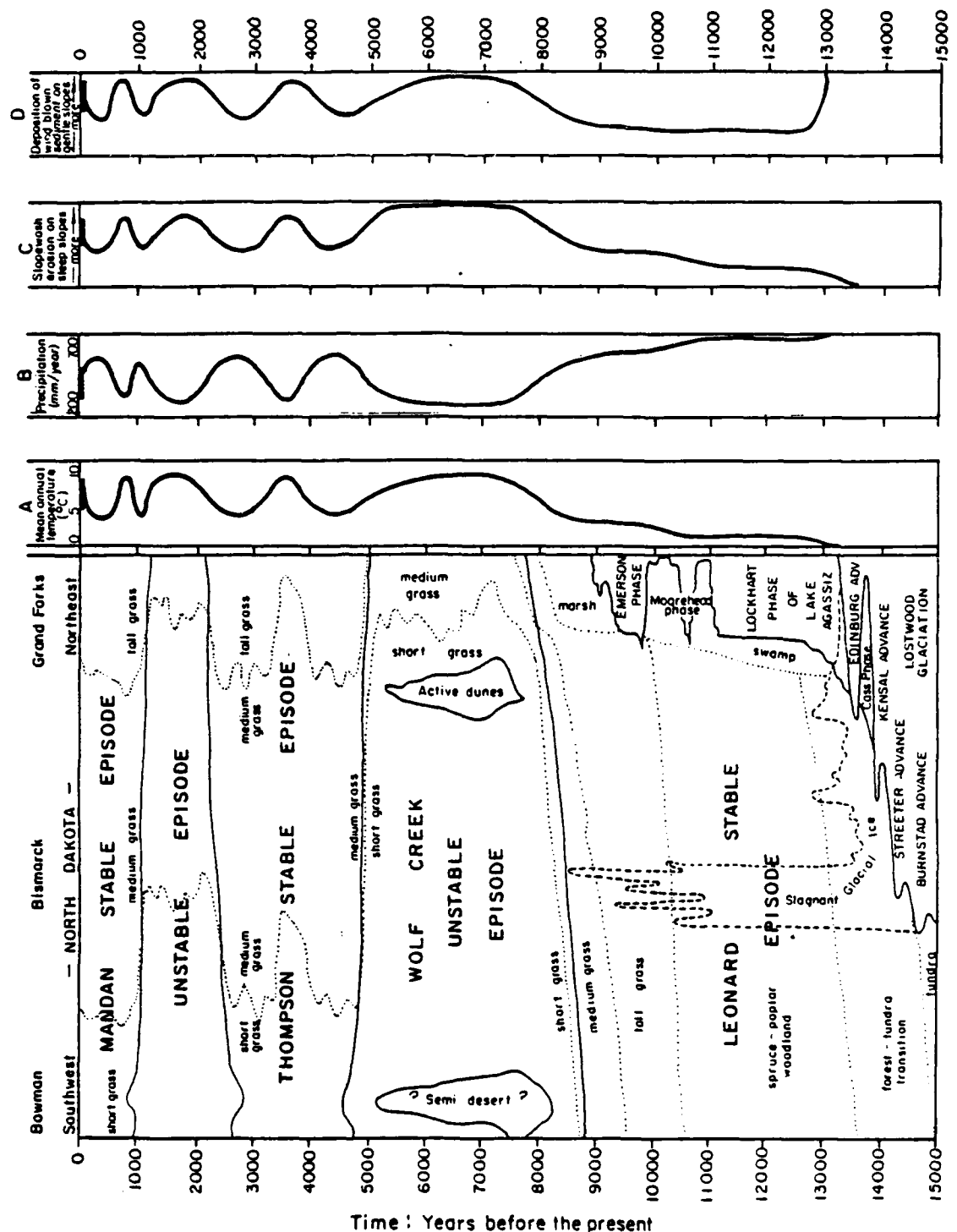


Figure 8. North Dakota's climatic history for the last 15,000 years. This is a time-distance diagram, time represented in a vertical direction, and distance, from southwestern to northeastern North Dakota, shown from left to right. The diagram illustrates when certain climatic events occurred in various parts of the state. For example, as conditions dried about 9,000 years ago, short-grass prairie first covered southwestern North Dakota (about 8,700 years ago) and advanced northeastward, although not into the easternmost part of the state, before giving way to medium-grass prairie over most of the state about 5,000 years ago as the climate again became more moist.

The Lockhart, Moorhead, and Emerson Phases, shown in eastern North Dakota between about 13,000 and 9,500 years ago, portray the history of Lake Agassiz. The Burnstad advance, and other advances, represent glacial advances of the last glacier that affected North Dakota. The "stagnant glacial ice" occurred mainly on the Missouri Coteau between about 14,000 and 9,000 years ago (it also was widespread over the Turtle Mountains and Prairie Coteau in southeastern North Dakota).

The four columns on the right (A, B, C, and D) represent, in a general sort of way, how various specific conditions changed over the past 15,000 years. Column A shows how the mean annual temperature varied; B shows how precipitation varied; C shows the relative amount of slope-wash erosion from the hillslopes; and D shows the amount of wind-blown sediment being deposited on gentle slopes and in low areas. In all four columns, the increasing amount is to the right, decreasing amount is to the left.

Figure 6. North Dakota climatic history (from Bluemle and Clayton 1982:Figure 8).

Tongue River), and Sentinel Butte formations comprise the Fort Union Group (see Figure 4) (Wyckoff and Kuehn 1983:144-146).

Wyckoff and Kuehn (1983) report that four terraces of the Little Missouri River have been recognized. Remnant portions of a terrace 85-154m above the present valley floor have been referred to as Little Missouri Terrace No. 4 (Petter 1956; Schmitz 1955). Terrace No. 3 is 37-43m below Terrace No. 4 in the South Unit of Theodore Roosevelt National Park. Renewed downcutting through Terrace No. 3 formed Terrace No. 2, presently 3.0-4.6m above the modern river Terrace No. 1 (Petter 1956).

The glaciated Coteau Slope region typically has a drift consisting of a thin veneer of till overlying a bedrock dominated topography. When compared with the Missouri Coteau, the drainage is more integrated and the topography more angular.

The Missouri River trench within the study area follows a course basically conforming to the outer limits of glaciation. Terraces are a prominent feature of the river, and terrace sequences can be very complex. Wyckoff and Kuehn record Reiten's (1980) examination of Missouri River and Knife River terraces in the vicinity of the Knife River Indian Villages in west-central North Dakota.

...Reiten identified five Pleistocene and two Holocene terraces within his study area. From highest to lowest...the five Pleistocene terraces are (1) the Riverdale terrace...(2) the Sakakawea terrace...(3) the McKenzie terrace...(4) the Hensler terrace...(5) the Stanton terrace. Two Holocene terraces were identified as the A terrace at an elevation of 6-7 m above river level and the B terrace, a composite terrace composed of two fills that range from 0-6 m above river level (1983:166).

In summary, since the retreat of the glaciers the Dunn County survey area has not seen any major topographic changes other than variable erosion and deposition of individual landforms. The badlands and "breaks" areas have been influenced the most by erosion which has formed, and is continuing to form, the present dissected landscape.

The rate of erosion in the badlands has not been constant. Since they were initiated, the badlands and other landforms have undergone many periods of erosion and deposition. During the past few hundred years, the badlands have undergone four separate periods of erosion and three periods of deposition.

New gullies have been cut to their present depth since about 1936. In general erosion tends to be most intense when the climate is dry; for, at such times, the cover of vegetation is thin and offers less protection to the soil (Bluemle 1975b:8).

The terraces have formed along the Missouri and other major rivers as these drainages intermittently downcut through previous floodplains. The upland plains and grassland areas, with thick deposits of glacial till, have been less altered. While the Wisconsin glaciation was largely north and east of the survey area, isolated lobes did penetrate Dunn County.

Effects of the Garrison Reservoir

The damming of the Missouri and consequent flooding of the lowlands have made the most marked change in the visual landscape. These actions have resulted in the inundation of the lower terraces/floodplains of the Missouri and other rivers, and created a very different landscape than that which previously existed. Studies undertaken for the Commissioner of Indian Affairs on the Fort Berthold Indian Reservation prior to the construction of the Garrison Reservoir highlight the significance of the "bottomlands" for the Indian lifeway at that time:

The more desirable homesites on the reservation are located along the valley bottoms where the Indians...have sought protection from the winds that sweep the plateaus and bench lands; and where they have cultivated their gardens, sheltered their livestock, and found convenient supplies of domestic water....The existing Indian cattle economy - dependent upon the proximity and balance of range, shelter, water, and feed - will be completely disrupted by the Garrison reservoir....The timber-brush lands along the Missouri will be completely inundated....It provides: (i) shelter for homesites, (ii) shade in summer and shelter for winter livestock..., (iii) source of fuel for domestic heating, (iv) source of fence posts, houselogs, and corral poles, and (v) source of pelts and food for the wildlife acclimated to the area (U.S. Indian Service 1946:26-28).

A literature and records search was conducted in early August, prior to the field survey. A reexamination of the records and files was completed after the survey, incorporating data gathered through field verification. The section below provides an overview of the results of the literature and records search, as modified by field verification. The records search is described and is followed by a summary of previous investigations and a prehistoric and historic overview of the area.

Literature and Records Search Overview

The initial literature and records search was conducted on August 5-7, 1985, and August 13-19, 1985. The initial search focused on identifying the location of previously recorded sites in and near the project area. To meet this objective, efforts were concentrated on examining site records at the Midwest Archeological Center (MAC), Lincoln, NE, and the State Historical Society of North Dakota (SHSND), Bismarck, ND. As a result, the author was able to locate, reasonably well, nearly all previously recorded sites.

The more specific objectives of the initial literature and records search were to determine the following:

1. the location of sites previously recorded in and near the project area;
2. the location of documented structures and activity areas not otherwise recorded as sites;
3. the nature and extent of previous field investigations, including a history of specific site investigations;
4. the nature and extent of previous analyses of archeological data from the project area; and
5. the general prehistory and history of the project area and nearby areas.

Resources consulted included site files maintained at the MAC and SHSND offices; old maps of the Missouri River and nearby areas (at MAC) which were produced by the U.S. Army Corps of Engineers (Corps), the Missouri River Commission and the U.S. War Department; the General Land Office Survey Maps of the area which were available at the U.S.

Department of Fish and Wildlife Service in Aberdeen, SD; and old road and property atlases which were available in Aberdeen and Bismarck.

Published and unpublished documents and manuscripts at a number of institutions were examined. In addition to materials on hand at both the Archeology Laboratory and the Center for Western Studies, sources were examined at the following institutions: Midwest Archeological Center (National Park Service [NPS]), Lincoln; the North Dakota State Library, Bismarck; the municipal library, New Town; the Bureau of Indian Affairs Office (BIA), Aberdeen; the South Dakota Archaeological Research Center, then located at Ft. Meade; and the U.S. Army Corps of Engineers office in Riverdale, ND (site and survey records). Materials available through interlibrary loan from various sources were also examined.

A number of site records did not easily permit site relocation on current maps. In most cases this was because sketch maps were lacking or were largely without scale; because of reference to non-distinctive land features; and because of errors in legal descriptions, whether due to inaccurate determinations or typographical errors. On the other hand, certain sketch maps, particularly those on some Smithsonian Institution River Basin Survey (SIRBS) project forms, show structures which have been designated as sites by this survey. Old maps of the Missouri River show a number of structures, one of which, 32DU13, ("Independence" and "Independence Indian Village") was relocated by this survey. Larry Robson and Virginia Gnabasik, former and current Corps' archeologists at the Garrison Dam/Lake Sakakawea Project, have attempted to locate on United States Geological Survey (USGS) topographic maps all previously recorded sites and investigations. This provided a useful check of the author's investigations and served as a major source for identifying previous surveys in the project area which did not locate sites. The sites previously recorded in the project area were located by two major, and numerous minor, investigations.

An attempt was made to identify all previous investigations. By virtue of having access to Gnabasik's record of previous surveys, and in an attempt to expedite the search, the author did not conduct a comprehensive search of the SHSND's files of previous surveys, per se. It is not known whether Gnabasik's investigations provide a comprehensive record of all small-scale archeological surveys which found no sites. The search identified, or accounted for, all previously

recorded sites. The records search verified some 15 separate investigations conducted under the auspices of six different organizations or sponsoring agencies and one series of independent efforts. The basis for identifying an investigation is a survey or excavation limited by the scope of a project and by a season. Thus, George Metcalf's examinations of site 32DU9 in 1950 and 1951 are considered separate investigations. The 15 investigations are listed below, followed by a more complete description of each in turn. The principal investigator or primary individual is listed first, followed by the name of the sponsor or contractor, the year(s) in which the on-the-ground phase of the investigation was conducted, and finally, the general type of investigation.

George F. Will and Thadeus C. Hecker--SHSND--c. 1924-1944--
archeological

George E. Metcalf--SIRBS--1950--archeological

Ray H. Mattison--NPS--1951--historic sites

Gary R. Leaf--University of North Dakota (UND)--1975--
archeological

Kent N. Good and Jeffery L. Hauff--UND--1977--archeological

Virginia Harris--Corps--1980--archeological

Ted Krieg--Historical and Archaeological Surveys, Inc.
(HASI)--1981--archeological

Larry G. Robson--Corps--1981--archeological

David D. Kuehn, Carl R. Falk and Amy Drybred--UND--1982--
archeological

Kent N. Good (PI) and W. Jeffrey Kinney--HASI--1982--
archeological

Ted Krieg--HASI--1983--archeological

Dennis E. Johnson--independent/voluntary--1983--archeological

Virginia Gnabasik--Corps--1983--archeological

Gregory L. Fox--Independent--1984--archeological

Virginia Gnabasik--Corps--no date--site records search

In brief, 30 sites were previously recorded in the project area, (Table 1). One duplicative site number is subsumed under this figure (32DU18). Sixteen or 17 (16 if 32DU11 is considered to be the same as 32DU24) nearby sites are apparently inundated and 17 sites near, but outside, the project area were also identified (see Table 1).

Table 1. Information on Previously Recorded Cultural Resources in and near the Dunn County Study Area.

SITES IN THE PROJECT AREA

Site Number/ Name	Taxonomic Affiliation	General Condition	Primary Reference(s)
32DU1/ 32DU18 Jacobsen/Night- walker's Butte in the Bad- lands/Little Swallow	Hidatsa	Intact	Leaf 1976/ Johnson 1983
32DU2 Midipadi Butte/Highway 8/Hidatsa/ Elbowoods/ Nightwalker's Butte	Besant/Hidatsa proper-- Knife River Phase	Intact	Good & Hauff 1977/Kuehn et al. 1982/Kuehn et al. 1984
32DU3	Unknown Prehistoric	Intact	SIRBS Records
32DU7	Unknown Prehistoric	Intact	SIRBS Records
32DU13 Independence/ Independence Indian Village	Historic Native American	Intact/ Destroyed	SIRBS Records
32DU18 (see 32DU1)			
32DU22	Unknown Prehistoric	Intact	SIRBS Records
32DU113 Stake 1173	Unknown Prehistoric	Intact	SHSND Records
32DU131 Richards Site	Euro-American	Intact	SHSND Records
32DU132 Jim Creek Site	Archaic	Intact	SHSND Records
32DU133	Unknown Prehistoric	Intact	SHSND Records
32DU134	Unknown Prehistoric	Intact	SHSND Records
32DU160 Line 294 Stake 180	Unknown Prehistoric	Intact	SHSND Records

Table 1. (cont.)

Site Number/ Name	Taxonomic Affiliation	General Condition	Primary Reference(s)
32DU161 Line 294 Stake 177	Euro-American	Intact	SHSND Records
32DU177	Euro-American/ Unknown Prehistoric	Intact	Fox 1984
32DU180	Euro-American	Intact	Fox 1984
32DU404	Unknown Prehistoric	Intact	Leaf 1976
32DU405	Unknown Prehistoric	Intact	Leaf 1976
32DU406	Late Middle and Late Prehistoric	Intact	Leaf 1976
32DU407	Early Middle, Late Middle, and Late Prehistoric	Intact	Leaf 1976
32DU408	Late Middle and Late Prehistoric	Intact	Leaf 1976
32DU409	Unknown Prehistoric/ Euro-American	Intact	Leaf 1976
32DU410 Voigt Site	Late Middle and Late Prehistoric	Intact	Leaf 1976
32DU412	Late Middle and Late Prehistoric	Intact	Leaf 1976
32DU413	Late Prehistoric	Intact	Leaf 1976
32DU414	Late Prehistoric?	Intact	Leaf 1976
32DU415 Bobber Site	Unknown Prehistoric	Intact	Leaf 1976
32DU416	Unknown Prehistoric	Intact	Leaf 1976
32DU417	Euro-American	Intact	Leaf 1976
32DU418	Late Prehistoric	Intact	Leaf 1976
32DU419	Euro-American	Intact	Leaf 1976
Benson Cemetery	Historic Native American	Intact	BIA No. 104 1950

Table 1. (cont.)

Site Number/ Name	Taxonomic Affiliation	General Condition	Primary Reference(s)
Young Bear Cemetery	Historic Native American	Intact	BIA No. 104 1950
White Calf Burial Ground	Historic Native American	Intact	BIA No. 104 1950
Cemetery	Euro-American?	Intact	Hay Flat USGS topo map 1970
SITES NEAR THE PROJECT AREA			
32DU4	Unknown Prehistoric	Inundated	SIRBS Records
32DU5	Unknown Prehistoric	Inundated	SIRBS Records
32DU6	Mandan-Hidatsa	Inundated	SIRBS Records
32DU8	Unknown Prehistoric	Intact	SIRBS Records
32DU9	Unknown Prehistoric	Inundated	SIRBS Records
32DU10	Unknown Prehistoric	Intact/Out	Metcalf 1963
32DU11 (same as 32DU24?)	Unknown Prehistoric	Inundated	SIRBS Records
32DU12	Unknown Prehistoric	Inundated	SIRBS Records
32DU14	Unknown Prehistoric	Inundated	SIRBS Records
32DU15	Unknown Prehistoric	Inundated	SIRBS Records
32DU16	Unknown Prehistoric	Inundated	SIRBS Records
32DU17	Unknown Prehistoric	Inundated	Metcalf & White 1953
32DU19	Mandan-Hidatsa	Inundated	SIRBS Records
32DU20	Mandan-Hidatsa?	Inundated	SIRBS Records
32DU21	Late Mandan-Hidatsa	Inundated	SIRBS Records
32DU23	Unknown Prehistoric	Intact/Out	SIRBS Records
32DU24 (same as 32DU11?)	Unknown Prehistoric	Inundated	SIRBS Records

Table 1. (cont.)

Site Number/ Name	Taxonomic Affiliation	General Condition	Primary Reference(s)
32DU25	Mandan-Hidatsa?	Inundated	Metcalf 1963
32DU26	Mandan	Inundated	Metcalf & White 1953
32DU27	Euro-American	Inundated	SIRBS Records
32DU28	Unknown Prehistoric	Intact/Out	Robson 1979
32DU29	Unknown Prehistoric	Intact/Out	Robson 1979
32DU30	Unknown Prehistoric	Intact/Out	Robson 1979
32DU31	Unknown Prehistoric	Intact/Out	Robson 1979
32DU54	Euro-American? (Corps aerial marker?)	Intact/Out	SHSND Records
32DU135	Unknown Prehistoric	Intact/Out	SHSND Records
32DU295 The Grave Situation Site	Historic Native American?	Intact/Out	Van Hoy & Nathan 1983
32DU296 Tiny Dancer Site	Unknown Prehistoric	Intact/Out	Van Hoy & Nathan 1983
32DU297 Burning Ring of Fire	Unknown Prehistoric	Intact/Out	Van Hoy & Nathan 1983
32DU298 Charging Eagle Site	Archaic	Intact/Out	Van Hoy & Nathan 1983
32DU401 Saddle Butte Site	Unknown Prehistoric	Intact/Out	Haberman & Schneider 1975
32DU402 Couple-a-Flakes Site	Unknown Prehistoric	Intact/Out	Haberman & Schneider 1975
32DU403 Saddle Butte Bay Burial	Historic Native American?	Intact/Out	Haberman & Schneider 1975
32DU411	Euro-American	Intact/Out	Leaf 1976

Table 1. (cont.)

Site Number/ Name	Taxonomic Affiliation	General Condition	Primary Reference(s)
Antelope Society Cemetery	Historic Native American	Intact/Out	BIA No. 104 1950
Charging Eagle (Nuita) Community	Historic Native American	Inundated	Mattison 1955
Lewis & Clark's Camp- site of April 12, 1805	Euro-American	Inundated	Mattison 1955
Lewis & Clark's Camp- site of August 12, 1806	Euro-American	Inundated	Mattison 1955

Previous Investigations

The earliest compilation of sites located within or near the current project boundaries was accomplished by Thad C. Hecker and George Will. In the late 1930s, Hecker conducted a study of the Missouri River in North Dakota for the State Historical Society of North Dakota. Hecker's study area extended northward from the South Dakota line to the south side of the Fort Berthold Indian Reservation (Metcalf 1963:12). The results of the Hecker study, along with a list of a few sites further up the river recorded on the basis of earlier work (Will 1924), were published in a report by Will and Hecker (1944).

Two sites (32DU1/32DU18, 32DU2) in the project area are attributed to sites noted by Will and Hecker. Site 32DU2 (currently named Midipadi Butte) is described or mentioned by Will (1924:326-327) and Will and Hecker (1944:116) (see Wood 1980; Kuehn et al. 1982; Kuehn et al. 1984). Will and Hecker also identify the Jacobsen site (32DU1/32DU18).

In summary, Will and Hecker appear to have focused on highly visible, prominent, or well-known earthlodge village sites. In the current project area there are only two such sites - Jacobsen and Midipadi Butte.

A series of reconnaissance surveys and excavations were conducted under the SIRBS program from 1947 to 1954, prior to completion of the Garrison Reservoir. These investigations were part of a larger effort to locate and salvage information from important archeological sites to be impacted or destroyed by the construction of flood control and electricity-generating reservoir systems.

The SIRBS investigations were carried out with limited time and finances, and perhaps understandably focused on large earthlodge village sites. The villages were more prominent and likely to produce large amounts of information per effort expended. The SIRBS projects concentrated on sites likely to be impacted by the reservoir, or those located at or below the high flood pool level. Examples include the following sites, which are located from 1.5 to 7 miles east, or downriver, of the project area: Grandmother's Lodge (32ME59); Night Walker's Butte in the Bull Pasture (32ML39); Star Village (32ME16); Like-a-Fishhook Village, Fort Berthold I and Fort Berthold II (32ML2); Rock Village (32ME15); and Fort Stevenson (32ML1).

One result of the above limitations is that few sites recorded or excavated by the SIRBS lie within the current project boundaries. The SIRBS parties recorded 16-17 (16 if 32DU11 is considered to be the same as 32DU24) sites which are presently inundated or outwashed near the project area, and three sites which are outside, but near, the project area.

As defined by this report, there were two SIRBS investigations and one associated investigation (Mattison in 1951) in or near the project area. These were headed by George E. Metcalf (in 1950 and 1951) and Ray H. Mattison (in 1951).

Metcalf conducted an initial reconnaissance survey in 1950, locating and revisiting a number of sites (32DU1/32DU18, 32DU2, 32DU3, 32DU7, 32DU13 and 32DU22) within the current project boundaries. Metcalf also located 16 sites outside of the current project area, 13 of which are now inundated (32DU4, 32DU5, 32DU6, 32DU9, 32DU11, 32DU12, 32DU14, 32DU15, 32DU16, 32DU17, 32DU19, 32DU20 and 32DU21). The three sites outside of the project area which are not inundated are 32DU8, 32DU10 and 32DU23. In 1951 Metcalf revisited 32DU9 and located several sites which are now inundated (32DU25, 32DU26 and 32DU27).

Also in 1951, Ray Mattison, historian for the Region II Office, National Park Service, conducted a survey of historic sites in the Garrison Reservoir area for the National Park Service. He recorded three unnumbered historic sites, all of which are now inundated. These are Charging Eagle (Nuita) Community and Lewis and Clark's camp sites of April 12, 1805 and August 12, 1806. Mattison also recorded Independence Townsite, which is in part a duplicate of site 32DU13.

Three other unnumbered sites in the project area, all Native American cemeteries, were recorded by a Bureau of Indian Affairs survey and census. These are Benson Cemetery, Young Bear Cemetery and White Calf Burial Ground (BIA Report No. 104, 1950: #13, 31A, 40, pp. 25-27).

A fourth unnumbered and unnamed cemetery is shown on the 1970 USGS topographic map, Hay Flat Quadrangle (7.5 min.). This cemetery lies on the north side of the mouth of the Little Missouri Arm.

The SIRBS emphasis on large earthlodge village sites is noticeable in the few sites which were extensively excavated. Donald J. Lehmer (1971), who produced a major synthesis of SIRBS and National Park Service work along the Missouri River in North and South Dakota, identified no major excavations in the current project area.

The extent of excavation by the SIRBS was largely limited to a portion of a couple of days spent testing at sites 32DU9 and 32DU10 in 1951 (Metcalf and White 1953:4, 12).

Summarizing the SIRBS investigations in and near the project area, the focus was on prominent earthlodge village sites which were situated at and below the maximum flood pool level. This resulted in cursory--although confirmable in many cases--investigations of the sites which lie in the current project area.

Following the SIRBS surveys, no professional archeological activities were recorded in or near the project area until 1974 and 1975. At that time, the University of North Dakota (UND) carried out two contracts with the National Park Service (contract nos. CX-6000-4-0139 and CX-6000-5-0185) which called for archeological surveys of portions of the Garrison Reservoir shoreline in Mountrail, McKenzie, Dunn and Mercer counties (see Haberman and Schneider 1975) and the south shore of the Little Missouri River embayment (see Leaf 1976). The surveys were directed at locating and identifying sites previously

undiscovered or thought safe from shoreline erosion. This was prompted by exposure of previously undetected sites (or components) such as at 32MN101 and 32MN234. The 1974 survey identified three new sites (32DU401, 32DU402 and 32DU403) near the project area (Haberman and Schneider 1975).

In the summer of 1975, a four-man UND crew, directed by Gary Leaf, surveyed 60 continuous miles of the shoreline of Garrison Reservoir, specifically along the south shore of the Little Missouri River embayment, in Dunn County. Thirteen new prehistoric sites, three historic sites, and 15 artifact "find spots" were recorded in Dunn County, one (32DU411) of which is outside of the present project area. One site (32DU1/32DU18) in the project area which was previously recorded was revisited. Limited testing of the Voigt site (32DU410) was conducted in an attempt to establish its spatial boundaries and stratigraphic extent (Leaf 1976:3, 33-36). Dennis Johnson, one of the members of Leaf's crew, visited the Jacobsen site (32DU1/32DU18) prior to the examination by the crew in 1975 (Johnson 1983).

Leaf recorded 16 sites in the current survey area, 14 of which were relocated during the 1985/1986 survey. The two not relocated are either outwashed or had their surface manifestations completely collected.

Following the Haberman and Leaf surveys, the next archeological investigation in the project area was an excavation conducted at site 32DU2 by UND (Good and Hauff 1977). The site was mapped and tested to investigate its potential eligibility for listing on the National Register of Historic Places (Good and Hauff 1977). The name Highway 8 was applied to the site at that time, although the name Midipadi Butte is preferred in more recent publications (see Wood 1980; Kuehn et al. 1982; Kuehn et al. 1984). The site has been referred to by several other names, including the Hidatsa site, the Elbowoods site, and Nightwalker's Butte (Kuehn et al. 1984).

Good and Hauff (1977) indicated that site 32DU2 was potentially significant in terms of National Register eligibility but recommended additional work prior to any actual nomination procedures (Good and Hauff 1977:41-44).

From 1979 to the present, one large-scale and 11 small-scale archeological reconnaissance surveys have been carried out to provide Section 106 clearance for proposed pumped water storage facilities,

seismic exploration, and development of several recreation areas. Eight of these projects included lands encompassed by the current survey area and five were conducted near the project area. In addition, excavations were conducted at Midipadi Butte (32DU2) in 1982 to salvage data which were being lost due to slump block erosion (Kuehn et al. 1982).

In 1979, Larry Robson, conducting an in-house U.S. Army Corps of Engineers survey of the proposed Dunn County Pumped Storage Facility, identified four sites (32DU28, 32DU29, 32DU30 and 32DU31) in the hills and tableland south of the Little Missouri River (Robson 1979). These four sites are located outside of the project area.

In 1980, Virginia Harris performed an in-house archeological survey for the U.S. Army Corps of Engineers (Corps) of areas in and near the Little Missouri Public Use Area which were being impacted by recreational activities (Harris 1980). Site 32DU413 was relocated.

Four small-scale archeological reconnaissance surveys were conducted in or near the project area in 1981. Larry Robson conducted two in-house surveys for the Corps. Robson relocated the Voigt site (32DU410) in an attempt to determine what effect, if any, the proposed relocation of an Amoco underground oil pipeline would have on cultural resources, particularly on site 32DU410 (Robson 1981a). No direct impacts to the site were anticipated.

Robson's second survey in 1981 focused on the McKenzie Bay Public Use Area in lands outside of the current project area (Robson 1981b).

An archeological reconnaissance survey of land in the project area was accomplished in 1981 by Ted Krieg, of Historical and Archaeological Surveys, Incorporated (HASI). Krieg recorded site Stake 1173 (32DU113), on the south side of Skunk Creek Bay while conducting a seismic survey (SHSND Site Files). In another survey, an isolated find was recorded in Section 6, T149N, R91W. The find spot is about 2.5 miles east of the mouth of Skunk Creek Bay.

A large-scale archeological survey of ten recreation areas located along the western portion of Lake Sakakawea, performed in 1981 by UND for the Corps (contract no. DACW45-81-C-0222), resulted in the recording of four sites in the McKenzie Bay (32DU295, 32DU296 and 32DU297) and Charging Eagle Bay Public Use Areas (32DU298) (Van Hoy and Nathan 1983). These public use areas, and thus the four sites, are outside the parameters of the current project.

In 1982, three archeological investigations pertinent to the current study area were conducted: 1) salvage excavations were performed at site 32DU2; 2) a small-scale survey located sites both in and outside of the current project area (32DU131, 32DU132, 32DU133, 32DU134 and 32DU135); and 3) another small-scale survey identified site 32DU54 on land near the project boundaries.

The 1982 excavations at Midipadi Butte were accomplished by UND, under a contract with the Corps (contract no. DACW45-82-M-3178), to salvage information which would otherwise be lost to erosional wave action on Lake Sakakawea (Kuehn et al. 1984:303-304). These excavations recovered data from five depressions along the butte edge which were in immediate danger of erosional destruction (Kuehn et al. 1984).

The other two archeological investigations in 1982 which were related to the present project area were seismic surveys conducted by HASI (Roberson 1982). Field parties conducting archeological investigations for the Little Missouri Survey of SEIS-PRO, Inc. recorded sites 32DU131, 32DU132, 32DU133 and 32DU134, all located within the current project area; and site 32DU135, situated outside of the project area (SHSND Site Files). All five sites are located in or near the western part of the Little Missouri River embayment, near the Little Missouri State Park. Site 32DU135 appears to be located on lands shown in SIRBS aerial photographs which apparently are mistakenly identified as the Night Walker in the Badlands Butte (see No. 32DU008 [Field No. K52-L23-10] and No. 32DU009 [Field No. K52-L23-11], by Solecki and Dewell, SIRBS files).

The 1982 HASI surveys also identified four isolated finds and a possible site (SHSND site lead). One find and the possible site are located 1-2 miles from the Jacobsen site; the other three isolated finds are recorded on either side of the mouth of the Little Missouri Arm.

The 1982 HASI seismic surveys included additional lands in the current project area where no sites were identified. These locations are presented in Table 2 and are recorded by project (or Line Number), township, range and section.

Three small-scale archeological investigations were conducted in the project area in 1983. A HASI archeological reconnaissance survey of a seismic line (Line 294) located sites 32DU160 and 32DU161 (Kinney et

Table 2. Small-Scale Archeological Reconnaissance Surveys in the Dunn County Project Area for which No Sites were Recorded.

Date	Legal Description	Party	Project
1982	Sec. 2, T147N, R91W	HASI	Line 88
1982	Sec. 3, T147N, R91W 34, T148N, R91W	HASI	Line 89
1982	Sec. 3, T147N, R91W 29, T148N, R91W	HASI	Line 139
1982	Sec. 4, T147N, R91W 5, T147N, R91W 33, T148N, R91W	HASI	Line 90
1982	Sec. 4, T147N, R91W 5, T147N, R91W 8, T147N, R91W 32, T148N, R91W 23, T149N, R91W 26, T149N, R91W 35, T149N, R91W	HASI	Line 138
1982	Sec. 12, T147N, R92W (?) 24, T148N, R92W	HASI	Line 140
1982	Sec. 20, T148N, R91W	HASI	Line 92
1982	Sec. 33, T148N, R91W 25, T148N, R92W	HASI	Line 93

al. 1983). These sites are on opposite sides of a bay which is several miles northeast of Saddle Butte (SHSND Site Files).

Site 32DU413, in the Little Missouri Recreation Area, was revisited by Virginia Gnabasik in 1983. Gnabasik conducted a Class III Intensive Inventory along the recreation area access road where it passes through the site in an effort to determine the effects of a proposed upgrade of the road (Gnabasik 1983). A series of 29 shovel tests on either side of the road were devoid of cultural material (Gnabasik 1983:2).

The third archeological investigation conducted in 1983 was an independent, or volunteer, effort carried out at the Jacobsen site (32DU1/32DU18). Dennis Johnson revisited the site in order to make a

rough site map and to document its physiographic features (Johnson 1983).

In 1984 a Class II Cultural Resource Inventory of Highway 22 from Lost Bridge to Highway 23 recorded sites 32DU177 and 32DU180 (Lost Bridge) (Fox 1984). Both sites are located near the Lost Bridge Public Use Area.

Finally, the Northern Border Pipeline Project, a major archeological investigation accomplished from 1979-1984 in western North Dakota, has produced considerable comparative data. The Northern Border Pipeline Project survey and excavation reports (Toom and Gregg 1983; Root and Gregg 1983a; Root and Gregg 1983b; Root 1983; Artz, Root and Gregg 1983) provide an extensive body of archeological, ethnohistoric and historic information on the western part of North Dakota.

Summary

In summary, most of the previously recorded sites in the project area have been defined on the basis of surface manifestations. There are several exceptions, however. Excavations were used to evaluate or salvage several sites in the project area, including Midipadi Butte (32DU2), 32DU9 and 32DU10. Determinations of cultural affiliations of previously recorded sites are provided in Table 1.

The previous investigations in the project area can be described under the following general categories:

- 1) Those which were limited to a cursory examination of certain areas; this would refer primarily to the SIRBS investigations which largely focused on areas within the high flood pool area. Thus, their work centered on currently inundated areas which are outside of the present project area.
- 2) Those which intensively focused on a single site or on a relatively restricted survey area; this category includes those investigations comprised of intensive excavations and nearly all of the small-scale surveys.
- 3) A survey of a large block area; this encompasses the survey portion of the investigations directed by Leaf in 1975.

The following discussion provides an overview of the prehistory and history of the project area, integrating a broad general review, based on such sources as Lehmer (1971) and Gregg (1983), with project-specific data based on the results of this survey, on more regionally based studies (e.g., Beckes and Keyser 1983; Clark 1985; Gregg, Bamat, Hanson and Schneider 1983; Haberman and Schneider 1975; Kuehn 1982; Lau 1981; Leaf 1976; Loendorf 1978; Loendorf et al. 1982; Lovick and Ahler 1982; Root 1985; Science Applications, Inc. and Overland Archeology, Inc. 1982; Van Hoy and Nathan 1983), and on site-specific evaluations (e.g., Kuehn, Falk and Drybred 1982; Kuehn, Loendorf and Blikre n.d.; Schneider 1975; Toom and Gregg 1983). The focus of this overview is the Garrison region of the Middle Missouri subarea of the Northern Plains (Figures 7 and 8).

Figure 9 presents a published chronological model for the region of the Northern Plains (Gregg 1983:Figure 6.4) that is broadly applied in the following discussion of the culture history of the study area. As a cautionary note, this chronology is a compilation of data derived from other regions, with insufficient data having been generated within the present study area to warrant more than a general comment on its relevance, or lack of relevance, to the study area.

Two more regionally specific chronologies have been developed. The first is for the Little Missouri Grasslands region (Loendorf 1978) in which four general temporal divisions were outlined: the Early Prehistoric period (10,000-6000 B.C); the Middle Prehistoric period (6000 B.C.-A.D. 500); the Late Prehistoric period (A.D. 500-1780); and the Historic period (A.D. 1780 to present).

The second has been developed for the Knife-Heart region of the Middle Missouri and is summarized by Lovick and Ahler (1982). This chronology deals with the Plains Village period and will be discussed later.

Paleoindian

The earliest occupation/peopling of the Northern Plains is dated around 9500 B.C. with the beginning of the Paleoindian tradition. This tradition is characterized by a variety of hunting and gathering strat-

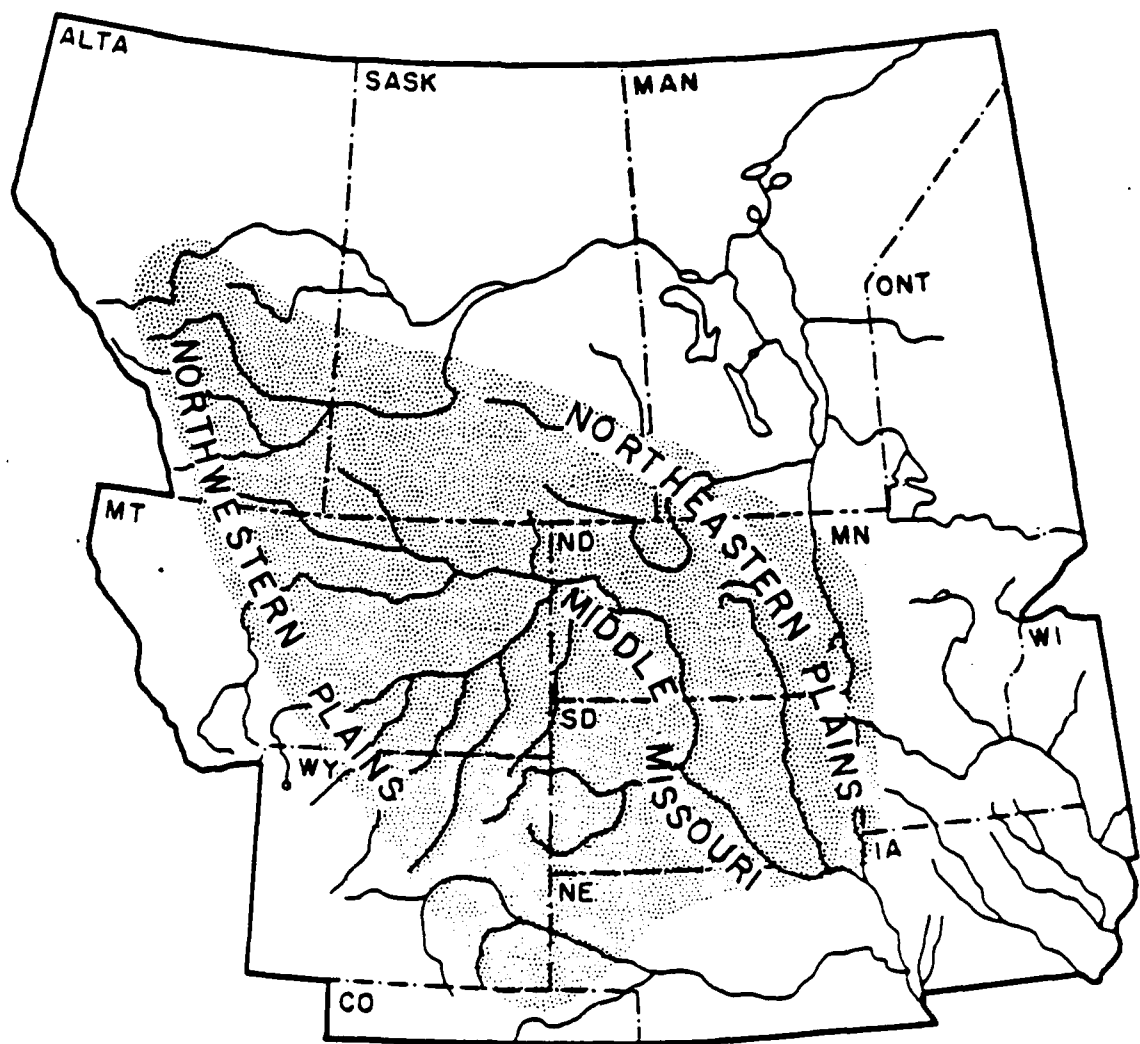


Figure 7. Subareas of the Northern Plains, combining terminology from Griffin (1952), Lehmer (1971:28-29), Lehmer and Caldwell (1966:512), and Wedel (1961:23) [from Gregg 1983:Figure 6.1].

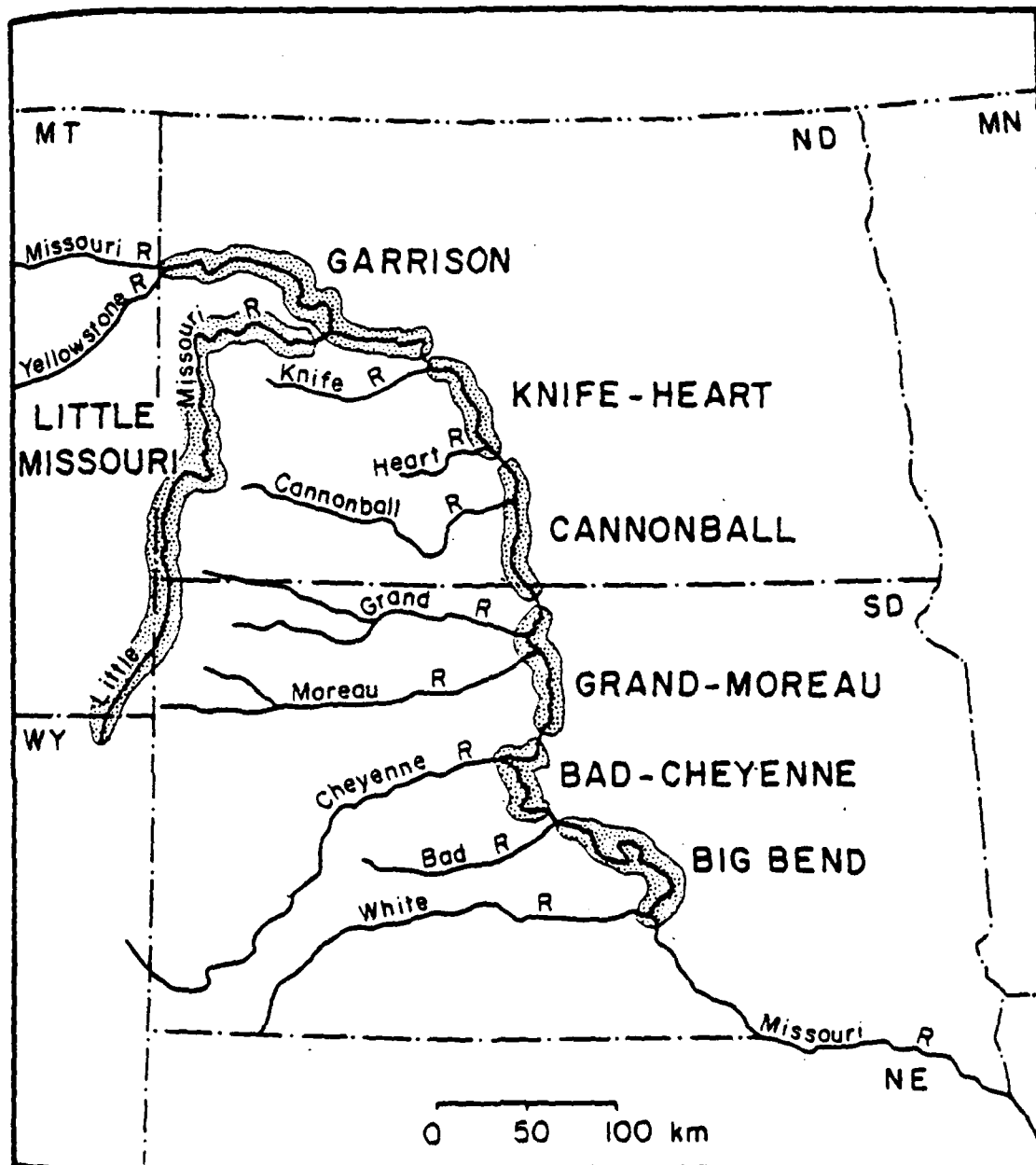


Figure 8. Regions of the Middle Missouri Subarea, from Lehmer (1971:29) and the Little Missouri Region of the Northwestern Plains Subarea, from Loendorf et al. (1982) [from Gregg 1983:Figure 6.2].

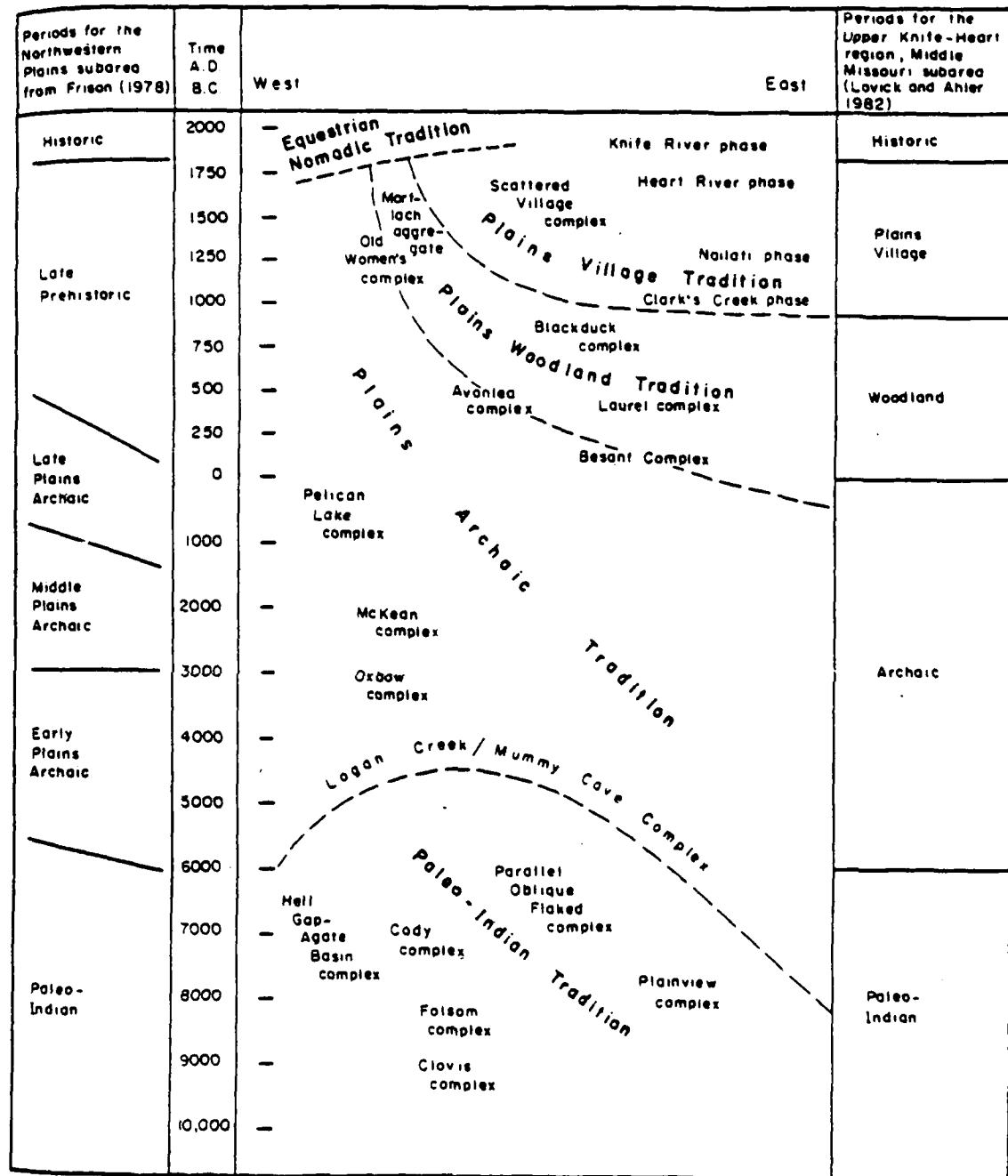


Figure 9. Chronological model for the Northern Plains depicting named archeological units with components known or anticipated in western and central North Dakota (from Gregg 1983:Figure 6.4).

egies, but the emphasis is on big game as the staple within the subsistence strategies. Within this tradition, six cultural complexes are recognized - Clovis, Folsom, Hell Gap-Agate Basin, Cody, Plainview, and Parallel Oblique Flaked - differing in part with regard to projectile point stylistics.

Of the 212 Paleoindian points recorded in North Dakota by 1982, the most frequent type (23 percent) was Folsom, with 95 percent of all of the specimens derived from localities west of the Missouri Coteau. A study of private collections of projectile points originating in or near the proposed Lynch Knife River Flint Quarry National Historic District (Clark 1985) resulted in a different picture. In these collections, 18 complete Paleoindian projectile points and 14 fragments were present. "The most numerous point types are the three from the Cody complex. Alberta, Scottsbluff, and Eden points make up 42% of the Paleo sample" (Clark 1985:73).

During the present survey an incomplete Agate Basin point was recovered from site 32DU662.

A significant Paleoindian site is recorded just to the north of the project area - the Moe site, 32MN101 (originally designated as 32MN16). A Folsom point was found at this site in 1969, and since then Mavis Moe, a local resident, has collected thousands of projectile points and tools from the site. About 5 percent of the points are probably Paleoindian; Clovis, Folsom and Plano (Milnesand, Plainview, Agate Basin and Angostura) points are all represented (Schneider 1982:126). Excavations at the Moe site in 1973 and 1974 did not recover any Paleoindian points, leading to the conclusion that the Paleoindian occupation "would occur at or below water level" (Schneider 1975:25). "The presence of so many distinct Paleoindian materials at Moe surely indicates a fairly heavy occupation of this portion of the state in early Holocene times" (Beckes and Keyser 1983:174).

Plains Archaic

Around 5500 B.C. a transition in subsistence economies occurs from the Paleoindian big game emphasis to the Plains Archaic emphasis on a more diversified resource exploitation, although there are regional variations in the extent and emphasis of the changes based on the different potentials of the local environments. In general it is the

adaptation from Pleistocene to essentially modern flora and fauna that marks the change in subsistence strategies. It has been noted that "the majority of the Pleistocene megafauna living in herds...became extinct about 8000 years ago" (Hester 1960:66).

While present evidence from the study region is very limited it suggests the emphasis was still on big game hunting.

Frison states that human adaptations on the Northwestern Plains during the last 4000 years of prehistory were largely dependent on bison (1971:89)....The termination of the Plains Archaic tradition is also variable. It is likely that some human groups using the study area with this adaptation made a transition to a Woodland adaptation as early as 100 B.C. Other groups, like the Algonkian Blackfeet, developed Equestrian Nomadic tradition adaptations from a Plains Archaic base very late in prehistory (Gregg 1983:256-257).

The named Plains Archaic tradition complexes in or close to the study area are the Logan Creek/Mummy Cave and Oxbow complexes (early), McKean complex (middle), and the Pelican Lake complex (late).

The Logan Creek/Mummy Cave complex includes the earliest side-notched points and is considered to be within the temporal range of ca. 5500-3300 B.C. Components near the survey area are represented by artifacts from the Tysver-Olson site (32DU605) in Dunn County reported by Kuehn (Gregg 1983:260, 262), artifacts from Billings County (Simon et al. 1982), and "occasional specimens of large side-notched dart points of a generalized Hawken or Bitterroot type" (Beckes and Keyser 1983:176) from the Little Missouri Grasslands. No diagnostic material of this time period was recorded during the present survey, but two cultural zones at the Moe site are radiocarbon dated within this period (Schneider 1975:17, 25).

The Oxbow complex is named from a site in Saskatchewan and has been variously dated to span the period 3500-1000 B.C., although no dates are available for Oxbow components in North Dakota. Based on the presence of Oxbow points, Loendorf et al. (1982:50) suggested that regular utilization of the Little Missouri region was initiated ca. 3050 B.C. Oxbow points were present in the surface finds from the Moe site, 32MN101 (Schneider 1975), and one was recovered during this survey from site 32DU769.

The McKean complex is comprised of McKean Lanceolate points, Mallory points, Duncan points, Hanna points, Yonkee points, and associated remains, including several unnamed point varieties.

The widespread McKean presence on the Northern Plains has been described as 'explosive' (Wormington and Forbis 1965:190) and 'almost dramatic' (Frison 1978:46). This presence correlates with the beginning of the essentially modern Sub-Boreal climatic episode (cool and moist in comparison with the Atlantic). Faunal and floral resource potentials are believed to have been similar to those of the early Historic period (Gregg 1983:270).

McKean complex materials have been recorded from the Moe site (Schneider 1975), site 32MN234 (Haberman and Schneider 1975), and from private collections in or near the proposed Lynch Knife River Flint Quarry National Historic District. "All four variants of the McKean complex are present, but 58% of these are Hanna points" (Clark 1985:74). This survey recovered two McKean complex points and a Yonkee point, all assignable to the Middle Plains Archaic. One of the McKean complex points was from site 32DU724; the other was an isolated find (IF 161). The Yonkee point was recovered from site 32DU633.

The McKean complex has an extensive distribution and a broad time frame from ca. 3000 B.C. to 510 B.C. The McKean complex may represent the earliest intensive use of the Little Missouri region (Loendorf et al. 1982:51) and the beginnings of a more intensive exploitation of the present study area. Although there has been little detailed evaluation of McKean complex subsistence strategies/adaptations, what evidence there is suggests a heavy reliance on bison hunting. Syms suggests McKean groups may have "lived much of the year in small groups and combined into larger groups during the summer for buffalo hunts" (1969:169). In the Little Missouri Grasslands "one pronounced pattern appears to be a concentration of Middle Archaic sites on many of the extensive linear ridge systems which occur throughout the badlands" (Beckes and Keyser 1983:177).

The Pelican Lake complex components follow those of the McKean complex throughout most of the geographic extent of McKean and the adaptive strategies are similar. "There is considerable taxonomic confusion with the Pelican Lake point type and varieties. Any corner-notched or corner-removed point dating ca. 1500 B.C. - A.D. 400 is

frequently classified as Pelican Lake" (Gregg 1983:273). Seven points classified as Pelican Lake were recovered during this survey: two were isolated finds (IF 2 and IF 134) and the remaining five were from sites 32DU231, 32DU412, 32DU418, 32DU664 and 32DU669.

Important Pelican Lake components in the nearby Little Missouri Grasslands regions include the Sunday Sage site (32BI22) (Simon and Borchert 1981a) and the Ice Box Canyon Ridge site (32MZ38) (Simon and Borchert 1981b).

"Most Northern Plains archeologists agree that Pelican Lake developed out of the McKean complex (cf. Joyes 1970:212; Reeves 1970a:167). In the Little Missouri region... 'it appears there was a continuous transition, in terms of exploitation of the region,' from McKean to Pelican Lake (Loendorf et al. 1982:52)" (Gregg 1983:273). However, "the question of whether Pelican Lake cultures represent an in situ development from preceding cultures or a cultural intrusion of Woodland influenced populations" (Beckes and Keyser 1983:185) needs further evaluation.

"Reeves places the 'transition from Hanna to Pelican Lake at ca. 1300 B.C. to 750 B.C.' with regional variations (1970b:330). The temporal range suggested for the Pelican Lake complex in the study area is 1500 B.C. - A.D. 250" (Gregg 1983:273).

Other types of Late Plains Archaic points were not recovered during this survey. Beckes and Keyser have noted that "a class of generalized, as yet untyped, side and corner-notched points of probable Late Archaic affiliation is found on the Grasslands" (1983:193). "This point style diversification may be accounted for by relatively high Late Plains Archaic period human population densities and increased regionalism. Lessened post-Sub-Boreal erosional and depositional landscape modification means increased potential for encountering archeological components from this period" (Gregg 1983:278).

Late Prehistoric/Plains Woodland

"The Woodland period... is characterized by the appearance for the first time of distinctively styled pottery vessels (Johnson and Wood 1980)... populations resident in the Plains during the Woodland period appear to have initially maintained the same basic adaptive strategies characteristic of the earlier Archaic populations" (Lovick and Ahler

1982:53). Another distinguishing feature is mound burial which developed where Woodland groups were able to maintain a relatively high population density; "the resulting social organization permitted the construction of numerous linear and conical burial mounds and possibly a greater emphasis on communal bison hunting (Neuman 1975; Chomko and Wood 1973; Wood and Johnson 1973)" (Lovick and Ahler 1982:53).

The Besant complex is the earliest named archeological unit associated with ceramics within the general study region. Often this complex is placed under the label of the Plains Archaic tradition, and there "may or may not be qualitative differences between Woodland and Plains Archaic lifeways in North Dakota" (Gregg 1983:278). Besant is partially contemporary with late Pelican Lake on the northwestern plains, with Laurel to the east and northeast, and with Avonlea.

The Hopewellian Interaction Sphere (Caldwell 1964) was ongoing during a portion of the Besant temporal range....Reeves suggests that KRF entered the...H.I.S. through Besant and that Besant interaction indicates qualitative differences in transportation systems, communication systems, and social organization in comparison with traditional Northwestern Plains hunter-gatherer societies (1970a:172-173) (Gregg 1983:280-282).

During the current survey, Besant projectile points were recorded at sites 32DU3, 32DU132 and 32DU664. Reeves suggests a Besant temporal range of A.D. 1 to A.D. 700 or 800 in the Northern Plains (Reeves 1970b).

The Besant complex is one of several complexes within the Plains Woodland tradition and is the one represented within the present project boundaries. The Midipadi Butte site (32DU2) (Good and Hauff 1977; Kuehn et al. 1982), located along the southern side of the Missouri River within the present survey area, exhibits evidence of Plains Woodland tradition occupation. Wood (1956) reports another Plains Woodland tradition site south of the Missouri River in northern McKenzie County (32MZ2). The Moe site (Schneider 1975) also contains evidence of Plains Woodland tradition occupation.

In the Knife-Heart region "it now appears that the Woodland period in the area can be divided into at least two subparts, Early/Middle Woodland (ca. A.D. 1-500) which is distinguished by the use of dart or spear points, and Late Woodland (ca. A.D. 500-1000) which is

characterized by the occurrence of arrowpoints and by inference the introduction of the bow and arrow" (Lovick and Ahler 1982:53).

The Avonlea complex is considered to have developed in place out of Pelican Lake (Reeves 1970a) with a temporal range in the study area of ca. A.D. 450-1000. Avonlea consists of a distinctive projectile point type as well as a number of components (all late) containing ceramics. A single Avonlea point was recognized during a recent survey by ALCWS along Lake Sakakawea in Mountrail County at 32MN269, but very few other Avonlea components are reported for North Dakota and none are reported from the Little Missouri region (Gregg 1983:294). Eleven Avonlea points are noted from private collections in the Knife River Flint quarry area (Clark 1985:74).

Late Prehistoric/Plains Village

Other than Besant and Avonlea components, which have been classified within the Plains Woodland tradition, no distinctive Plains Woodland material is recorded from the study area. The remaining diagnostic prehistoric material recovered on the survey is categorized as either "Late Prehistoric Corner/Side-Notched," "Plains/Prairie Side/Corner-Notched" or "Late Prehistoric unnotched." Points of these classifications were recovered from site 32DU132 and isolated finds 110, 120 and 158. Specific dating of these points is lacking and they may range from the Woodland through the Plains Village periods.

The Plains Village tradition is not well-documented in the general study area, which includes the Garrison subarea of the Missouri River and the Little Missouri region. Few earthlodge villages are present, and most of the sites of this period are periodic or seasonal occupation sites. In western North Dakota the Mondrian Tree site (32MZ58), the Dune site (32MZ502), the Flat Top Butte site (32MZ422), the Wilkins site (32SL7) and the Geary Bison Kill (32BI4) are examples of non-earthlodge Plains Village sites. The ceramics recovered during this survey at IF 9 probably reflect activity at a transitory Plains Village occupation. Ceramic material is also previously recorded from the two earthlodge villages, 32DU1 and 32DU2, in the survey area, as well as from sites 32DU3, 32DU298 and 32DU410, located in or near the project area.

Stone circle sites or tipi ring sites are most often associated with the Late Prehistoric period, but several have been shown to date to

the Middle/Late Archaic periods and some are possibly earlier (Winham 1982:23.2). Another site type associated with the Plains Village period in the study area is the eagle trapping pit. Examples of both these site types were located during the present survey.

Lehmer's synthesis of the Middle Missouri region (1971) still represents the standard reference guiding much of Missouri River archeology. Lehmer defined three cultural traditions which influenced the development of the Middle Missouri region during the Plains Village period - the Central Plains tradition, the Middle Missouri tradition (including three variants: the Initial, Extended, and Terminal), and the Coalescent tradition (including the Initial, Extended, Post-Contact and Disorganized variants).

"There are no Initial Middle Missouri variant sites presently recognized in North Dakota. However, heavy utilization of KRF at Initial variant villages in the lower Bad-Cheyenne and Big Bend regions...indicates interaction with groups in the study area [KRF quarries, Dunn County] on this early time level" (Gregg 1983:306).

The Central Plains tradition is not directly represented by any sites in the Middle Missouri area, but its influences are apparent. In the vicinity of Lake Sakakawea, the earliest village sites are of the Extended Middle Missouri variant, appearing ca. A.D. 1000-1050, with one site - Grandmother's Lodge (32ME59) - located just east of Dunn County. The only other known village sites in or near the survey area are classified as Disorganized Coalescent, and consist of Rock Village (32ME15), Jacobsen/Nightwalker's Butte in the Badlands (32DU1/18) and Midipadi Butte (32DU2).

It is generally understood that the prehistoric village cultures eventually developed into the Mandan, Hidatsa, and Arikara tribes who inhabited the Middle Missouri subarea in historic times. The Arikara have oral traditions of having moved into the Missouri valley from areas to the south, in particular from the Central Plains, and the archeological record supports these traditions to a great degree (Deetz 1965:5-7). Likewise, the Mandan have oral traditions in which various parts of the tribe moved to their eventual homeland in South Dakota and particularly North Dakota from somewhere to the east and southeast (Bowers 1948:19-24; 1950:15-18), and to some extent the archeological record also supports these traditions. The Hidatsa have distinct traditions for three different

subparts of the tribe, with the Hidatsa Proper and the Awaxawi claiming to have arrived on the Missouri River from the east, and with the third subtribe of the Hidatsa, the Awatixa, claiming to have always lived on the Missouri River in the Knife-Heart region (Wood 1980; Bowers 1948:17-19) (Lovick and Ahler 1982:56).

Lovick and Ahler's recent reassessment of the Plains Village period in the Knife-Heart region (1982:54-84) shows a much more complex set of interactions and processes of coalescence that can be incorporated into either Lehmer's (1971) or Bowers's (1948) classificatory schemes. Six "phases" in the Plains Village prehistoric and historic periods are recognized in the Knife-Heart region, which following Lovick and Ahler (1982:Table 2), are: Clark's Creek phase, A.D. 1000-1200 [within Lehmer's Middle Missouri tradition and Bowers's Cannonball focus]; Nailati phase, A.D. 1200-1400 [within Lehmer's Middle Missouri tradition and Bowers's Painted Woods focus]; Heart River phase, A.D. 1400-1710 [within Lehmer's Coalescent tradition and Bowers's Heart River focus]; Scattered Village complex(es), A.D. 1400-1700 [within Bowers's Upper Grand focus and Painted Woods focus]; Unnamed phase, Protohistoric, A.D. 1710-1750 [within Lehmer's Coalescent tradition and Bowers's Heart River focus]; and the Knife River phase, A.D. 1750-1861 [within Lehmer's Coalescent tradition and Bowers's Heart River focus].

Euro-American Period

The Historic period in the area was heavily affected by the Missouri River which served as a major transportation route utilized by native tribes, fur traders, travelers, gold seekers, soldiers and settlers. Early exploration of the Lake Sakakawea area by Euro-Americans was inspired by a search for new markets for the fur trade and included expeditions by the La Verendrye brothers (1730s-1740s), Jean Baptiste Truteau (1790s), Loisel (1800s), Francois-Antoine Larocque (1805) - who recorded seeing many bears and skunks when they crossed the "lesser Missory" on October 7, 1805 (Wood and Thiessen 1985:198) - and Lewis and Clark (1804/1806). The belief that the elder La Verendrye visited the Missouri River at a location several hundred miles upstream from the modern cities of Bismarck and Mandan has been shown to be invalid not only on the basis of the documents themselves, but on the basis of recent archeological findings

as well (Smith 1980). In 1807 Manuel Lisa led a party up the Missouri River to the Big Horn River where Lisa had a fort built. Much of the history of this period is concerned with competition among the Missouri Fur Company, the Western Department of the American Fur Company and the Columbia Fur Company, the latter being merged into the American Fur Company in 1827 (Wood and Thiessen 1985:40).

The most disastrous effect of the contact of Native Americans with Europeans was the spread of disease, especially smallpox. Smallpox had reduced the Arikara to three villages by 1795, the Mandan were almost completely eradicated and the Hidatsa were forced to move north into the Lake Sakakawea region. The Mandan followed and subsequently joined the Hidatsa for protection against their mutual enemies, the Sioux. In 1845 the Hidatsa built Like-a-Fishhook Village, and in the same year James Kipp of the American Fur Company erected Fort James, renamed Fort Berthold.

The Treaty of Fort Laramie of 1851 defined

the boundaries of the Gros Ventre (a misnomer for the Hidatsa), Mandan, and Arikara (Indian) Nations, now called the Three Affiliated Tribes. These boundaries established a vast area of land [more than 12½ million acres] vaguely described as the entire right bank of the Missouri from the mouth of the Heart River to the mouth of the Yellowstone, and from the mouth of the Powder River to the headwaters of the Heart River (Bureau of Indian Affairs 1971:7).

The present Fort Berthold Reservation is the residuum of that territory.

In A.D. 1861 the last surviving group of villagers in the Knife-Heart region, the Arikara, emigrated to join the remnants of the Mandan and Hidatsa on what is now the Fort Berthold Reservation, and established Star Village opposite Like-a-Fishhook village (Smith 1972). In 1862 the Arikara were attacked by the Sioux and then joined the Mandan and Hidatsa for protection and the beginning of the merger of what is now referred to as the Three Affiliated Tribes.

In 1866 another treaty was signed by the Three Tribes (never ratified by the U.S. Senate) which added a large tract on the eastern portion of the reservation. Between 1870 and 1910 a succession of executive orders and congressional acts reduced the [Ft. Berthold] reservation...to a gross area (including white-owned land) of 643,368 acres, just before the building of the Garrison dam (Bureau of

Indian Affairs 1971:8).

A series of military posts was established on the Missouri River to give the Indian agents protection and to protect the increasing steamboat traffic resulting from the discovery of gold in Idaho and Montana. One post, Fort Stevenson, was erected 18 miles downstream of Fort Berthold. In 1868 a permanent Indian Agency was established at Like-a-Fishhook Village. In 1874 the old fur trading post burned down and in 1875 the Indian Agency was moved one and a half miles downstream (site 32ML49).

During the 1870s and early 1880s the "frontier" as a distinct zone began to disappear, due to the decrease in threats from the Sioux and the arrival of the railroad. Fort Stevenson was abandoned in 1883 and before the turn of the century the Indian Agency had been moved to Elbowoods, and Fort Berthold and Like-a-Fishhook Village had been abandoned.

The Three Tribes established relatively permanent settlements along the river bottom and there were no hostile outbreaks against the U.S. Government during the late nineteenth and early twentieth centuries. "Allotment of reservation land to individual Indians began about 1890 with 949 allotments in the Missouri Valley, completed by 1895. Subsequent allotments were made in 1910, 1912, and 1915, while the final allotments in the upland range lands west of the Missouri were made between 1925 and 1929. Agricultural use of the area's lands began as early as 1880" (Bureau of Indian Affairs 1971:8).

Non-Indian settlement of the area began in the 1880s with cattle ranching. Settlement around the perimeter of the reservation proceeded rapidly with the construction of the Northern Pacific and Great Northern railroads in the 1880s.

Maximum settlement on small farms was realized in 1915, when final sale of former reservation lands was completed. The white settlers were dominated by immigrants and first generation Americans of Scandinavian and German stock....Within the space of a single generation, this stock had changed the basic pattern of most of the reservation from one of extensive livestock operations to one of relatively intensive crop production (Bureau of Indian Affairs 1971:8-9).

Henke (1971) reports that a well-planned campaign for enticing settlers to move to Dakota Territory was undertaken by officials. In

1887 Lauren Dunlap, Dakota Territory Commissioner of Immigration, asserted that:

'the plans proposed for foreign emigration, in the interest of Dakota, do not stop short of attaining the highest and best results possible. It is not the pauper emigrant, who is a welcome departure from the port where he sails, that is wanted by any means; but the other class, of a well-to-do character, who are to be had by reaching and reasoning with them, with regard to the betterment of their social condition, the larger freedom, and the greater chance for development in this country -- and in Dakota -- to be given their children' (Henke 1971:414).

After statehood was gained in 1889, North Dakota continued its public relations campaign to entice the "well-to-do character." In 1891, Governor Andrew H. Burke told the state legislature that:

'...we are yet in the formative period of our existence as a state. Our future largely depends upon the character of those who are to make their homes within our borders, and the vigorous development of every industry that will tend to give stability and permanency to our business affairs.'...Burke called upon the legislature to assist those sections of the state campaigning to induce settlement (Henke 1971:415-416).

The second boom began in 1898 and continued through World War I, during which time 250,000 immigrants moved into the state.

As Hammer (1969) records, the railroads were the key to regional commerce, transportation and communication. Ranching communities functioned predominantly as elementary trade centers. The layout of agricultural towns was determined by the railroad, with terrain features contributing to the decision. A pamphlet put out by the Milwaukee Railroad (1913) to attract settlers to land in Montana is equally relevant to North Dakota at this time. The pamphlet advises that "the settler who moves out on the land will find September and October to be the most satisfactory months. He will then be able to get his house built before the winter sets in, and during the winter he can haul the material for his stables, sheds, and fences and have everything ready for an early start at breaking in the spring" (pp.13-14).

In the 1930s the drought underscored the need for a controlled water source and the damming of the river became a priority. Construction of the Garrison Dam began in 1947 and was completed in 1953.

From a population peak in the twenties, there has been a continuing decrease brought about by the droughts of the 1930s, increased mechanization, employment opportunities elsewhere and the consolidation of small non-economic farms. The inundation of the Missouri Valley following closure of the Garrison Dam in the early 1950s forced the "relocation of three small towns and over 85 percent of the Indian population plus the geographical separation of the reservation into five segments, created a social dislocation which requires continuing adjustments" (Bureau of Indian Affairs 1971:2).

The primary purpose and requirement of the current contract was the intensive survey of all project lands (ca. 22,260 acres) to locate and evaluate any and all cultural resources present, and to assess the potential for buried cultural deposits. The proposed research design (Appendix I) was both multi-staged and flexible to take into account the actual data recovered. The initial (first stage) research orientation was based on the perceived data potential of the region. This directed the data recovery program which focused on the documentation of site content, site location and research potential, with particular emphasis on the occurrence of Knife River Flint.

The final (second stage) research orientation was developed during the survey, and adapted to meet the actual field situation regarding the range, type and integrity of the cultural resources being recorded. A geomorphological study of the survey area, while necessary to fully evaluate the cultural resource potential, was beyond the scope-of-work of this project. However, cutbanks were inspected for buried cultural deposits.

Initially, proposed analyses included studies of diagnostic materials, lithic resource utilization (particularly Knife River Flint), and locational data. Management recommendations for each site were also to be prepared.

After completion of the field survey and evaluation of the specific data collected, the research orientations became more specific. Several detailed studies were undertaken. Chapter 9 presents the results of a study of the projectile points recovered during the survey. Cultural-technological complexes represented consist of Agate Basin, Oxbow, McKean, Yonkee, Pelican Lake, Besant, Late Prehistoric Side-Notched and Late Prehistoric Corner-Notched (see Table 3). Scrapers are also analyzed in Chapter 9, following a typology similar to that utilized by Lee and Lovick (1979) and Nowak (1981).

Comparative locational analyses, studying sites in relation to land forms, site exposure, parameters of visibility, ecosystems, elevation and distance to water sources, are presented and discussed below (Chapter 9, Tables 13-18). General assemblage comparisons at artifact scatter sites, broad evaluations of historic sites, and studies

of eagle trapping pits and anomalous human interment practices involving "trunk" burials are also examined.

It was soon apparent that extensive research focusing on lithic resource utilization would not be profitable given the limited nature of the data recovered. The majority of the lithic debitage and tools were of Knife River Flint (KRF), variously patinated and unpatinated. Therefore, detailed analyses of the occurrence of KRF in the lithic assemblages located during this survey were undertaken (see Chapter 9, Table 9). Many areas of naturally occurring KRF cobbles were encountered (see Field Maps - Site Archive), some of which appeared to have been utilized, and were therefore assigned a site or isolated find designation. Others showed no evidence at the time for such utilization (see Chapter 9, Figure 230 and Appendix M for further information). The study of resource (lithic) utilization in the area is further developed by a study of the raw materials present at artifact scatter sites (see Chapter 10, Table 21). In addition to KRF, Tongue River silica, porcelanite, various colored cherts, jasper, agate, obsidian, quartzite, chalcedony, granite, petrified wood, sandstone, shale, basalt and quartz raw materials were present. Most of the lithic material, including the KRF, was clearly derived from tabular cobbles readily available locally.

The nature of the surface material collected precluded, in most cases, definite association with features or specific components of a site, and is considered an unrepresentative sample of most sites. With that proviso, it is recognized that KRF accounted for 75 percent or more of the lithic debitage at over 90 percent of the sites (at which five or more lithic items were present) recorded.

Field Survey Methods, Organization and Schedule

The field survey was undertaken in two phases. The first session was conducted between August 18 and September 4, 1985, and the second was undertaken from April 27 to June 26, 1986. The investigation in 1985 covered the western end of the Little Missouri River and all islands with the exception of one, located off Independence Point, which was surveyed in 1986. In 1986 the survey proceeded east and north, and west and south of McKenzie Bay, terminating at the Dunn/Mercer County line, east of the confluence of the Little Missouri and Missouri rivers. The 1985 crew consisted of 2-3 persons. In 1986 the crew size was comprised of 3-4 persons; occasionally two 2-man crews were utilized.

Survey methods varied with the terrain from the norm of transect walking at 30m intervals. In river and upland breaks areas field personnel walked the ridges, butte tops and less steep slopes, crossing the region as effectively as possible. In the present reservoir bank area one person inspected the cutbanks and "beach." On river terrace areas closer spacing was maintained. In most cases two sets of transects, out and back, were sufficient to cover the survey area, but on wider plains and terraces additional transects were accomplished. In many cases the location of a site or isolated find prompted a more detailed survey of the surrounding area.

The field survey was organized in 1985 from a base at Slater's Resort. Peter Winham directed the survey in 1985. In 1986, Kerry Lippincott directed the survey, initially from a base at McKenzie Marina and later from Halliday, ND. Crew members consisted of John Butterbrodt, Peter Froelich and Kurt Watzek. Peter Winham and Kerry Lippincott met with the Fort Berthold Tribal Council prior to initiating the survey. The Tribal Council issued a letter (Appendix J) supporting the survey efforts.

Field Conditions - Access, Surface Visibility

Generally the field conditions were good for this project. The level of Lake Sakakawea was very low (1840 ft. amsl on August 19, 1985; 1838.3 ft. amsl on October 3, 1985; 1836.2 ft. amsl on April 26, 1986; and rising thereafter to 1845.4 ft. amsl by June 24, 1986), allowing

better access around the approximately 190 miles of shoreline, and examination of several sites that would otherwise have been inundated. Vehicular access to the survey area was better than expected, but required gaining permission to cross private lands. A boat was used along the Little Missouri River wherever and whenever possible; the western area was dry (see Plates 5, 6, and 7) and high wind advisories were common.

Surface visibility was usually excellent. The cutbanks, beach, river and upland breaks areas, and badlands had a surface visibility of 30-100 percent. One terrace area west of Lost Bridge was shovel tested during transect surveying.

Data Recording Procedures and Definitions

Data recording procedures followed those outlined in the proposal (Appendix I), and consisted of completing the categories of data listed on the field data sheet form and/or on the official North Dakota State Site Form; definitions outlined in the "manual" for completing the North Dakota site forms were followed.

All sites located, whether within or outside the actual survey area as defined (i.e., within the Corps take area above 1850 ft. amsl), were fully recorded. At stone circle sites the inside diameter of all stone circles was recorded. Plans were made of each site using a brunton compass and tripod and 100m tape. The compass was placed over a temporary datum and features plotted from that point.

Photographs of all newly recorded sites were taken in black and white and color slide formats. [One roll of color film was destroyed in processing by Kodak.] The procedures with previously recorded sites were slightly different. The first priority was to relocate the sites, if possible, and to determine why some previously recorded sites could not be relocated (buried, destroyed, inundated). If relocated, the previously recorded data were compared with the present circumstance of the site and any major deviations noted. If additional features were present, a new or updated site map was made and those new features recorded. An update to the existing site information was completed.

A total of 195 sites (Figure 10), including both newly recorded sites and previously recorded sites, are inventoried below. The inventory format is as follows. All sites are presented in site number order. The categories of information required in the main text are juxtaposed with the site maps. In this way the reader can review both the written data and the site map at the same time. Specific locational data and other information not specifically required in the main text are given on the official North Dakota State Site Forms in Appendix B.

Following the inventory, analyses of the data and summaries of the sites, by site type, are presented. The site maps accompanying the site forms are generally self-explanatory. Where additional information is needed to interpret the site map, it is listed under the "Data Plotted on Site Map" section of the site data page. A key to the symbols found on the site maps that are not otherwise defined is provided on page 69.

Site boundaries are sometimes defined by a solid or dashed line which encloses the features/cultural material noted on the survey. In other cases just the specific information on cultural features and associated materials is presented, without imposing such an "interpretive" boundary to the site.

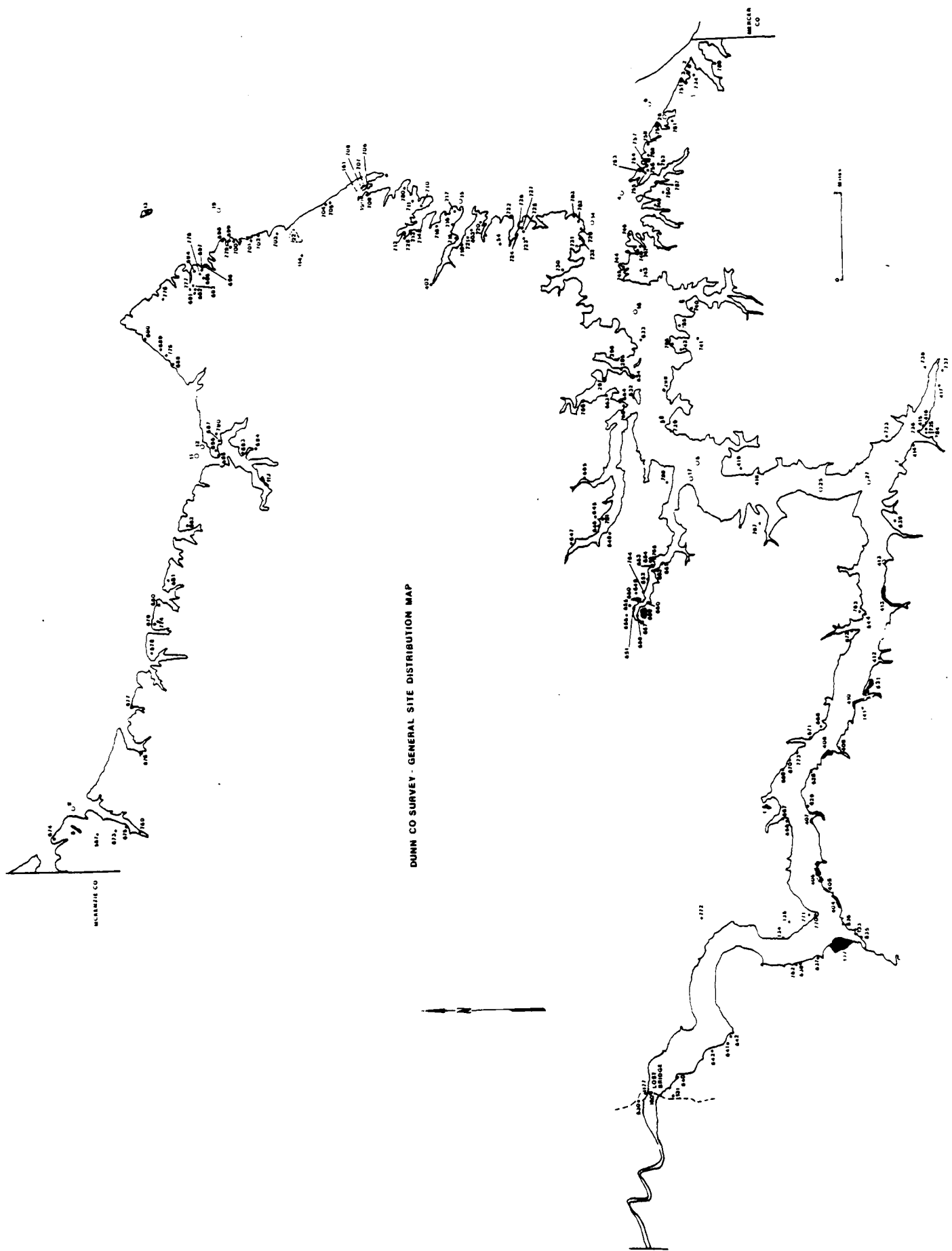


Figure 10. Map showing the overall distribution of sites within the

Explanation of Site Inventory Data Categories

Site number: 32DU

Site name: (If given)

County: Dunn.

State: North Dakota.

Site map: Figure

Property owner(s) and address(es): Generally the owner is the U.S. Army Corps of Engineers, Omaha, Nebraska, but some sites were located on private/tribal land en route to Corps land.

Tenant and address: In almost every case this is "Unknown." Therefore this category is not listed under each individual site description.

Site type: A simple description/site type category is given. More details of the site are provided in the information below and on the State Site Form in the appendices.

A site is defined here on the basis of spatial association of material/features and/or some topographic linking of components. Proof that there is, indeed, any direct association between the individual given components of a site must await further evaluation. For instance, we do not know whether some single stone circles are part of a much wider site complex - or whether multiple stone circles are really overlapping sites, each of fewer components. Such theoretical considerations, however, are probably more confusing at this stage (Class II Inventory), and are only pointed out to remind the reader that the information presented is basically descriptive and open to other interpretations. Individual features (e.g., cairns) separated by more than 50 meters are generally classified as separate sites.

For previously recorded sites a combination of the total information available for the site is presented. If the present 1985/1986 survey did not locate a site, this is stated, and the previously recorded description is given.

Component(s): These are based generally on diagnostic material (projectile points, ceramics) and feature types (stone circles, concrete foundations). Some features - notably depressions and cairns, but also stone circles and artifact scatters - might be prehistoric, historic or recent. Prehistoric is defined here as essentially pre-1800; historic is defined as being post-A.D. 1800 and pre-A.D. 1935; and recent is defined here as post-A.D. 1935. In this study the following feature types (as they are defined in this report) are considered prehistoric: stone circles, rock alignments, artifact scatters (unless containing

items clearly of Euro-American manufacture) and eagle trapping pits (noting that these are documented in the historic period as well). Cairns are treated on an individual basis, and are considered prehistoric unless form suggests they are more recent. Depressions not defined as eagle trapping pits are usually considered prehistoric if found with prehistoric artifact scatters. Depressions are defined as historic if associated with historic artifact scatters, or if the depression is large, deep and not appearing weathered for too long. Direct evidence for the age of all features is lacking on such a survey - and such assumptions must be made to avoid repetitious discussion about the nature of the site.

Trunk burials are defined as Historic Native American - Mandan-Hidatsa. The current assignment of these burials to the Mandan-Hidatsa rather than to the Arikara is based on three facts. First, there is an ethnographic account of the Mandan placing their dead in boxes and trunks or in crevices in rocks (Bowers 1950:101). Second, the burials under consideration are all located within what was traditionally the Mandan-Hidatsa area of the reservation; and third, the Mandan and Hidatsa burial practices appear to have been similar, with both differing from the practices of the Arikara. The Arikara more generally interred their dead and were quick to adopt the European methods of burial. However, direct association of these trunk burials with any particular group or groups of people must await future research.

For previously recorded sites components are listed if previously recorded, even if they were not noted during the 1985/1986 survey.

Elevation (m): One figure is given as the average for the whole site area. In some sites variation of several meters can occur.

Topographic position: Local topography is given. See USGS maps in the appendix for the regional perspective.

Site size: Given as m². Approximate dimensions can be measured off the site map, if needed. The site area is only a figure for the area encompassing all the cultural material/features presently recorded as making up that site. It is a general measure of size and cannot, from a surface survey, relate to any clearly stated definition of a site area as there are too many unknowns.

Strata and depth: In this category the depth of an occupation layer is indicated. This can be based on data from profiles, on data from feature types (the occupation layer associated with a stone circle is approximately at the depth of the base of the stones), or on the general depth of soil in the area. It does not include (unless stated) features cut through the living surface - such as cache pits or depressions.

Vegetation: Vegetation is noted or listed as "beach" or "cultivated."

Ground surface visibility (%): This is an approximate figure indicative of the ability to locate cultural material on the site's surface. Generally 20 percent or greater visibility indicates there was good potential for locating surface artifacts. Less than 20 percent visibility suggests ground cover could obscure surface materials, although sporadic eroded areas, animal burrows, etc., might be present.

Nearest water: This refers to the nearest pre-reservoir water source shown on the USGS quadrangle maps, unless specified otherwise.

Pool elevation (feet), when applicable: This information is provided for sites exposed on "beaches" because of the reservoir level fluctuations and is an approximate figure only. During 1985 the lake level varied little from around 1838' amsl (560.2m). In April 1986 the level had dropped to 1836' amsl (559.6m) but rose to 1845.4' amsl by June 24.

Site condition - impacts: Listed.

Surface collections (by whom and when): The Archeology Laboratory of the Center for Western Studies is abbreviated "ALCWS." For other abbreviations refer to "Previous Investigations."

Collected artifacts: Brief descriptions of the collected artifacts are given here. Additional details and measurements are given in the appendices. KRF = Knife River Flint. Note: This section is not included if there are no collected artifacts.

Data plotted on site map: This section is completed only if there is information on the site map that is not readily understood and to give specific measurements of plotted features.

Previous investigations: Listed as follows:

ALCWS	= Archeology Laboratory of the Center for Western Studies, Augustana College, Sioux Falls, SD.
SIRBS	= Smithsonian Institution, River Basin Surveys.

- Leaf 1976 = Shoreline Survey of Lake Sakakawea: The Badlands in Southern Dunn County, North Dakota. Museum of Anthropology, University of Kansas, Lawrence and Department of Anthropology and Archaeology, University of North Dakota, Grand Forks.
- Johnson 1983 = Dennis Johnson (avocational archeologist, Watford City, ND) - Report on Nightwalker's Butte in the Badlands (Jacobsen, 32DU1) in Newsletter of the North Dakota Archaeological Association.
- Fox 1984 = Class II and III Cultural Resource Inventory of N.D. 22: Lost Bridge to N.D. 23. Gregory L. Fox (P.I.), 617 N. 8th St. #5, Bismarck, ND.
- Haberman and Schneider 1975 = 1974 Archaeological Survey of Portions of the Garrison Reservoir Shoreline, North Dakota. Department of Anthropology and Archaeology, University of North Dakota, Grand Forks.
- HAS, Inc. 1982 = Historical and Archaeological Services, Inc., Grand Forks, North Dakota.
- Kinney, Kinney and Schreiner 1983 = Cultural Resource Inventory of Forty-six Proposed Seismic Test Lines in Dunn, McKenzie McLean, Mercer, Mountrail and Williams Counties, North Dakota. Historical and Archaeological Surveys, Inc., Mandan, North Dakota.
- Roberson 1982 = Cultural Resources Inventory of Thirty-four Proposed Seismic Test Lines in Dunn, McLean, Mercer and Mountrail Counties, North Dakota. Historical and Archaeological Surveys, Inc., Grand Forks, North Dakota.
- Good and Hauff 1977 = Archaeological Test Excavation at the Highway 8 Site [32DU2], Garrison Reservoir, North Dakota. Department of Anthropology and Archaeology, University of North Dakota, Grand Forks.
- Kuehn, Falk and Drybred 1982 = Archeological Data Recovery at Midipadi Butte, 32DU2, Dunn County, North Dakota. Department of Anthropology and Archaeology, University of North Dakota, Grand Forks, North Dakota.

Gnabasik = Virginia Gnabasik, Corps of Engineers
archeologist, Riverdale, North Dakota (various
small surveys).

Location of artifacts: All artifacts collected on this project are to be curated at the State Historical Society of North Dakota. Information on private collections is given if available. Note: This section is not included if there are no collected artifacts. For previously collected artifacts, if the site form states where the artifacts are, this information is given; however, in some cases the artifacts may have been moved elsewhere. Generally the location is listed as unknown.

Other material reported by owner: Previous collections are recorded above under "Surface Collections." This category is for miscellaneous information reported by the owner, but not otherwise substantiated.

Recommendations: As stated.

Remarks: This section is used to add to the site information provided above and discuss the recommendations.

Testing for National Register Eligibility (purpose of): In most cases this testing is to further document a site's areal extent, depth, components present, research potential and integrity. Sometimes areal extent, depth and integrity can be inferred from the surface survey to a degree. Occasionally there are specific aspects of a site to be tested, in which case they are defined here.

Key To Site Maps

North Arrow = True North (unless otherwise indicated).

USCE = United States Corps of Engineers boundary.

1839' = Elevation, in feet above mean sea level.

 = Break in slope.

+ = Datum.

Site number: 32DU1 (32DU18) - Site name: Nightwalker's Butte in the Badlands/Jacobsen site (also Little Swallow site).

County: Dunn. State: North Dakota. Site map: Figure 11
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska and unknown.

Site type: Earthlodge village.

Component(s): Hidatsa - Disorganized variant, Coalescent tradition.

Elevation (m): 654.

Topographic position: On top of a high, flat-topped, steep-sided butte.

Site size: 12,500m².

Strata and depth: Unknown; vandals' diggings indicate perhaps over 1m in depth in depressions.

Vegetation: Short to mid grasses, brush, juniper.

Ground surface visibility (%): 5-20%.

Nearest water: Little Missouri River - 525m.

Site condition - impacts: Vandalism is the major ongoing impact. Leaf documented that "the site is currently being potted and looted on a regular and very destructive basis" (1976).

Surface collections (by whom and when): SIRBS 1950; Leaf 1976; ALCWS 1986; Local collectors.

Collected artifacts: SIRBS: chips, bones, teeth, wood, worked bone, projectile points, blades, scrapers, retouched flakes, sherds. Leaf: Bison(?) bone, 40 pieces KRF, two pieces worked sandstone, one fire-cracked granite fragment, 20 grams consolidated ash, 23 potsherds. ALCWS: two bifaces, one preform reduction blank and two bodysherds. Local collectors: reported to have found Euro-American trade goods such as metal arrowheads and knives (Leaf 1976:9).

Data plotted on site map: Plots A-C: Biface fragment and preform reduction blanks; D-E: Bodysherds; F: Bifacially retouched flake, KRF; G: Retouched flake, KRF; H: Burned animal bone on animal burrow.

Previous investigations: SIRBS 1950; Leaf 1976; Johnson 1983.

Location of artifacts: Leaf and local collectors - Unknown. ALCWS - State Historical Society of North Dakota.

Other material reported by owner: In 1950 SIRBS personnel recorded that

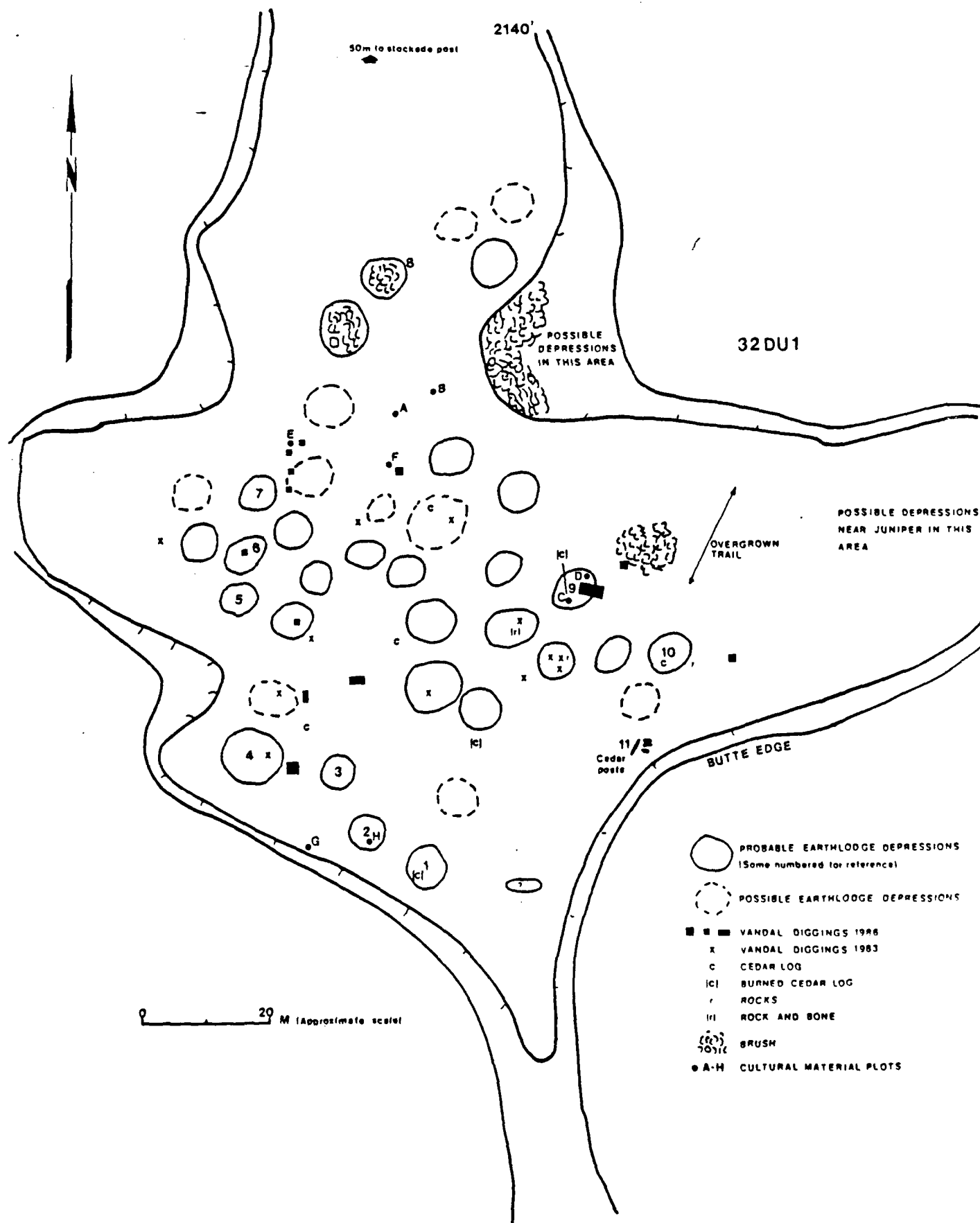


Figure 11. Plan of site 32DU1 (after Johnson 1983:Sketch map).

- James Vaagen, Werner, N.D. reported having found a few sherds and a blue glass bead here.

Recommendations: Previous investigators have recommended this site be nominated to the National Register of Historic Places. As with any earthlodge village, the site is potentially eligible, but additional documentation is needed for nomination (see below). Any steps that can be taken to limit the ongoing vandalism should be implemented immediately (signs, public education, visits).

Remarks: The site lies on the left (north) bank of the Little Missouri River. Over 35 depressions are visible on the butte top, and some brush may hide additional depressions. The depressions vary from those clearly visible (40cm deep or more) to those barely perceptible. Some notched cedar posts lie at the "entry" to the butte top and other posts lie at the south edge of the butte.

Based on the site type, location, similarities to other sites (Nightwalker's Butte in the Bull Pasture, 32ML39 and Midipadi Butte, 32DU2), oral history and professional opinion, the site is attributed to the Hidatsa and was probably occupied between A.D. 1781 and 1837.

Testing for National Register Eligibility (purpose of): Prior to nominating this site to the National Register of Historic Places, further documentation is desirable. This documentation should be in the form of professional test excavations (not undertaken to date) to more clearly define the component(s) present at this site; an accurate (transit survey) plan of the site is needed to accompany the nomination and the extent of vandalism needs to be addressed to determine the present integrity of the site.

Site number: 32DU2 Site name: Midipadi Butte (formerly Highway 8)
County: Dunn. State: North Dakota. Site map: Figure 12
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Earthlodge village/occupation.
Component(s): Besant complex, Woodland tradition and Disorganized variant, Coalescent tradition village.
Elevation (m): 604.
Topographic position: On the top of a narrow and very steep-sided butte on the south side of Lake Sakakawea.
Site size: 10,000m².
Strata and depth: Excavations (Kuehn, Falk, and Drybred 1982) revealed a medium brown silty loam cultural level beneath a dark brown sod and above a light brown silty clay loam. Cultural material generally encountered to depths of 40cm b.s.
Vegetation: Native prairie grasses and buckbrush/sage.
Ground surface visibility (%): 5-15%.
Nearest water: Missouri River - 500m.
Site condition - impacts: The major impact is from mass wasting along the lakeside edge. In places, 3m have eroded since 1982.
Surface collections (by whom and when): SIRBS 1950; Good and Hauff 1977; Kuehn, Falk and Drybred 1982; ALCWS 1986.
Collected artifacts: SIRBS: chips, stones, animal bones, bone splinters, end scraper, retouched flake or two. Good and Hauff: projectile point, biface, three modified flakes, hammerstone, 324 flakes, nine ceramic sherds, 1436.5 grams of unidentified bone, six identifiable bone fragments (all of Bison bison), floral remains. Kuehn, Falk and Drybred: 26 rim sherds, 899 body sherds, one shell bead blank, several unpatterned quartzitic ground stone tools, fire-cracked rock (coarse-grained granitic stone and medium-grained sandstone), ochre, 24 pieces of fired clay, a glass trade bead, charcoal, seeds (including one charred corn kernel), wood fragments, 14 metal artifacts, 26 chipped stone tools, faunal remains, including six modified pieces of bone and antler. ALCWS: one biface.
Data plotted on site map: This map is the 1982 map of investigations, on which the present (1986) butte edge on the lakeside has been superimposed.

Previous investigations: SIRBS 1950; Good and Hauff 1977; Kuehn, Falk and Drybred 1982.

Location of artifacts: SIRBS, Good and Hauff, and Kuehn, Falk and Drybred - unknown; ALCWS - State Historical Society of North Dakota.

Other material reported by owner: None.

Recommendations: Good and Hauff (1977:41) determined the site to be a Woodland village with potential National Register of Historic Places significance, but further investigation was needed to fulfill the requirements for nominating the site to the Register. Based on a request submitted by DOD-COE John E. Velhradsky on March 22, 1978, the site was determined eligible by the State Historic Preservation Officer and the Secretary of the Interior under criteria D (sites that have yielded, or may be likely to yield, information important in prehistory or history) [36 CFR Part 63.3 Determination]. However, no formal nomination is known to have taken place.

Additional investigation was undertaken in 1982 by Kuehn, Falk and Drybred when a Plains Village component was also defined. Following that investigation, it was recommended that an additional program of systematic data recovery be conducted as soon as possible to avoid any further loss of the significant cultural resources and that the site be nominated to the National Register of Historic Places as soon as possible on the basis of its high research potential and local significance.

The ALCWS survey documented continuing erosion of the site - although this was particularly obvious in the areas of the earlier excavations. Thus, we concur with the need for further data recovery. A complete evaluation of the site as a whole should be undertaken as recommended by Good and Hauff (1977:41-42) and discussed by Kuehn, Falk and Drybred (1982:17). The site should then be listed on the National Register of Historic Places and a management data/salvage program set in motion.

Remarks: Midipadi Butte is a multi-component site at which 16 depressions were noted in 1982. Good and Hauff (1977) attributed the site to the Woodland tradition. Kuehn, Falk and Drybred (1982) note that oral tradition indicates the site is one of three butte top villages occupied by a group of Hidatsa under the leadership of the Nightwalker. The above referenced reports provide the basic data on this site.

Site number: 32DU3 Site name:
County: Dunn. State: North Dakota. Site map: Figure 13
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Besant.
Elevation (m): 564.
Topographic position: Currently material exists only at strand line on
the beach of Lake Sakakawea. Inundated at high water.
Site size: 800m².
Strata and depth: Outwashed.
Vegetation: Beach - foxtail grass.
Ground surface visibility (%): 80-100%.
Nearest water: Missouri River - 650m.
Pool elevation (feet), when applicable: 1845.4' amsl.
Site condition - impacts: The site has been eroded out by the
reservoir. Materials redeposited.
Surface collections (by whom and when): SIRBS 1950; ALCWS 1986.
Collected artifacts: SIRBS: small sherds, flint flakes, bone. ALCWS:
projectile point base and utilized (?) bone fragment.
Data plotted on site map: Current material scatter inundated at high
water.
Previous investigations: SIRBS 1950.
Location of artifacts: SIRBS - unknown; ALCWS - State Historical
Society of North Dakota.
Other material reported by owner: None.
Recommendations: No further work is recommended. The site is
essentially destroyed.
Remarks: In addition to the collected items, the following additional
KRF items were noted in 1986: a secondary flake blade, a prismatic flake
blade, six tertiary flakes and four secondary flakes. Some mammal bone
fragments were also present on the beach.

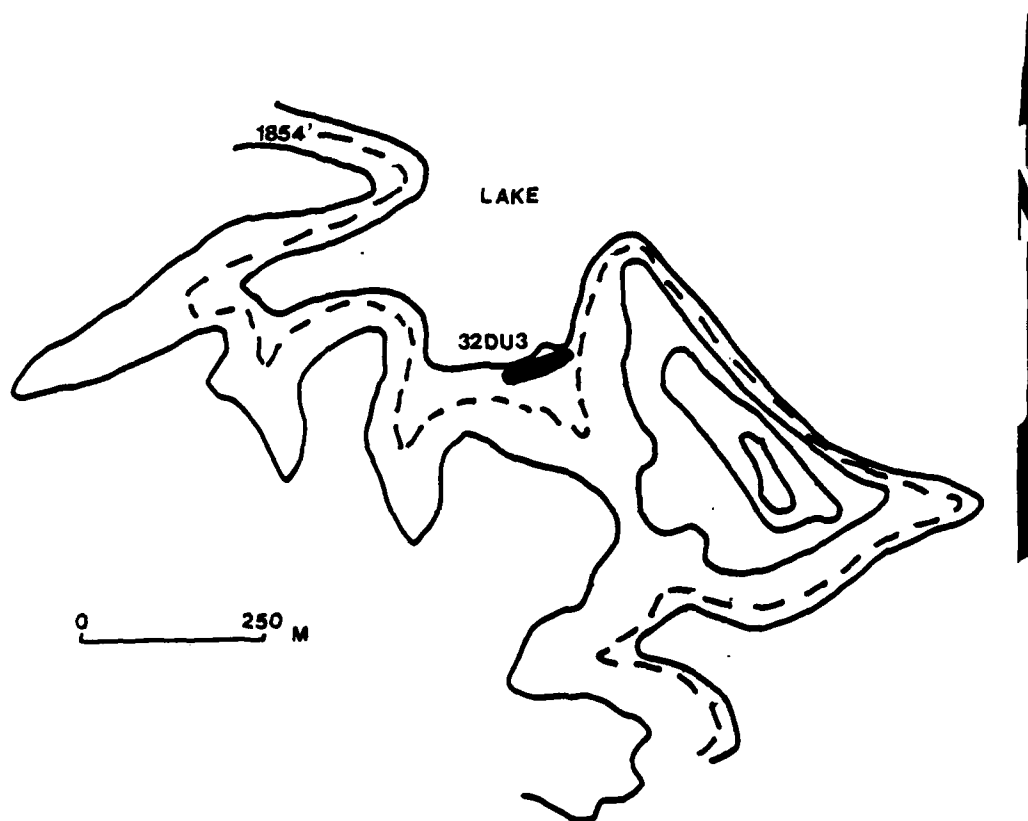


Figure 13. Plan of site 32DU3.

Site number: 32DU7 Site name:
County: Dunn. State: North Dakota. Site map: Figure 14
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Recorded in 1950 as "Occupational" [artifact scatter] - not relocated in 1986.
Component(s): Unknown.
Elevation (m): Unknown.
Topographic position: Recorded in 1950 as "on south side of Hans Creek, right side of Little Missouri River, where Hans Creek joins the larger stream."
Site size: Recorded in 1950 as 30-40 acres.
Strata and depth: Small amount of material was noted in 1950 in thin dark line in cutbanks at depth of 0.4'.
Vegetation: n/a.
Ground surface visibility (%): 100% along beach near suspected site area.
Nearest water: n/a.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: The site was not relocated; it is assumed to have been inundated/eroded by reservoir.
Surface collections (by whom and when): SIRBS 1950.
Collected artifacts: Chips, shell fragments.
Data plotted on site map: Copy of SIRBS 1950 map of site location.
Previous investigations: SIRBS 1950.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work.
Remarks: Site destroyed.

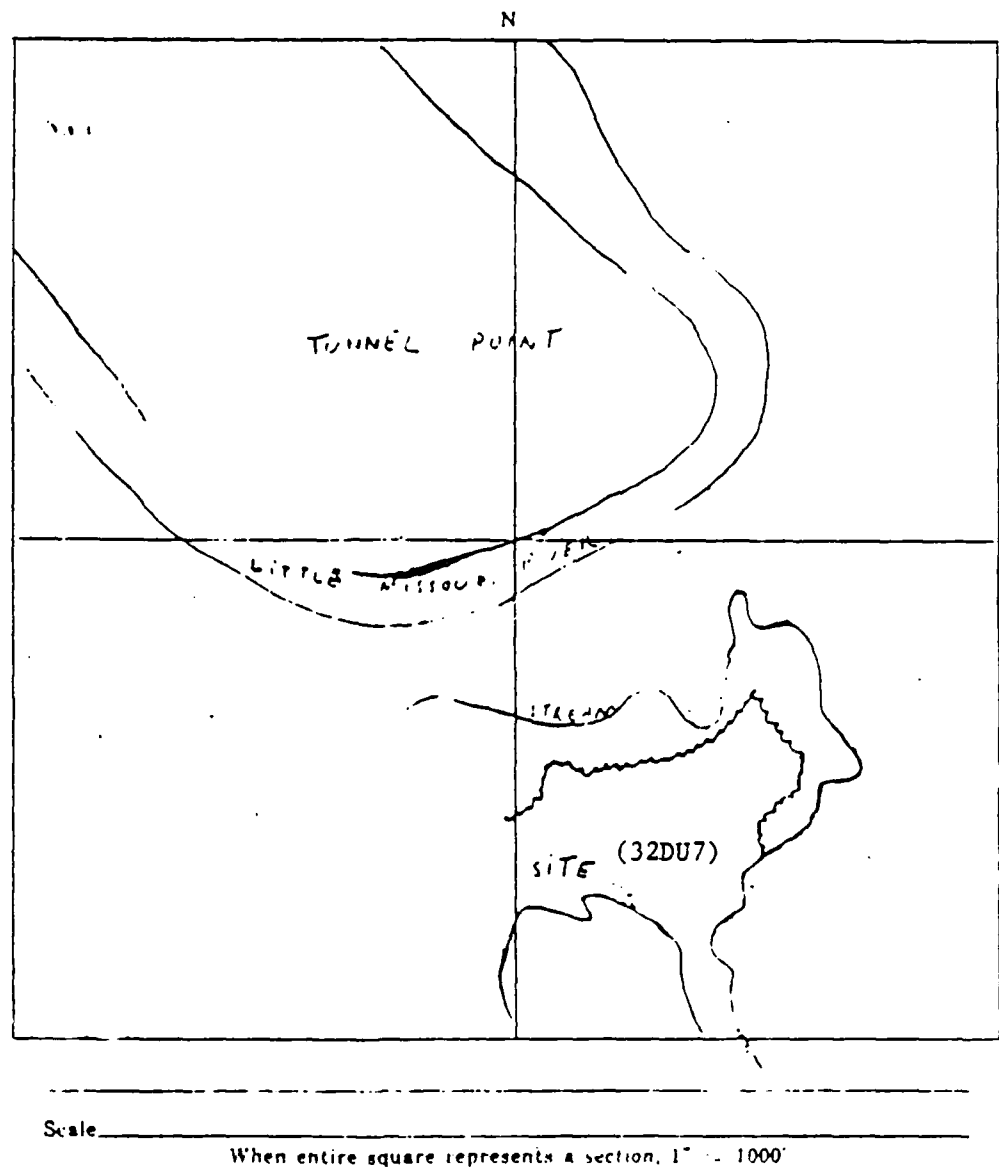


Figure 14. 1950 River Basin Survey map showing the location of 32DU7.
This site was not relocated during the 1985/1986 survey.

Site number: 32DU8 Site name:
County: Dunn. State: North Dakota. Site map: Figure 15
Property owner(s) and address(es): Unknown (private or reservation).
Site type: Stone circles.
Component(s): Unknown.
Elevation (m): 640.
Topographic position: On the crest of an extensive ridge system.
Site size: 50,000m².
Strata and depth: Unknown. Tests in 1950 negative. All material surficial.
Vegetation: Short bunchgrass.
Ground surface visibility (%): 30%.
Nearest water: Missouri River ~ 480m.
Site condition - impacts: No major impacts, but a track crosses the site and there is surface erosion.
Surface collections (by whom and when): SIRBS 1950.
Collected artifacts: A few chips.
Data plotted on site map: Cairns: A-0.45m diameter (7 stones); B-0.58m diameter (12 stones); C-0.78m diameter (9 stones). Stone circle diameters: 1-6.9m; 2-5.66m; 3-4.34m; 4-6.09m; 5-5.75m; 6-5.4m; 7-7.05m; 8-5.26m; 9-3.55m; 10-5.3m; 11-6.72m; 12-5.63m.
Previous investigations: SIRBS 1950.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: The site is located on private/reservation lands. It is potentially eligible for nomination to the National Register of Historic Places.
Remarks: Occasional KRF debitage was noted on the surface during the 1986 survey.

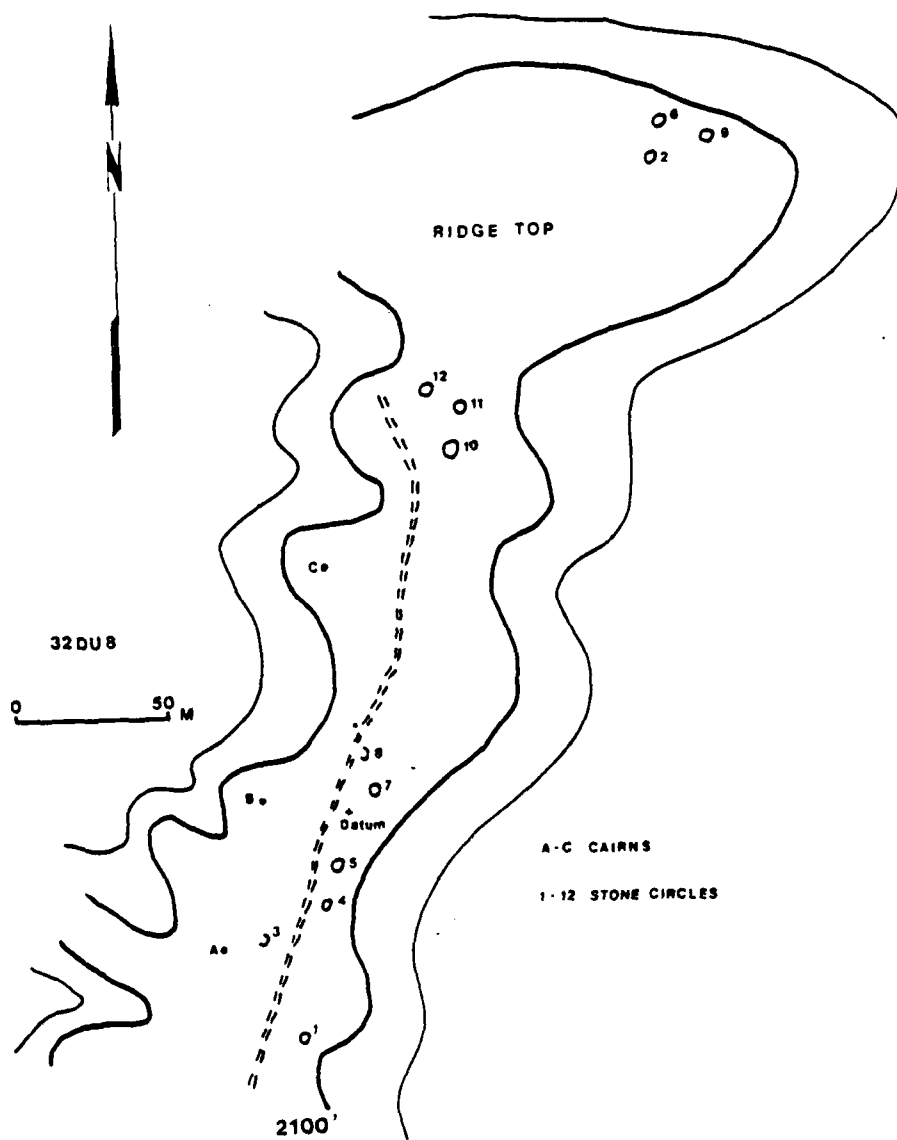


Figure 15. Plan of site 32DU8.

Site number: 32DU13 Site name: Independence.
County: Dunn. State: North Dakota. Site map: Figure 16
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Historic settlement.
Component(s): Historic Native American.
Elevation (m): 580.
Topographic position: The portion that currently exists is on a low island in Lake Sakakawea.
Site size: 60,000m².
Strata and depth: Unknown.
Vegetation: Various grasses.
Ground surface visibility (%): 2-100%.
Nearest water: Missouri River - ca. 500m.
Pool elevation (feet), when applicable: 1845' amsl.
Site condition - impacts: Partially inundated; what remains is subject to reservoir erosion. Superstructures have been removed from foundations.
Surface collections (by whom and when): SIRBS 1950; ALCWS 1986.
Collected artifacts: SIRBS: flint chips, iron, one sherd, china, glass, and cartridge. ALCWS: one length of barbed wire, twist stretch, 6 inches between double wrapped, four-prong barbs.
Data plotted on site map: 1=two-track; 2=prayer/totem stick (recent); 3=L-shaped depression, 25cm deep, 6.7m along the south side, 6.2m along the east side, 4.4m along the north side and 2.5m long on the west leg of the depression; 4=indistinct rhomboidal depression, 1.6m long at the north side, 1.9m on the south, 2.1m on the east and 1.7m on the west; 5=wheel ruts/tracks; 6=crescent area of heavier vegetation, 16.4m N-S by 18m E-W; 7=1.4m deep depression, 6.5m long by 5m wide.; 8=poured concrete foundation - the NW side is 5.5m long, the SW side 6.1m and the SE side 2.7m. The foundation is 21cm wide. An extension, 3.0m x 2.3m is connected at the SW corner; 9=poured concrete foundation missing SE side - the NE side is 4.0m long, the SW side is 8.6m and the NW side is 6.2m.
Previous investigations: SIRBS 1950.
Location of artifacts: SIRBS - Unknown; ALCWS - State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site is potentially eligible for nomination to the National Register of Historic Places. The original community of Independence was a significant settlement in the early twentieth century. Further investigation is needed to determine what cultural material/research potential is present at the site and exactly what relationship the remaining features have to the former community (see below). Limited testing and additional documentary research are, therefore, recommended.
Remarks: Documentary sources suggest the community of Independence consisted of ca. 15 Indian households within a mile of the community center and 26 households scattered along the river valley. According to Gerard Baker, the surviving complex of foundations is the remains of the general store operated by Wolf Chief.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity. Document the relationship of the surviving site area to the original community.

LAKE SAKAKAWEA

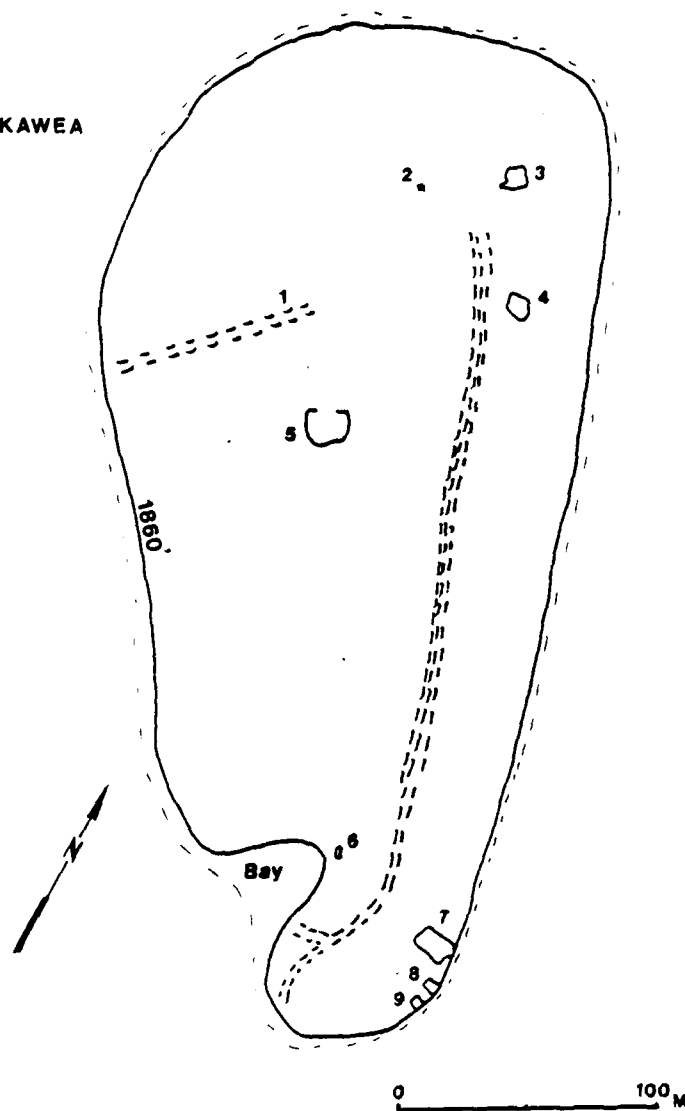


Figure 16. Plan of site 32DU13 (1 - 9 = site features).

Site number: 32DU22 Site name:
County: Dunn. State: North Dakota. Site map: Figure 17
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska and unknown/private.
Site type: Cabin and artifact scatter on private land which were not recorded in 1986. Artifact scatter on Corps land was recorded in 1986.
Component(s): Euro-American/Historic Native American/Unknown.
Elevation (m): 616.
Topographic position: Recorded in 1950 as on south bank of a ravine, "very well up." East and below the crest of a ridge. The 1986 artifact scatter was exposed in a cut through a hillslope.
Site size: 1986 area - 3m².
Strata and depth: Two layers of burned soil, bone and KRF debitage were noted in 1986; one was at 44cm b.s. and the other at 62-68cm b.s.
Vegetation: Mixed grasses and trees.
Ground surface visibility (%): 25%.
Nearest water: Intermittent stream - 360m.
Site condition - impacts: Site exposed in artificial cut which has probably impacted more of the site.
Surface collections (by whom and when): SIRBS 1950; ALCWS 1986.
Collected artifacts: SIRBS: broken and burned animal bones, flint chip. ALCWS: foot bone of large mammal.
Data plotted on site map: Plan and profile of cutbank exposure in 1986.
Previous investigations: SIRBS 1950.
Location of artifacts: SIRBS - Unknown. ALCWS - State Historical Society of North Dakota.
Other material reported by owner: SIRBS records show that Ted Buffalo found two round, perforated bone tools with incised spiral decoration, leaching out of the bank.
Recommendations: Formal testing to determine nature and extent of site deposits and relationship, if any, to cabin.
Remarks: All material noted in 1986 on Corps land was in the cutbank. A steep hill to the south suggests a limited extent in that direction, while to the north the artificial cut has likely destroyed what originally existed.
Testing for National Register Eligibility (purpose of): To determine areal extent, components present, research potential and integrity.

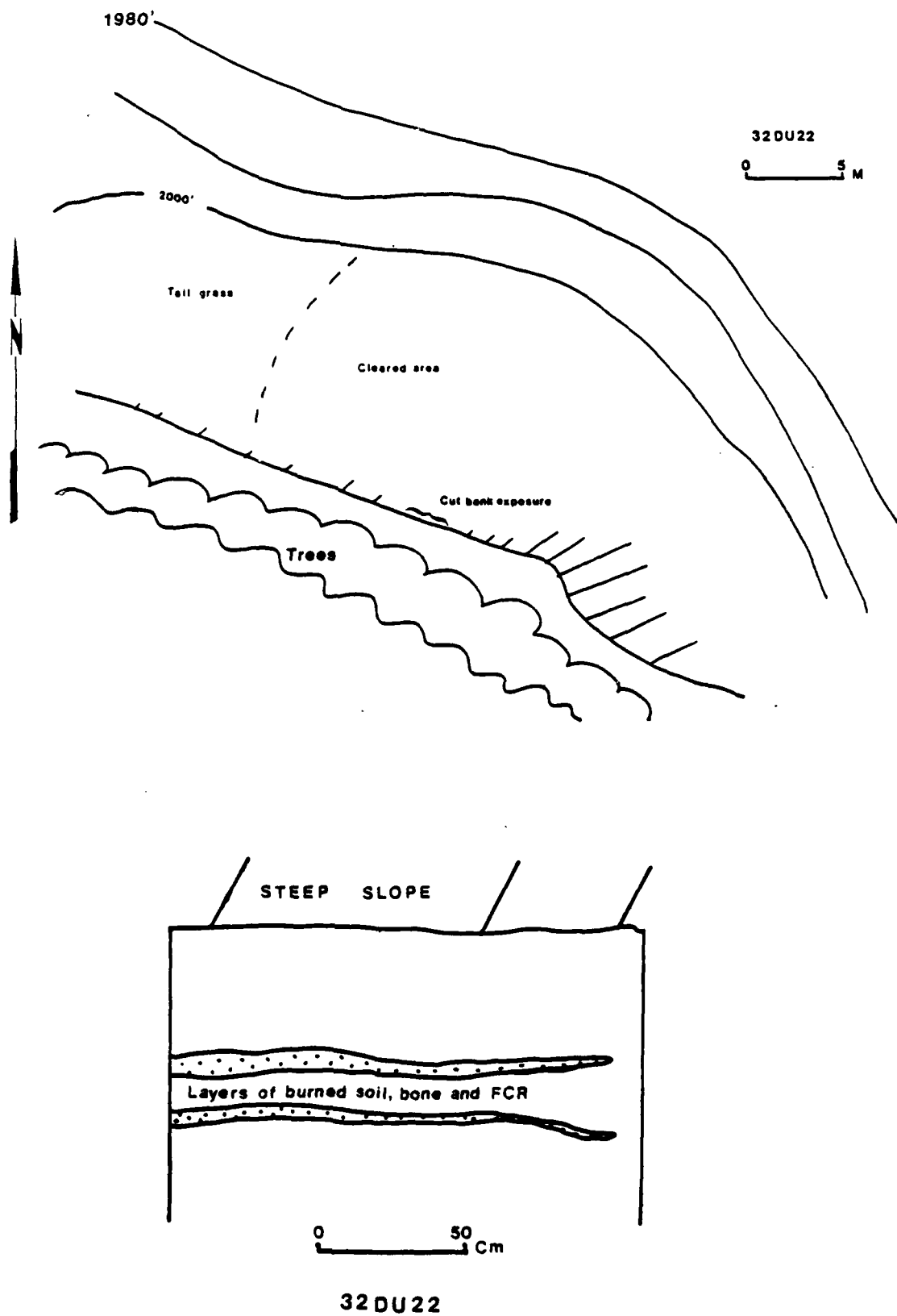


Figure 17. Plan and profile of cutbank exposure located within the survey area at site 32DU22.

Site number: 32DU113 Site name:
County: Dunn. State: North Dakota. Site map: Figure 18
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Quarry/artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the side and base of an upland ridge overlooking Skunk Creek Bay.
Site size: 45,000m².
Strata and depth: Unknown.
Vegetation: Dwarf juniper, prairie grasses.
Ground surface visibility (%): 60-90%.
Nearest water: Skunk Creek - 130m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: Slope wash and reservoir erosion are major impacts.
Surface collections (by whom and when): Roberson 1982.
Collected artifacts: 25 KRF flakes.
Data plotted on site map: Locus 1 - a possible quarry area and lithic scatter. Locus 2 - two possible quarry areas, each of which have caused a slump area on the side of a ridge.
Previous investigations: Roberson 1982.
Location of artifacts: HAS, Inc; Grand Forks, ND.
Other material reported by owner: None.
Recommendations: Assess nature of impacts to the site and research potential.
Remarks: This site appears to be an activity area related to the utilization of naturally occurring KRF cobbles - including some limited "quarrying". Since this is a common type of activity in this region, the site might provide significant information on this topic.
Testing for National Register Eligibility (purpose of): To determine depth, components present, research potential and integrity.

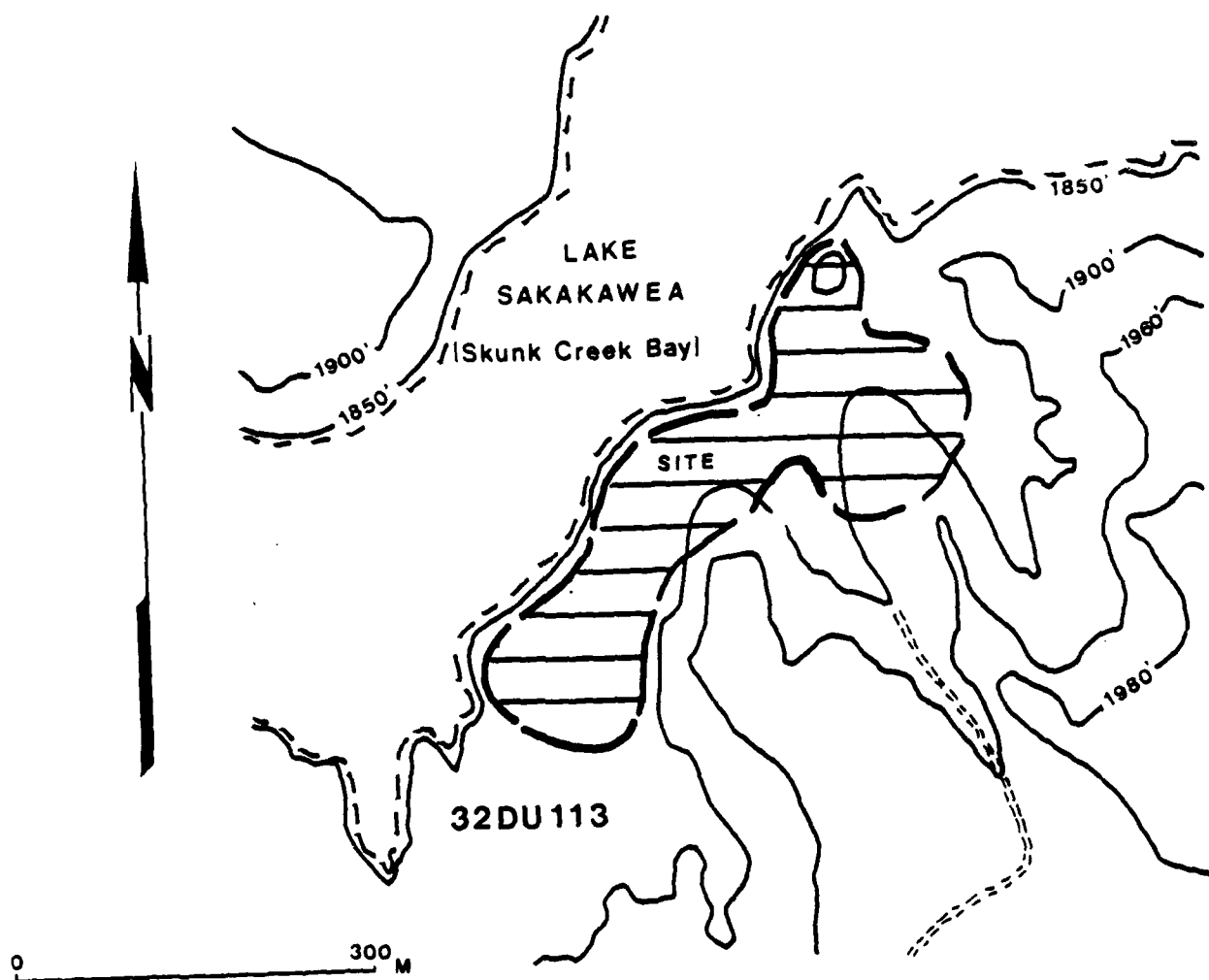


Figure 18. Plan of site 32DU113 (after 1981 map - confirmed in 1986).

Site number: 32DU131 Site name: Richards site.
County: Dunn. State: North Dakota. Site map: Figure 19
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Ranch house and dugout.
Component(s): Euro-American.
Elevation (m): 572.
Topographic position: On the edge of the Little Missouri floodplain, cut into a steep cutbank.
Site size: 625m².
Strata and depth: Unknown.
Vegetation: Short grass, marsh grass, trees and forbs.
Ground surface visibility (%): 30-60%.
Nearest water: Spring - adjacent.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Structures are collapsed, or in the process of collapsing. Presumably the original contents were removed. Otherwise, the site has fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: L-shaped plan of three-story ranch house with two-story attachment; and 5x5m dugout depression with two horizontal logs remaining.
Previous investigations: HAS, Inc. 1982.
Other material reported by owner: None.
Recommendations: Assess the stability of the structure. Undertake a regional documentary evaluation of this site and other historic sites in the area to determine whether they might be considered eligible for nomination to the National Register of Historic Places in relation to the theme of ranching. Evaluate the dugout.
Remarks: Documentary evidence relates the site to W. L. Richards (b. 1862 - d. 1953), and it appears that the area around Lost Bridge was an active ranching area in the early to mid-1900s. The first floor of the ranch house is made of dressed sandstone and mortar. On top of the foundation are log walls with dovetail mortise and tenon corners and plaster chinking. The interior is finished with plaster and lathe. The exterior of the second floor was covered with stamped brick design tin sheeting. The top of the third floor is also log, covered with brick stamped tin sheeting and clapboard siding. The roof is a gambrel design and has wood shingles. The soffit shows signs of green paint and evidence of standard milling. The quality and type of work done on this building ranges from the primitive to the slick.
Testing for National Register Eligibility (purpose of): To determine depth, components present, research potential and integrity of the dugout. Undertake detailed documentary research and evaluation of this site in relation to the local regional history. In particular its significance in relation to the history of ranching in the area should be investigated.

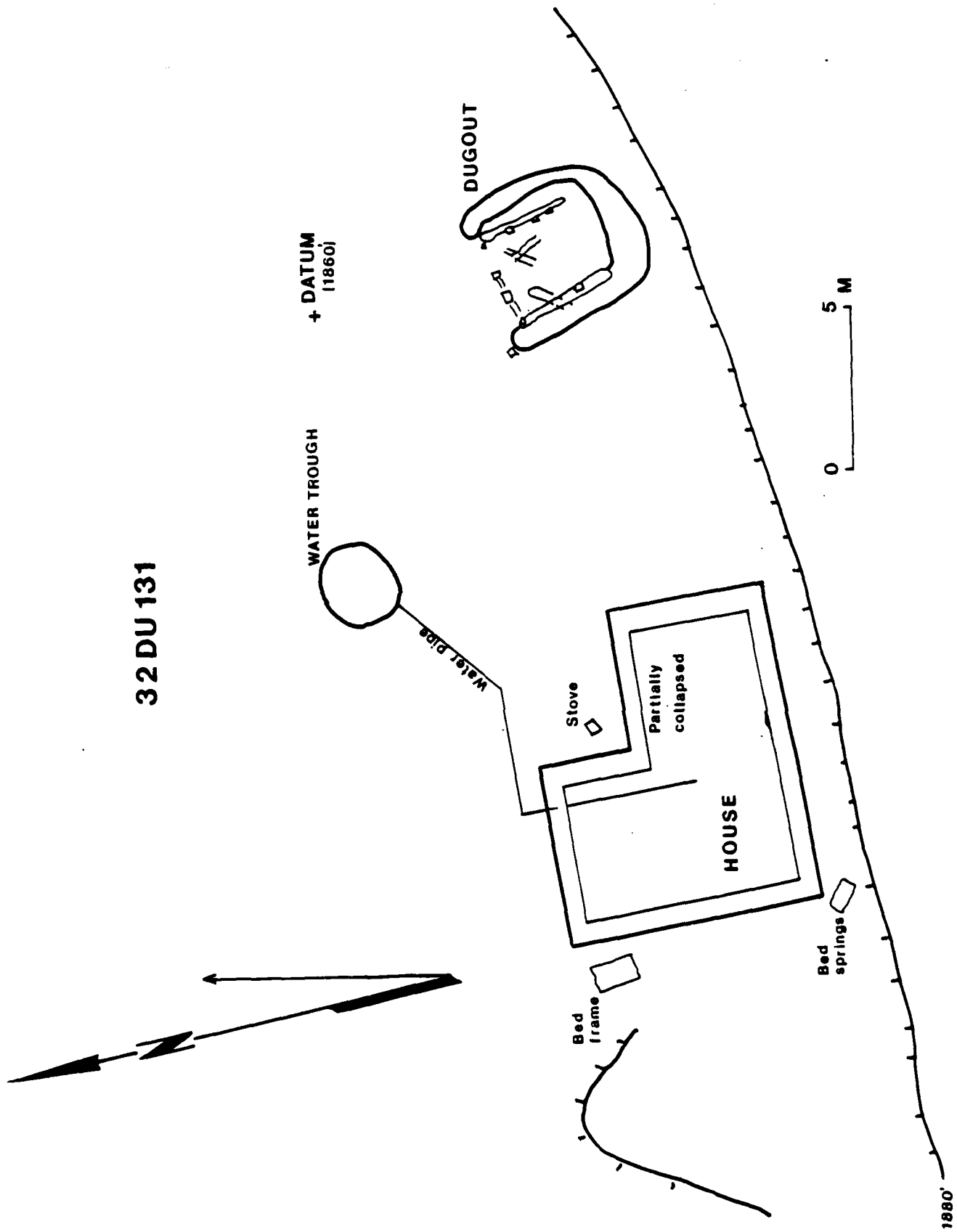


Figure 19. Plan of site 32DU131.

Site number: 32DU132 Site name: Jim Creek site
County: Dunn. State: North Dakota. Site map: Figure 20 -
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Duncan/Oxbow, Pelican Lake, Besant.
Elevation (m): 579.
Topographic position: On a large sloping bench or terrace formed by the
confluence of Jim Creek and the Little Missouri River.
Site size: 250,000m².
Strata and depth: Material exposed in cutbank to a depth of 30cm.
Vegetation: Short (grazed) prairie grasses, trees, beach.
Ground surface visibility (%): 35% (10-100%).
Nearest water: Little Missouri River - adjacent.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Shoreline erosion has impacted a specific,
but unknown portion of the site. Additional impacts are occurring from
prairie dogs, slope wash and grazing.
Surface collections (by whom and when): HAS, Inc. 1982; ALCWS 1985.
Collected artifacts: HAS, Inc: 242 items (lithic). ALCWS: Late
Prehistoric side-notched point, Besant side-notched point, Pelican Lake
corner-notched point, two transverse scrapers, a preform reduction blank
and a worked flake, all of KRF.
Data plotted on site map: Map of site area, 1982. In 1986 some material
was also located immediately northwest of this area, up to a tributary
where there was a small artifact concentration.
Previous investigations: HAS, Inc. 1982.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: Selected test excavations in the areas of the artifact
concentrations and above any cutbank exposures should be undertaken to
document the research potential, integrity and components present at
this site. The impact of shoreline erosion on the site could then be
better assessed.
Remarks: Over 1000 items of cultural material were noted in 1982;
nearly all of the items were produced on KRF, but an obsidian flake and
a porcelanite point were also present. Less than 350 items were noted
in 1986; all of these items were of KRF, with the exception of one
porcelanite flake.
Testing for National Register Eligibility (purpose of): To determine
components present, research potential and integrity.

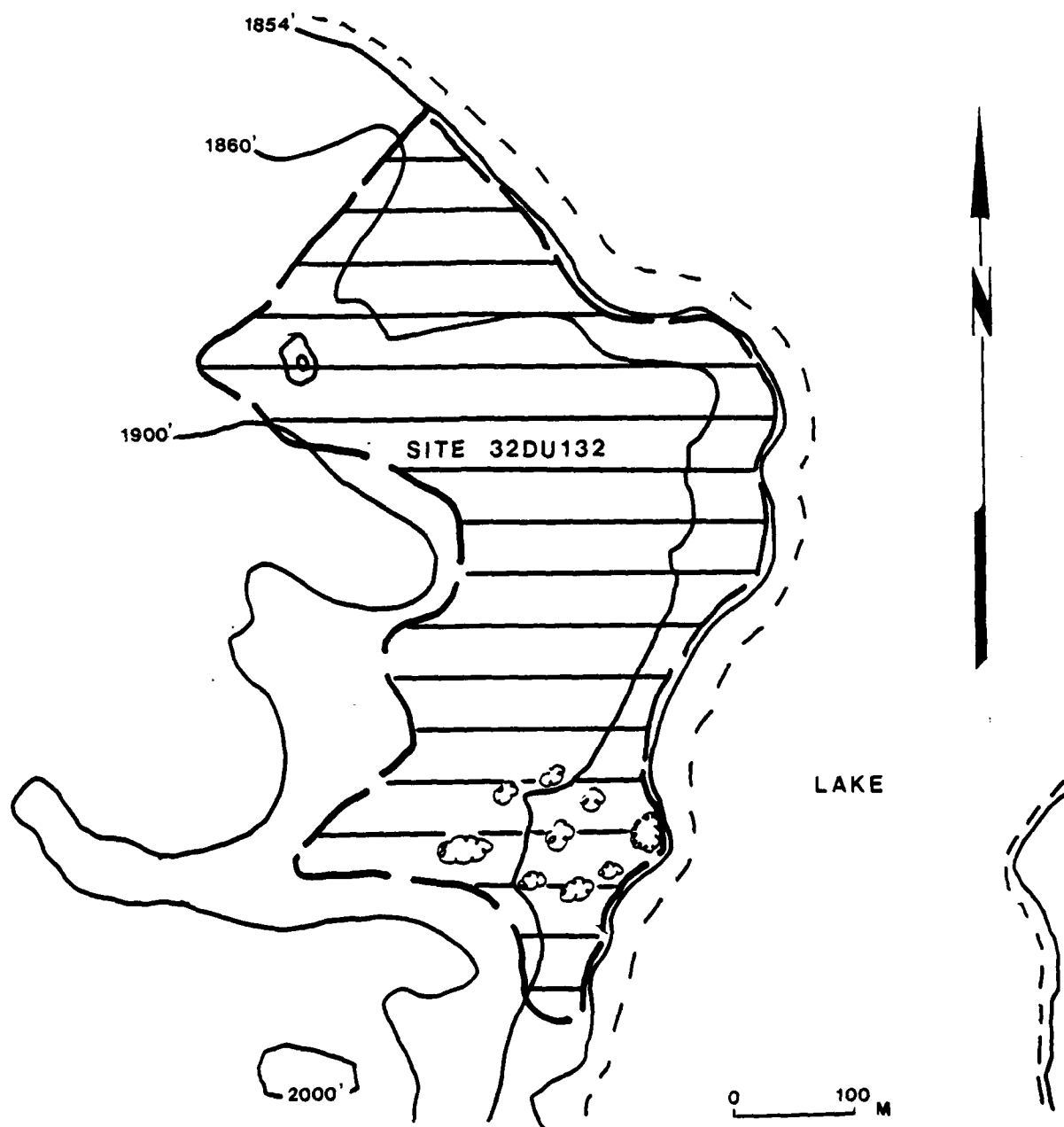


Figure 20. Plan of site 32DU132 (after 1982 map - amended in 1985).

Site number: 32DU133 Site name:
County: Dunn. State: North Dakota. Site map: Figure 21
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On top of a small beach at the confluence of Jim
Creek and the Little Missouri River; below high water level in 1986.
Site size: 7,500m².
Strata and depth: 0-20cm, as exposed in cutbank in 1982.
Vegetation: Beach/weeds.
Ground surface visibility (%): 90-100%.
Nearest water: Intermittent stream - 150m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Now inundated except at low water levels.
Surface collections (by whom and when): HAS, Inc. 1982.
Collected artifacts: Three KRF flakes, three KRF shatter, one KRF core,
and one grey chalcedony flake.
Previous investigations: HAS, Inc 1982.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: It appears that more of the site has washed away since
the 1982 survey. Some subsurface material may be present, but little
was observed in 1982 (10 items) or in 1986 (nine items). Since the site
is generally under water, no further work is recommended.

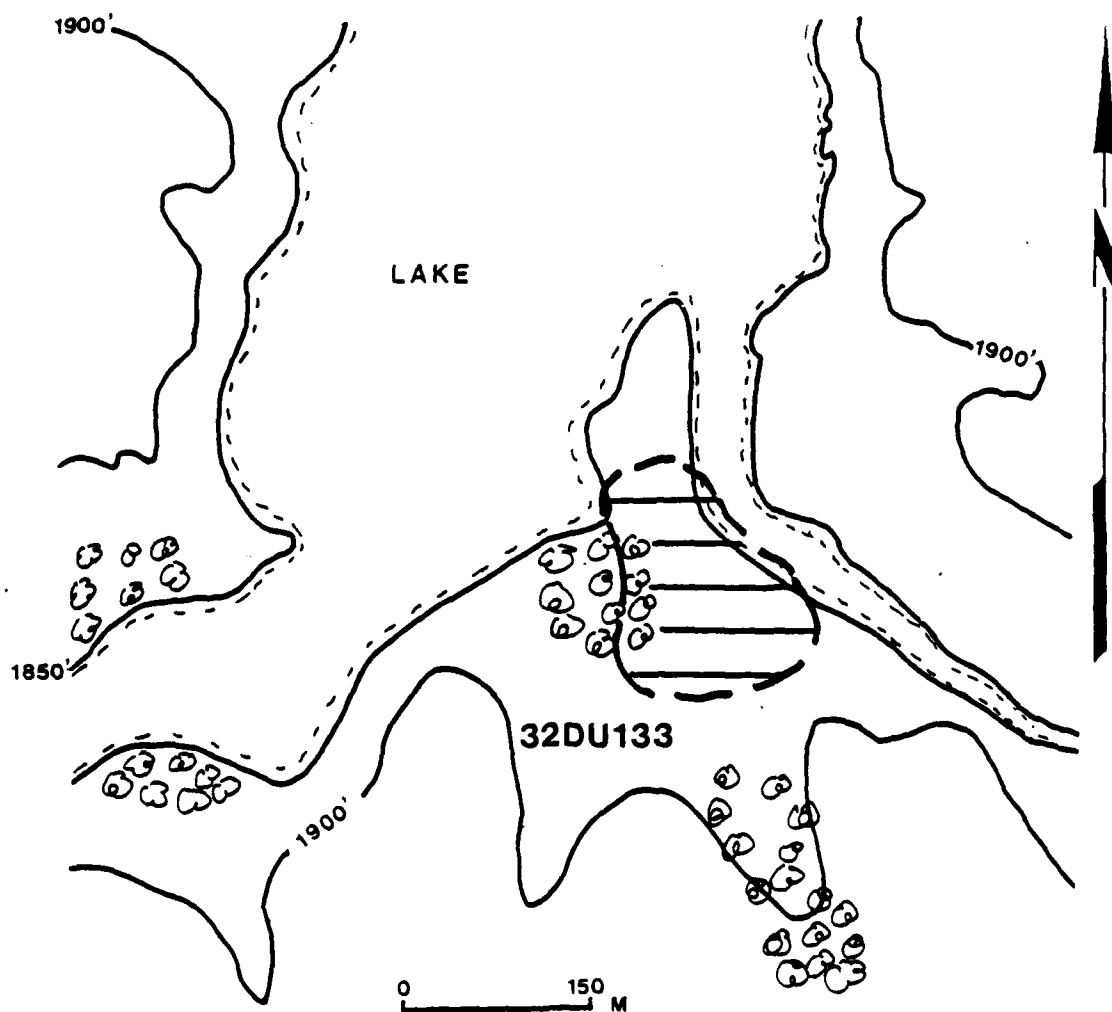


Figure 21. Plan of site 32DU133 (after 1982 map - confirmed in 1985).

Site number: 32DU134 Site name:
County: Dunn. State: North Dakota. Site map: Figure 22
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of and on the upper slope of a small
terrace on the east bank of the Little Missouri River.
Site size: 2,500m².
Strata and depth: Surficial.
Vegetation: Short prairie grasses.
Ground surface visibility (%): 20% (with 100% in erosional washouts).
Nearest water: Intermittent stream - 100m.
Site condition - impacts: Washouts show a very shallow soil depth.
The site is represented mainly from collections in 1982 (10 of the total
15 items noted). Only five items were noted in 1986.
Surface collections (by whom and when): HAS, Inc. 1982.
Collected artifacts: Eight KRF flakes/flake fragments and two KRF
chunks.
Previous investigations: HAS, Inc. 1982.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site has no further research potential; therefore,
no further work is recommended.

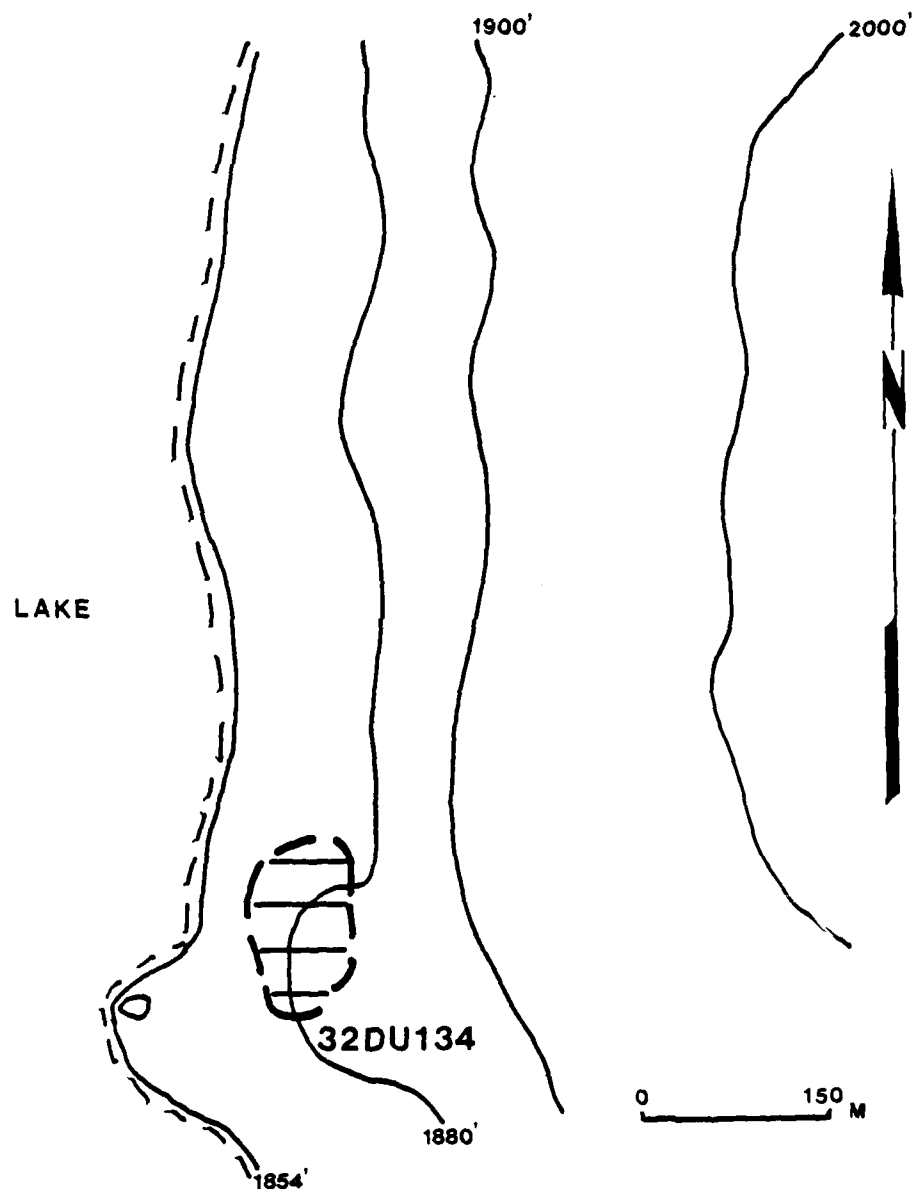
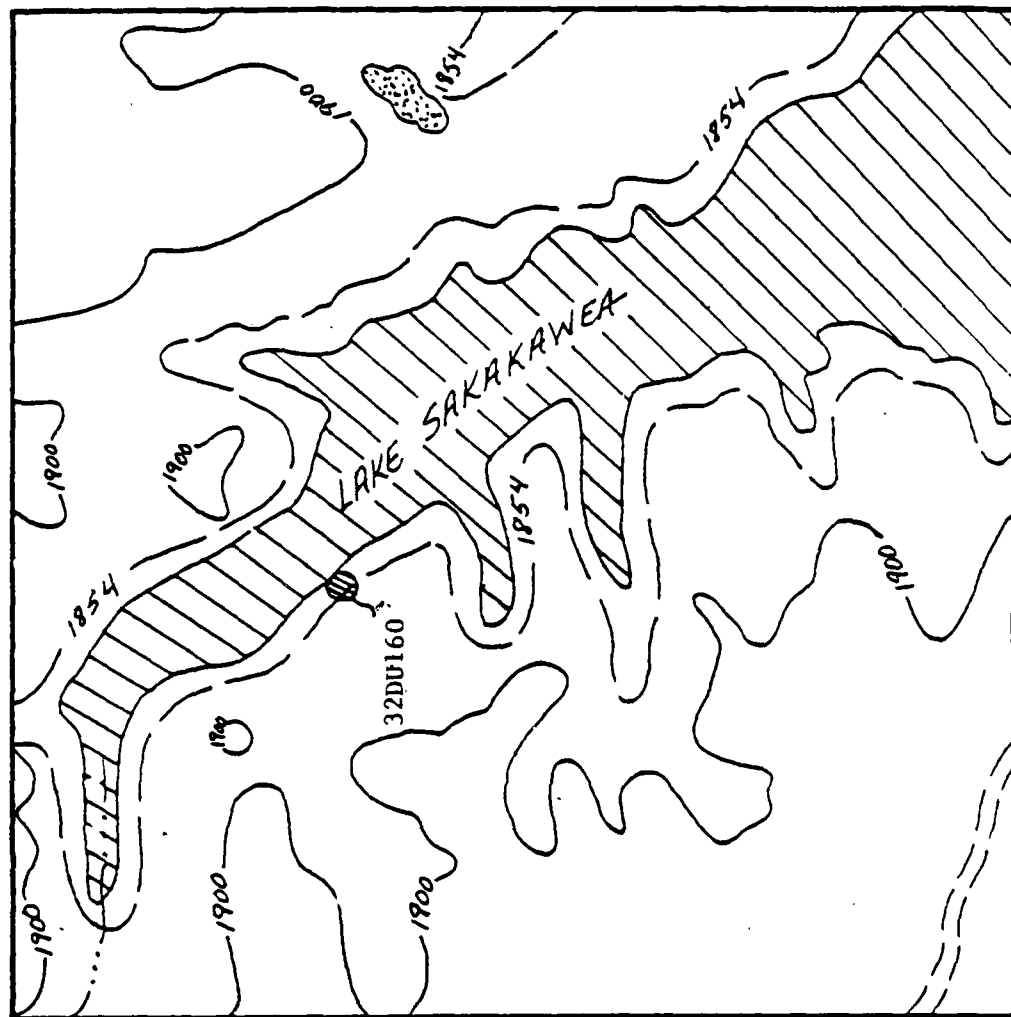


Figure 22. Plan of site 32DU134 (after 1982 map - confirmed in 1986).

Site number: 32DU160 Site name: Line 294 - Stake 180.
County: Dunn. State: North Dakota. Site map: Figure 23
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: The site was recorded in 1983 as an artifact scatter. It was not relocated in 1986.
Component(s): Unknown.
Elevation (m): 567.
Topographic position: On small gravel ridge on the beach of Lake Sakakawea.
Site size: 25m².
Strata and depth: Surficial.
Vegetation: n/a.
Ground surface visibility (%): 100% on shoreline.
Nearest water: Spring - 100m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: When recorded in 1983 it was observed that the cultural material was not in context. It had probably eroded out of cutbanks and been redeposited. Three items were collected in 1983. No further material was exposed in 1986.
Surface collections (by whom and when): Kinney, Kinney and Schreiner 1983.
Collected artifacts: KRF corner-notched point, KRF notched biface midsection, KRF core tool.
Previous investigations: Kinney, Kinney and Schreiner 1983.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: No further work.
Remarks: The site is outwashed and has been completely collected.



Map Key:

⊙ : site area

- - - : intermittent stream

— — — : two-track trail

••• : trees

Map Scale: 1"=500'

Figure 23. 1983 map of site 32DU160, not relocated in 1986.

Site number: 32DU161 Site name: Line 294 - Stake 177.
County: Dunn. State: North Dakota. Site map: Figure 24
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Log-covered dugout and artifact scatter.
Component(s): Historic Native American.
Elevation (m): 579.
Topographic position: On the side of a ridge/hilltop.
Site size: 100m².
Strata and depth: Surficial (except dugout).
Vegetation: Mixed grasses and forbs.
Ground surface visibility (%): 5% in depression; 20% on eroded slopes nearby.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: No major impacts at this time. Whatever superstructure may have existed has been removed.
Surface collections (by whom and when): None.
Data plotted on site map: Location of log-covered dugout with scatter of broken glass. Depression is 2.5m E-W by 2.2m N-S and ca. 1m deep.
Previous investigations: Kinney, Kinney and Schreiner 1983.
Other material reported by owner: None.
Recommendations: The site area is limited by the topographic location, and the site type reflects Indian allotment structures. Excavation of the depression might reveal significant information about Native American lifestyles in the early to mid-twentieth century in this area.
Remarks: The logs had been notched so as to be placed together in a manner similar to a log cabin. This notching suggested some use other than a roof or dugout cover. In addition to glass, two iron doors (? from stove) and a coca-cola bottle were noted.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

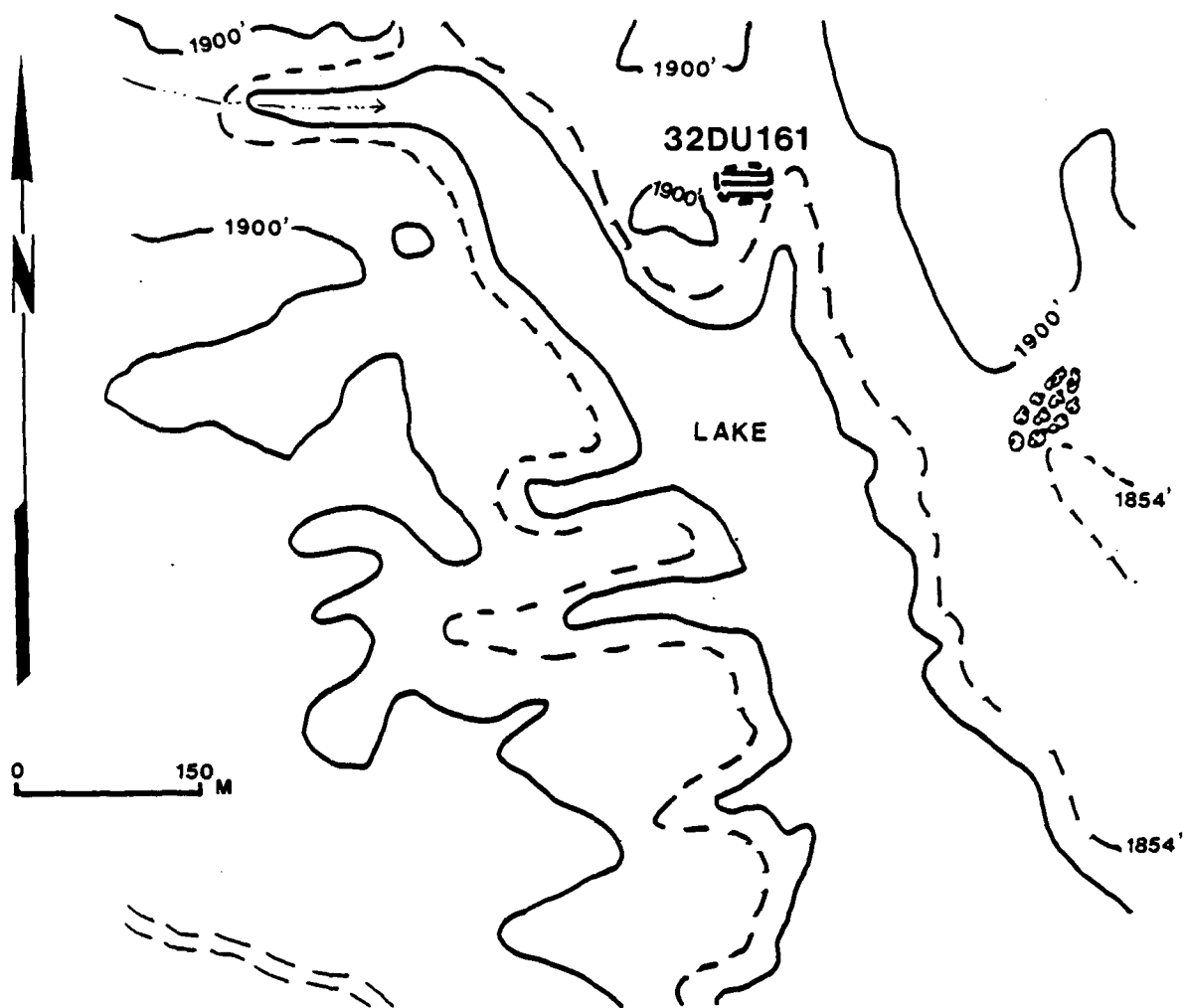


Figure 24. Plan of site 32DU161 (after 1983 map - confirmed in 1986).

Site number: 32DU177 Site name:
County: Dunn. State: North Dakota. Site map: Figure 25
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter, trail and rectangular ditched enclosure.
Component(s): Euro-American/unknown.
Elevation (m): 567.
Topographic position: On a terrace above the Little Missouri River.
Site size: 16,128m².
Strata and depth: Soil is a sandy loam with numerous glacial cobbles. Artifacts were located from 0-10cm b.s. in 1984 shovel tests.
Vegetation: Cactus, forbs, short prairie grasses, sagebrush.
Ground surface visibility (%): 15-75%, generally over 50%.
Nearest water: Little Missouri River - 20m.
Site condition - impacts: The earlier (prehistoric) artifact scatter has probably been impacted by the more recent (historic) trail and structure. The area is subject to variable erosion. Recent roads and bridge construction have also impacted the site; its very accessibility makes it subject to impact from public use of the area.
Surface collections (by whom and when): None.
Data plotted on site map: Site boundary enclosing artifact scatters and rectangular ditched enclosures, with old road cut, trail and recent Hwy. 22 also shown near/in site area. Locations of four shovel tests (1985) also indicated [no cultural materials found in these tests].
Previous investigations: Fox 1984.
Other material reported by owner: None.
Recommendations: Further evaluation of this site is necessary to establish the nature of the ditched enclosure and to attempt to define the components which are present.
Remarks: In 1984 the site was recorded as having in excess of 100 items of KRF raw material, shatter, cores and flakes, as well as two unifacial tools of KRF. The historic component was recorded as consisting of a road cut due west and adjacent to the north abutment of the Lost Bridge, and a road cut leading west from the north edge of the lithic scatter and continuing to a built-up road surface on the bottom lands. Crockery fragments, the bottom of a water tumbler and mason jar fragments were noted.
In 1985 only 25+ KRF items were noted, along with a sparse scatter of unmodified nodules. A rectangular ditched enclosure was also recorded. The only recent items noted in 1985 were bottle glass and beer/coke cans.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

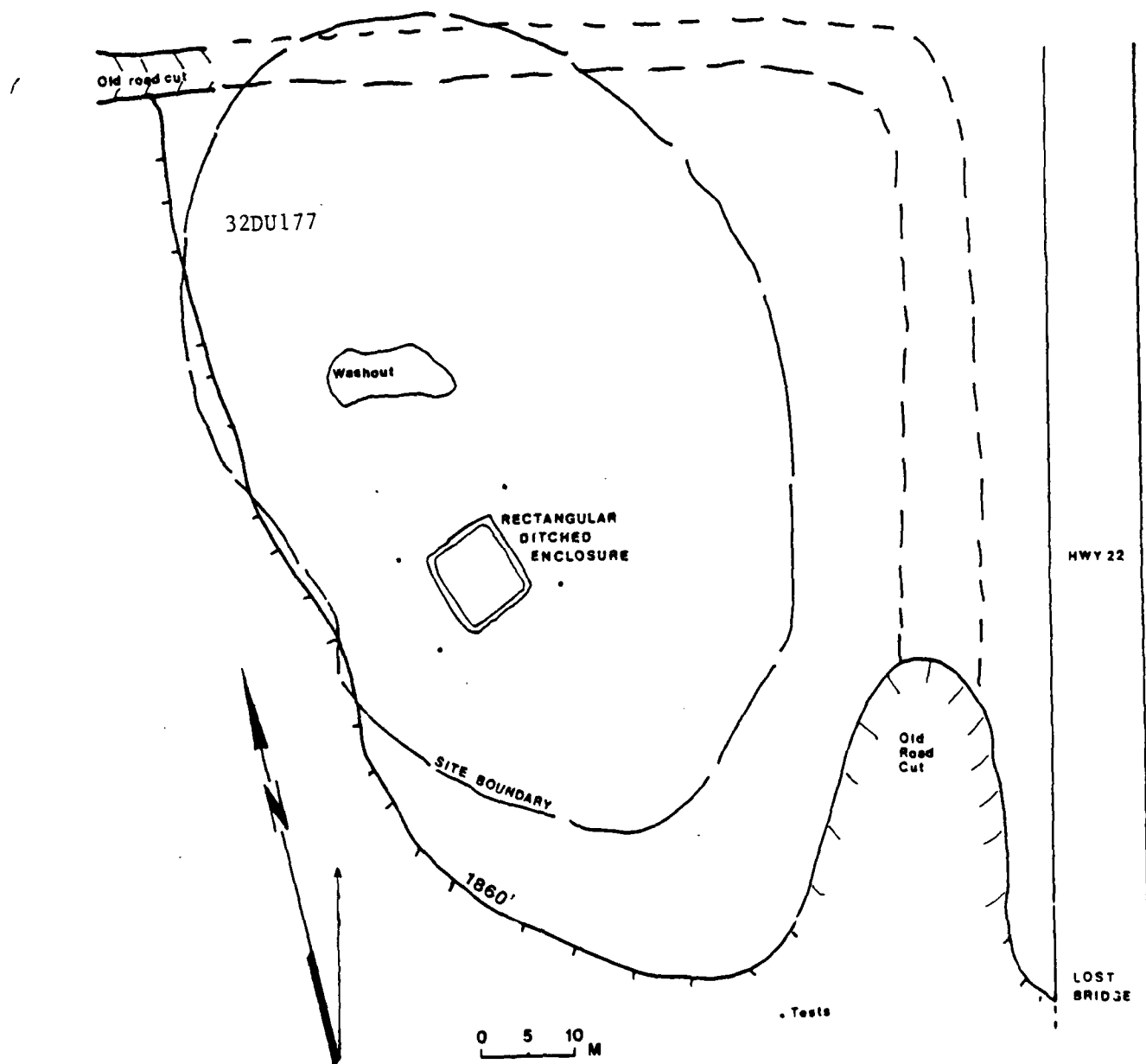


Figure 25. Plan of site 32DU177.

Site number: 32DU180 Site name: Lost Bridge
County: Dunn. State: North Dakota. Site map: Figure 26
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska manages lands on either side of the bridge. The bridge and road are probably owned by the State of North Dakota.
Site type: Bridge.
Component(s): Euro-American.
Elevation (m): 569.
Topographic position: Spans the Little Missouri River between the south bank/terrace and the north bank/terrace.
Site size: 1228m².
Strata and depth: n/a.
Vegetation: n/a.
Ground surface visibility (%): n/a.
Nearest water: Little Missouri River - below.
Site condition - impacts: Normal wear and tear.
Surface collections (by whom and when): n/a.
Previous investigations: Fox 1984.
Other material reported by owner: None.
Recommendations: Might be considered as part of an historic district of local significance.
Remarks: The location of Lost Bridge coincides with a trail dating to the 1880s which was used by ranchers in the Killdeer Mountains. The bridge was completed in 1931 but did not acquire a paved or gravel road until 1953 (hence its name). It is a triptych span camelback, designed by the North Dakota State Highway Department, with the steel fabrication provided by the Illinois Steel Bridge Company of Jacksonville, Illinois.
Testing for National Register Eligibility (purpose of): n/a. However, documentary/historical evaluation is needed to provide a framework with which to evaluate historic sites in this area.

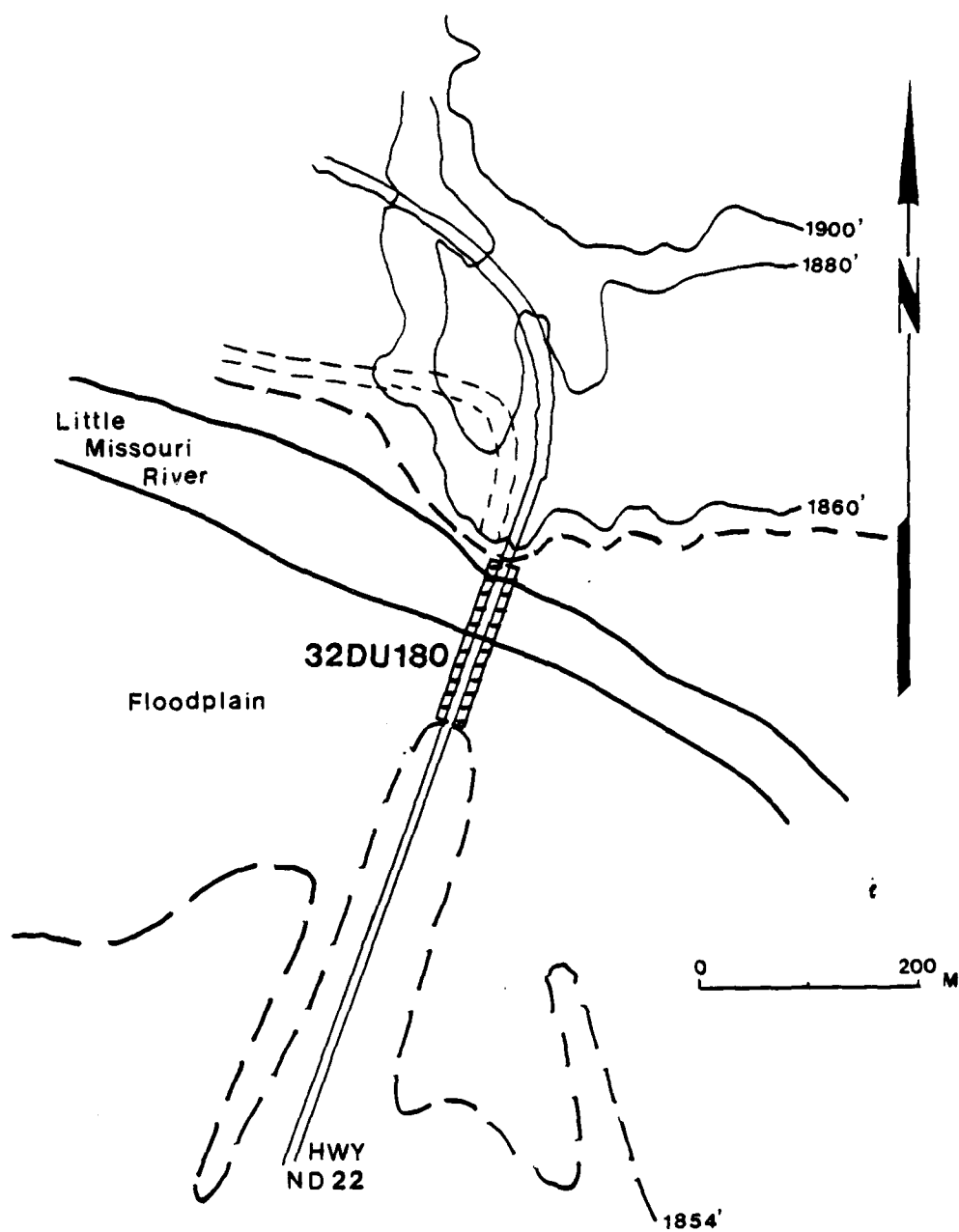


Figure 26. Plan of site 32DU180.

Site number: 32DU403 Site name: Saddle Butte Bay Burial
County: Dunn. State: North Dakota. Site map: Figure 27
Property owner(s) and address(es): Unknown/private/reservation.
Site type: Coffin burial.
Component(s): Historic Native American (Mandan-Hidatsa).
Elevation (m): 573.
Topographic position: On the side of a sloping ridge along the south shore of Saddle Butte Bay of Lake Sakakawea.
Site size: 225m².
Strata and depth: Unknown.
Vegetation: Short pasture grasses.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The site is in fair to poor condition; the burials have been disturbed and are continuing to erode. The site has integrity of location.
Surface collections (by whom and when): None.
Data plotted on site map: Burial Box 1, with cranium. The box is milled lumber with round nails. No other bones are visible; the burial box has collapsed. A=a plain grit-tempered ceramic sherd, 5mm thick. B=Human infant humerus.
Previous investigations: Haberman and Schneider 1975.
Other material reported by owner: None.
Recommendations: Burial sites require protection. Based on the maps and markers observed, however, this site lies just outside the Corps management area.

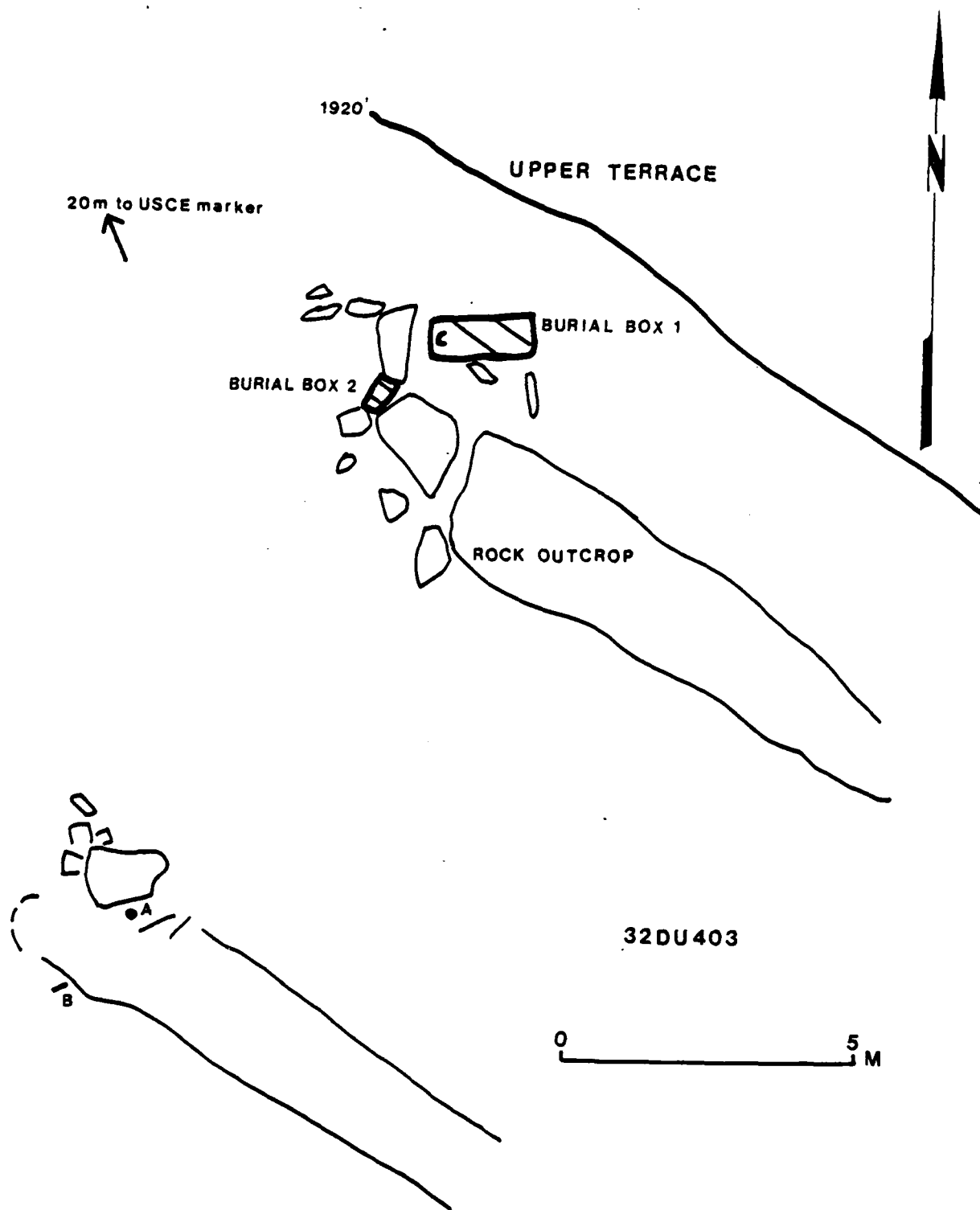


Figure 27. Plan of site 32DU403.

Site number: 32DU404 Site name:
County: Dunn. State: North Dakota. Site map: Figure 28
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: Exposed on the present shoreline, and in the cutbank, of the Little Missouri Arm of Lake Sakakawea, on the south shore in the second bay east of Jim Creek Bay.
Site size: 25,200m².
Strata and depth: 0-10cm.
Vegetation: Short grass above beach.
Ground surface visibility (%): 25-100%.
Nearest water: Little Missouri River - 150m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Actively eroding into the reservoir.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Eleven flakes or flake fragments, an end scraper and a biface fragment, all of KRF.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: The site is a very limited/sparse scatter and is extensively eroded. Therefore, no further work is recommended.
Remarks: This site was originally recorded as a 20 x 4m scatter on the beach. The 1985 survey located material for several hundred meters along the beach to the west. A flake was recorded in the cutbank at the NE edge of the site (in the previously recorded area) at 10cm b.s., but was not associated with any defined strata. Despite good to excellent surface visibility and inspection of the entire cutbank and exposures inland, no indication of an extensive site was noted. The site is considered mostly outwashed and redeposited.

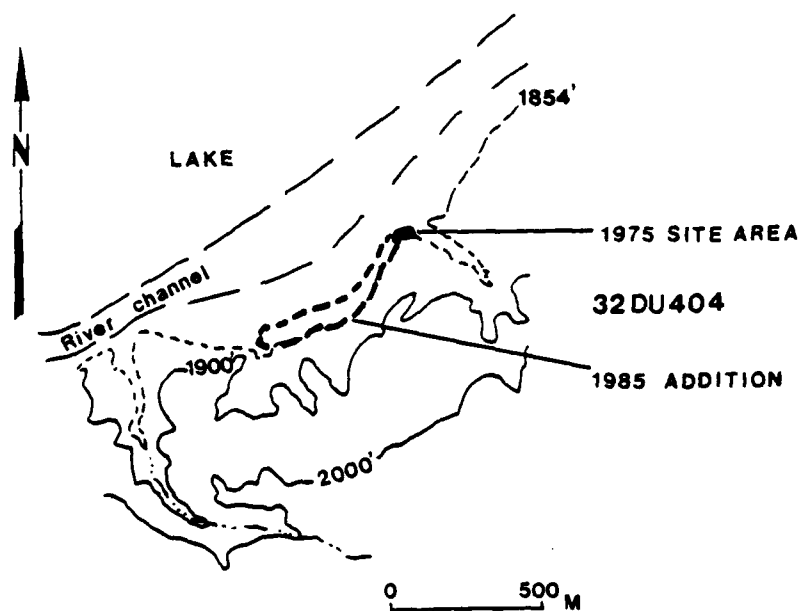


Figure 28. Plan of site 32DU404, showing 1975 recorded site area and 1985 addition (essentially outwashed).

Site number: 32DU405 Site name:
County: Dunn. State: North Dakota. Site map: Figure 29
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: Exposed on the beach area of the Little Missouri
River embayment's south shore.
Site size: 7,500m².
Strata and depth: Surficial.
Vegetation: Beach.
Ground surface visibility (%): 90-100%.
Nearest water: Little Missouri River - 100m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Totally eroded out.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Fifty flakes or flake fragments, one core, two
thin bifaces, all of KRF.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work.
Remarks: Leaf noted artifacts eroding out of the bank in 1975, and
material concentrated in an area 30 x 2 meters. Only ca. 30 items of
KRF were noted in 1985; none were noted in the cutbanks.

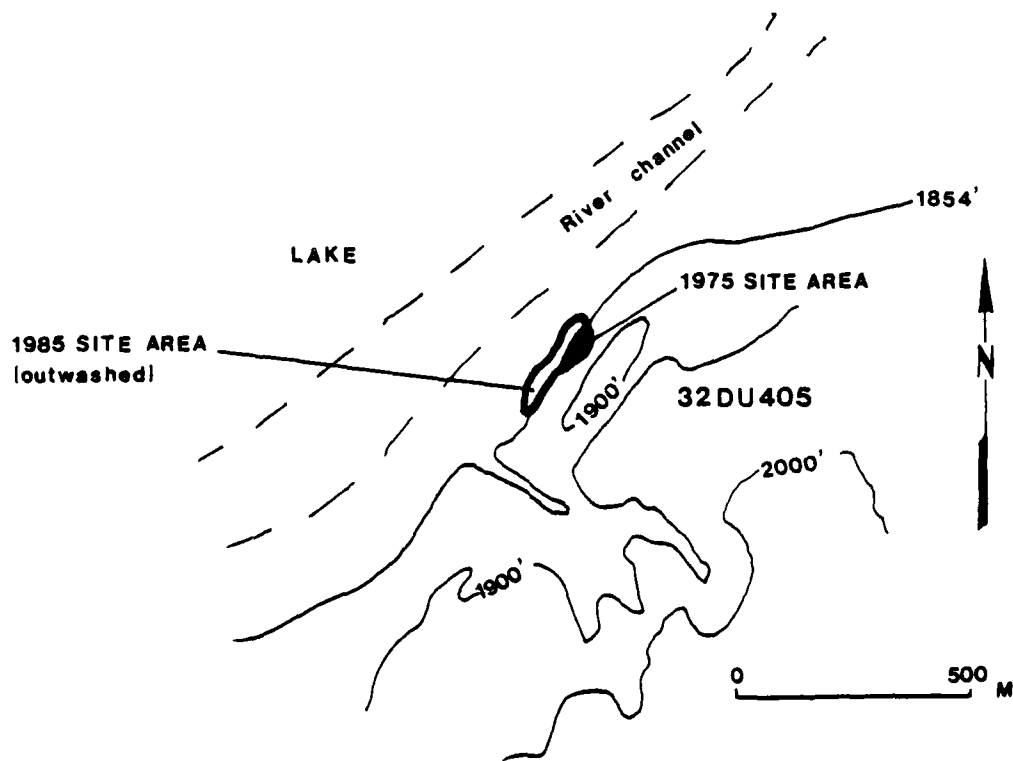


Figure 29. Plan of site 32DU405, showing 1975 recorded site area and area of outwashed materials recorded in 1985.

Site number: 32DU406 Site name:
County: Dunn. State: North Dakota. Site map: Figure 30, 31
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown/Late Prehistoric?
Elevation (m): 567.
Topographic position: On the beach and in the cutbank of the Little Missouri River embayment's south shore, and extending onto the lower hill slopes.
Site size: 170,000m².
Strata and depth: 30cm b.s.
Vegetation: Short grass, prickly pear, sagebrush, beach.
Ground surface visibility (%): 25-100%.
Nearest water: Little Missouri River - 250m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Severely eroded by the reservoir, but inland and in situ material indicated.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Two cores, an end scraper, two triangular biface fragments, two corner-notched projectile points, and 32 flakes or flake fragments, all of KRF. Two flake fragments and an unnotched triangular point of quartz; three flake fragments of quartzite; and one of chert.
Data plotted on site map: Locations of concentrations A, B and C recorded in 1985. A=eight+ KRF flakes and a chalcedony flake on the beach, a tertiary KRF flake and a KRF nodule inland. B=a core, a retouched flake and 15+ KRF flakes on the beach; a KRF shatter and tertiary flake in the cutbank; and a tertiary KRF flake inland. C=60 flakes, four bifaces and three cores of KRF on the beach; and a biface on an inland ridge.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: Assess erosional impacts and test to define inland/in situ manifestation and research potential of the site.

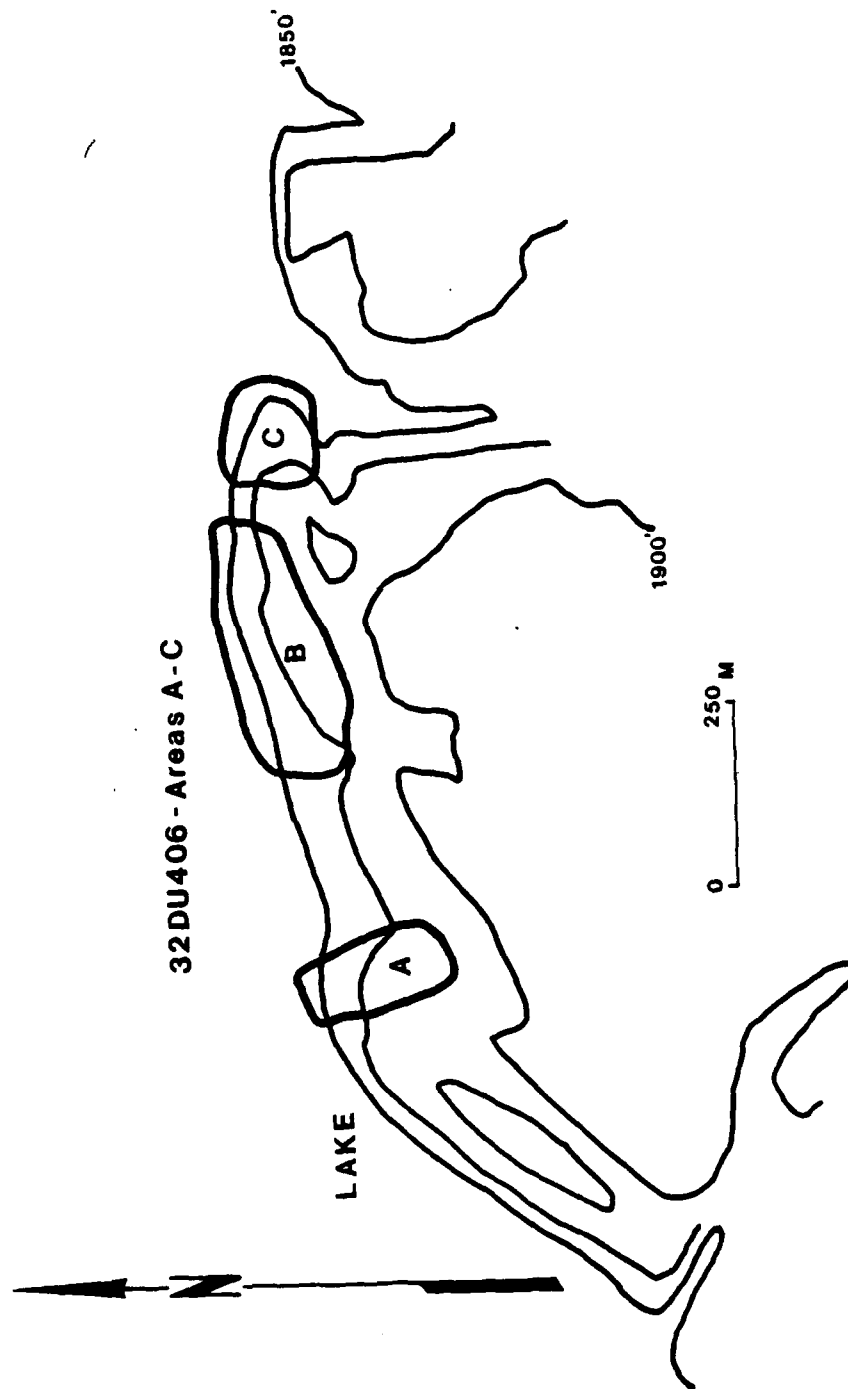


Figure 30. Plan of site 32DU406, areas A - C.

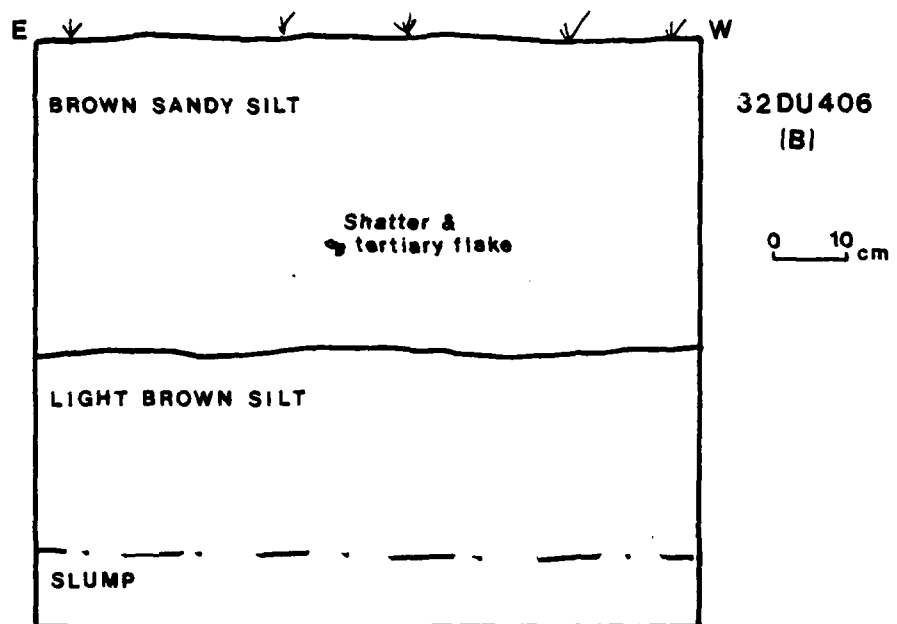


Figure 31. Profile at site 32DU406, Area B.

Remarks: Leaf recorded an area 400 x 2 meters with cultural material eroding out of the beach. In 1985 three areas or loci were recorded, each consisting of sparse lithic scatters.

Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

Site number: 32DU407 Site name:
County: Dunn. State: North Dakota. Site map: Figure 32
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Archaic/Late Prehistoric?
Elevation (m): 563.
Topographic position: On the beach of the Little Missouri River embayment's south shore.
Site size: 50,000m².
Strata and depth: Material noted in cutbank at 10cm b.s.
Vegetation: Beach/short grass.
Ground surface visibility (%): 30% inland, 80-100% on beach.
Nearest water: Intermittent stream - adjacent.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Site appears almost totally washed out at this time. The one area of in situ material was located below steep knoll slopes and is clearly the last remnant of whatever cultural deposits existed in that area.
Surface collections (by whom and when): Leaf 1975; ALCWS 1985.
Collected artifacts: Leaf: KRF items included 20 shatter, 38 flakes and flake fragments, two unmodified pieces, six cores, seven scrapers, two graters, one bifacial knife, 14 triangular bifaces, one cleaver, two flake cores, one large side-notched projectile point, two medium-sized corner-notched projectile points, and three small triangular projectile points. Jasper items included one point midsection and one flake. Porcelanite items consisted of one flake and one triangular point with side notches. One grey chert end scraper was collected. Quartzite items included two flake fragments, one shatter, and one hammerstone. Quartz items were comprised of one flake fragment and one flake. ALCWS: Retouched flake produced on porcelanite.
Data plotted on site map: Site area located on both sides of a former coulee.
Previous investigations: Leaf 1976.
Location of artifacts: Leaf - Unknown; ALCWS - State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site may have been locally significant and appears to have been multicomponent. Today it is essentially outwashed. What research potential it has has been revealed by the previous evaluations of this site. No further work is recommended.
Remarks: Leaf reported an extensive scatter of lithic debris over 1/8th of a section. He reported that it was likely that the site covered most of the coulee and that portions are now submerged. In 1985 over 200 items were noted, nearly all of KRF. All material would be inundated at high water. The almost total lack of material in the exposed cutbanks suggests this site is essentially outwashed.

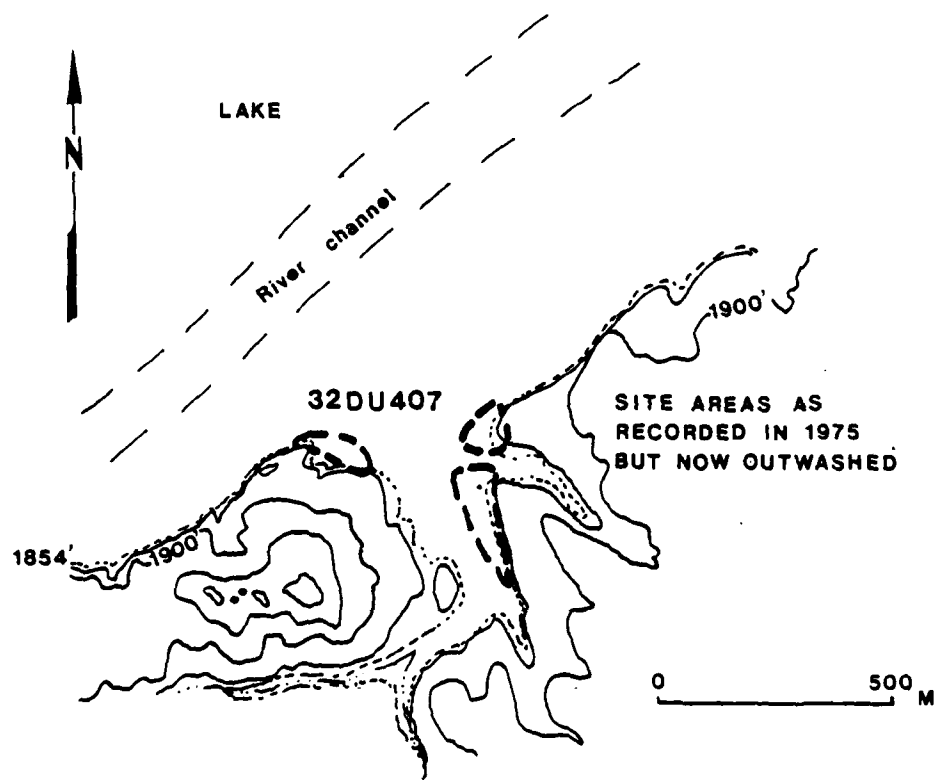


Figure 32. Plan of site 32DU407, generally as recorded in 1975 but now outwashed.

Site number: 32DU408 Site name:
County: Dunn. State: North Dakota. Site map: Figure 33
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Late Archaic/Late Prehistoric?
Elevation (m): 597.
Topographic position: On the beach of the Little Missouri River
embayment's south shore.
Site size: 80,000m².
Strata and depth: Outwashed/surficial.
Vegetation: Beach/short grass, prickly pear, yucca.
Ground surface visibility (%): 25-100%.
Nearest water: Little Missouri River - 120m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Appears totally eroded out.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Items produced on KRF included one unmodified
piece; 10 cores; five scrapers; four triangular bifaces; four choppers;
two medium-sized corner-notched projectile points; one small triangular,
unnotched point; 23 shatter; and 177 flakes or flake fragments. Two
flake fragments and one shatter of quartz were also collected.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: The site is largely outwashed and surficial. No
further work is recommended.
Remarks: Leaf recorded this scatter as covering an area 100 x 2 meters
along the beach. He noted very little flat ground in the area,
postulating that most of the site had been destroyed. Apart from some
items noted outwashed in arroyos, the material recorded in 1985 was
confined to the beach. No in situ material was noted in cutbanks and at
high water most of the site would be inundated.

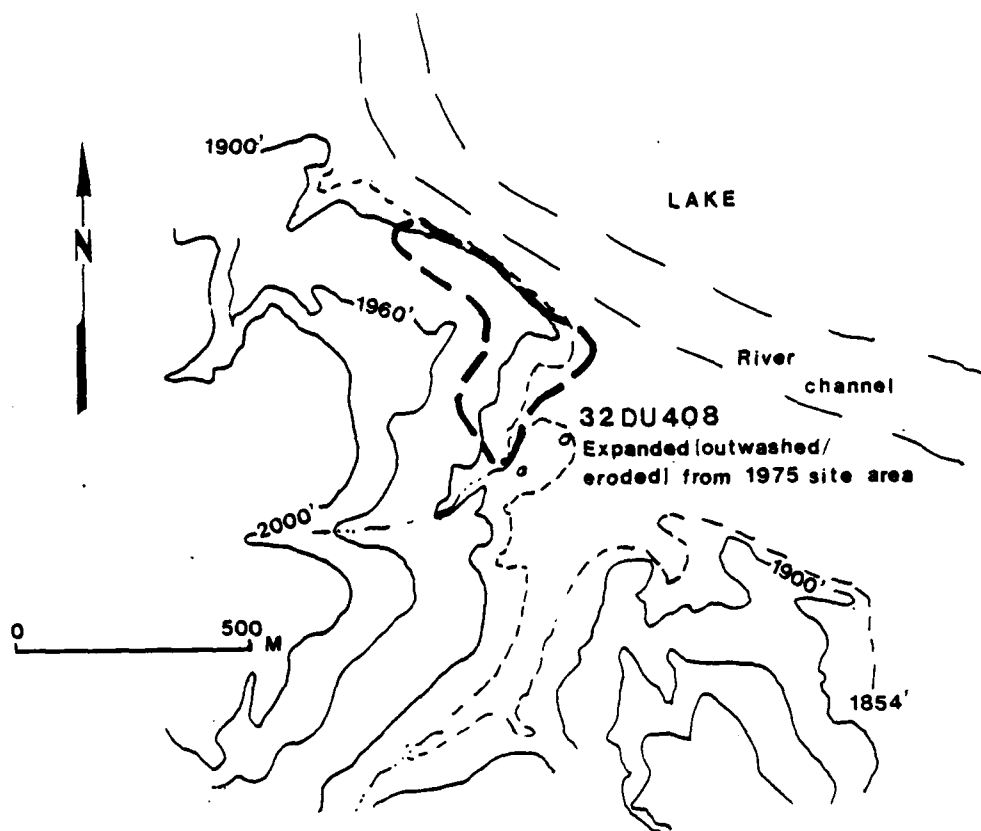


Figure 33. Plan of site 32DU408, slightly expanded from the site area recorded in 1975 and essentially outwashed.

Site number: 32DU409 Site name:
County: Dunn. State: North Dakota. Site map: Figure 34
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Historic and unknown.
Elevation (m): 563.
Topographic position: On the beach of the Little Missouri River embayment's south shore.
Site size: 11,250m².
Strata and depth: Surficial/outwashed.
Vegetation: Beach.
Ground surface visibility (%): 90-100%.
Nearest water: Little Missouri River - 380m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: No in situ material was noted. The site is surficial and outwashed.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: KRF items included four cores, six scrapers, two triangular bifaces, 26 shatter, and 204 flakes and flake fragments. One piece of granite (fire-cracked?) was collected. Historic items consisted of wood burning stove lids and four modern glazed stoneware sherds.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work is recommended because the site is outwashed.
Remarks: Leaf recorded this site as covering an area 100 by 4 meters along the beach. The site is in the same coulee as 32DU408. Cultural material was still eroding out in 1975. In 1985 all material noted was below high water level in outwashed contexts. The material included over 200 items of KRF, some recent bottle glass, iron pipe and whiteware.

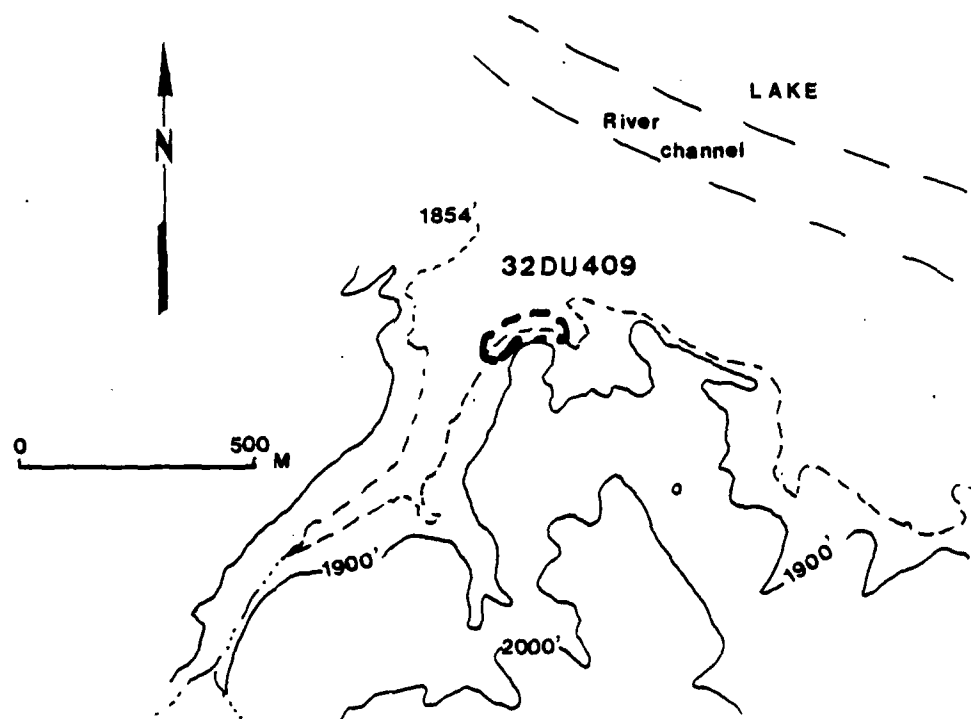


Figure 34. Plan of site 32DU409, generally as recorded in 1975 but now essentially outwashed.

Site number: 32DU410 Site name: Voight site.
County: Dunn. State: North Dakota. Site map: Figure 35
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Late Archaic, Late Prehistoric and Historic?
Elevation (m): 563.
Topographic position: On beach and adjacent pasture of the Little Missouri River embayment's south shore.
Site size: 210,000m².
Strata and depth: Tests revealed buried A horizons with intervening B or clay horizons. All cultural material was within the top 10cm.
Vegetation: Beach.
Ground surface visibility (%): 100%.
Nearest water: Intermittent stream - adjacent.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Site appears largely eroded out by reservoir action.
Surface collections (by whom and when): Leaf 1975; ALCWS 1985.
Collected artifacts: Leaf: KRF items included one unmodified piece, one tested piece, 18 cores, three scrapers, one graver, 10 triangular bifaces, four choppers, three corner- or side-notched medium-sized projectile points, one gunflint (?), 19 shatter, and 333 flakes or flake fragments. Quartzite items consisted of one hammerstone, one side-scraper, and one core. Items produced on quartz included four flakes or flake fragments, one end scraper, one point tip, and one core. Five shatter of petrified wood were collected. Porcelanite items included one shatter and five flake fragments. Jasper items were comprised of three flake fragments and one cleaver. An agate flake, one chert end scraper, three granite hammerstones, two basalt hammerstones, one basalt flake fragment, and one ceramic sherd were also collected. ALCWS: KRF transverse scraper.
Previous investigations: Leaf 1976.
Location of artifacts: Leaf - unknown; ALCWS - State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: This site was locally significant and appears to have been occupied during several periods. The cultural deposits are, however, shallow and deflated and now largely outwashed. Existing collections and previous testing define the main aspects of the site. Additional work on the surface manifestation of this site might be profitable, but the site is not considered eligible for nomination to the National Register of Historic Places and no further work along those lines is recommended.
Remarks: Leaf recorded the scatter as covering an area 500 by 100 meters on the beach and adjacent pasture. There were definite concentrations of Knife River Flint exposed on the beach, and rings of fire-cracked granite boulders from former hearths. Portions of the site were still eroding into the lake. This site was tested in 1975 by excavating four 2x2m units to depths of 30cm. Cultural material was located only in the top 10cm and there was no evidence for stratigraphically superpositioned multiple components.
In 1985 the site appeared even more outwashed, and no in situ material was noted. Most of the exposed material is inundated at high water.

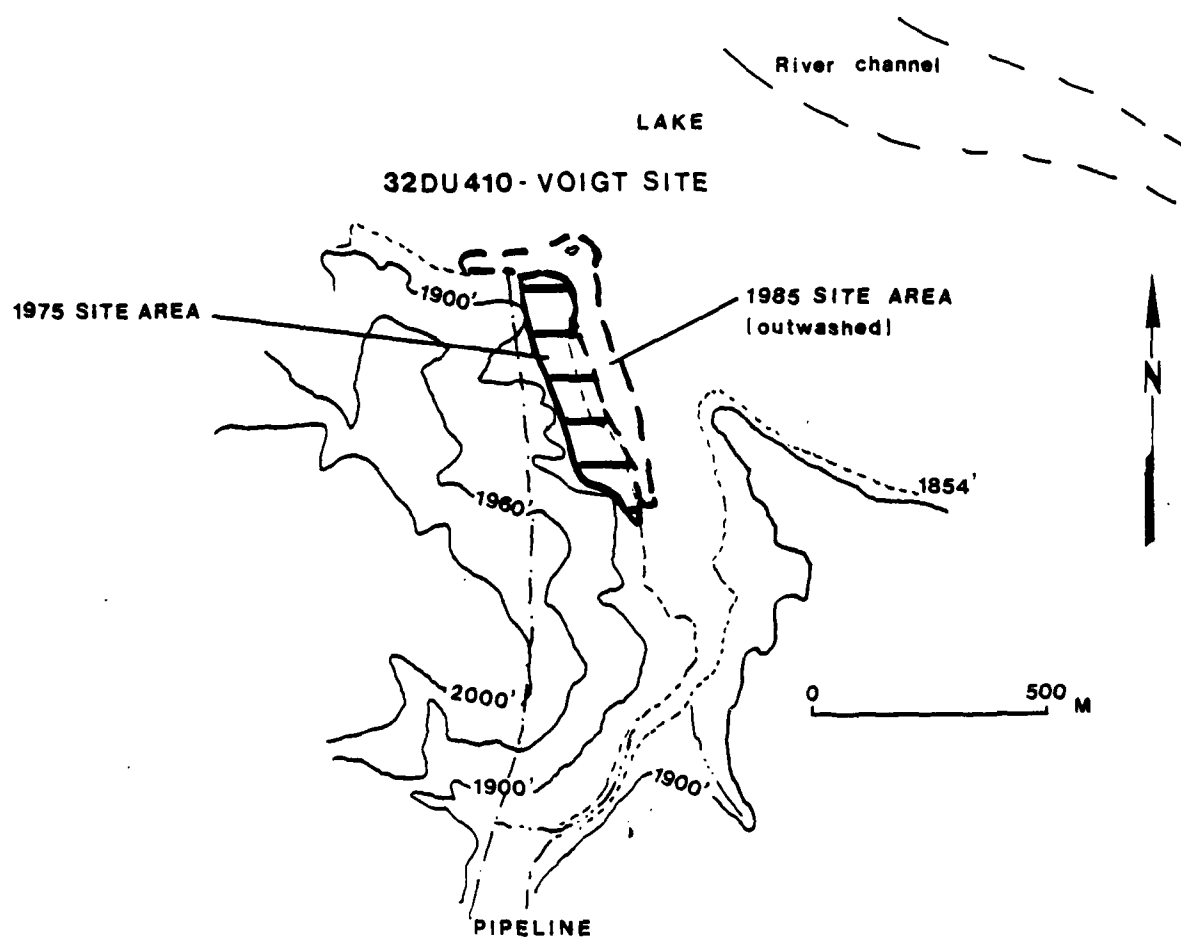


Figure 35. Plan of site 32DU410, showing 1975 recorded site area and area of outwashed materials recorded in 1985.

Site number: 32DU412 Site name:
County: Dunn. State: North Dakota. Site map: Figure 36
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Pelican Lake/Late Prehistoric?
Elevation (m): 563.
Topographic position: On the beach of the Little Missouri River embayment's south shore, on a point of land between two coulees.
Site size: 22,500m².
Strata and depth: Outwashed/surficial.
Vegetation: Beach.
Ground surface visibility (%): 100%.
Nearest water: Intermittent stream - adjacent.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Appears completely washed out.
Surface collections (by whom and when): Leaf 1975; ALCWS 1985.
Collected artifacts: Leaf: KRF items included two scrapers, one side-notched medium-sized projectile point, one small triangular side-notched projectile point, the blade portion of a large side-notched projectile point (?), and five flakes or flake fragments. A porcelanite core and a quartz flake fragment were also collected.
ALCWS: Pelican Lake corner-notched projectile point.
Previous investigations: Leaf 1976.
Location of artifacts: Leaf - unknown. ALCWS - State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: No further work is recommended.
Remarks: Leaf recorded a small scatter over an area 137 by 16 meters on the beach, with cultural material eroding into Lake Sakakawea. In 1985 cultural material was observed only on the beach below the high water level. A medium concentration of material was exposed on a point of land with a sparse scatter around it. Over 150 items were noted; 99% were KRF. No material was present in the nearby cutbank, and it appears that the site is completely outwashed.

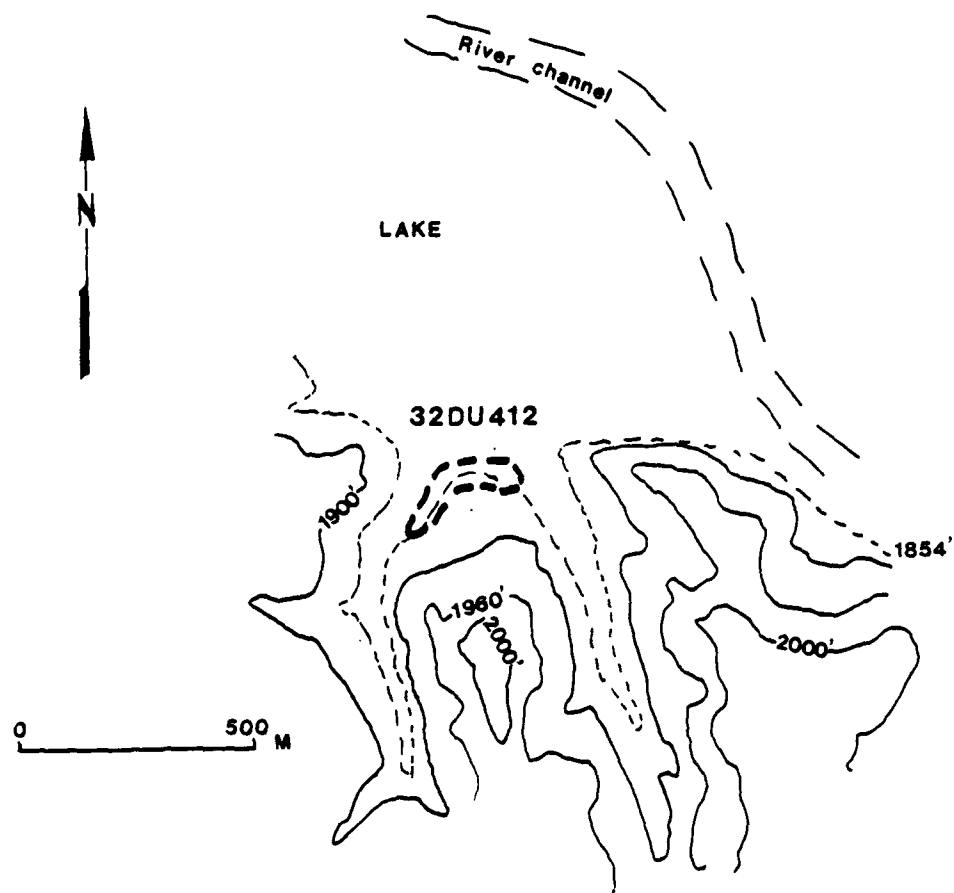


Figure 36. Plan of site 32DU412, generally as recorded in 1975 but now essentially outwashed.

Site number: 32DU413 Site name:
County: Dunn. State: North Dakota. Site map: Figure 37
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.

Site type: Artifact scatter.

Component(s): Late Prehistoric?

Elevation (m): 563.

Topographic position: On the south shore of the Little Missouri River embayment.

Site size: 51,000m².

Strata and depth: Surficial.

Vegetation: Beach/short grass.

Ground surface visibility (%): 35-100% inland, 100% beach.

Nearest water: Little Missouri River - 120m.

Pool elevation (feet), when applicable: 1839' amsl.

Site condition - impacts: Road construction, camping and lake erosion have all impacted the site to a significant degree.

Surface collections (by whom and when): Leaf 1975; ALCWS 1985.

Collected artifacts: Leaf: KRF items included 11 flakes or flake fragments, one small corner-notched projectile point and the midsection of a small bifacial artifact. ALCWS: One KRF biface blade fragment.

Data plotted on site map: Site as originally mapped by Leaf (1976).

Previous investigations: Leaf 1976; Harris 1980; Gnabasik 1983.

Location of artifacts: Leaf - unknown. ALCWS - State Historical Society of North Dakota.

Other material reported by owner: Leaf records that Tim Peters (then operator of Peter's Resort) had two small side-notched triangular points from the site and that other bifacially retouched tools and lithic debris had been observed/removed from the site.

Recommendations: No further work is recommended. Lake erosion, road construction, recreation/camping use and surface collecting have destroyed the site integrity.

Remarks: Leaf recorded a wide scatter of lithic debris over an area 1.7 by 0.3 kilometers, encompassing much of the Little Missouri Public Use Area. He observed three concentrations of KRF which were recorded as one site since the vegetation cover then restricted visibility and the reported collecting from the site suggested that these areas were probably part of one large scatter. In 1980, Harris located only four flakes of KRF in this area. Extensive testing along a portion of the site area by Gnabasik (1983) also produced negative results.

The 1985 survey showed that Leaf's Area 1 was now destroyed by a new road and campground. In his Area 2, a few flakes were noted on the beach and in tracks leading to the beach; all of these items were in disturbed contexts. Area 3 consisted of a very sparse scatter only on the beach. Inspection of cutbanks and inland erosion cuts revealed no additional material and no indication of any buried deposits. About 28 lithic items were observed altogether in 1985.

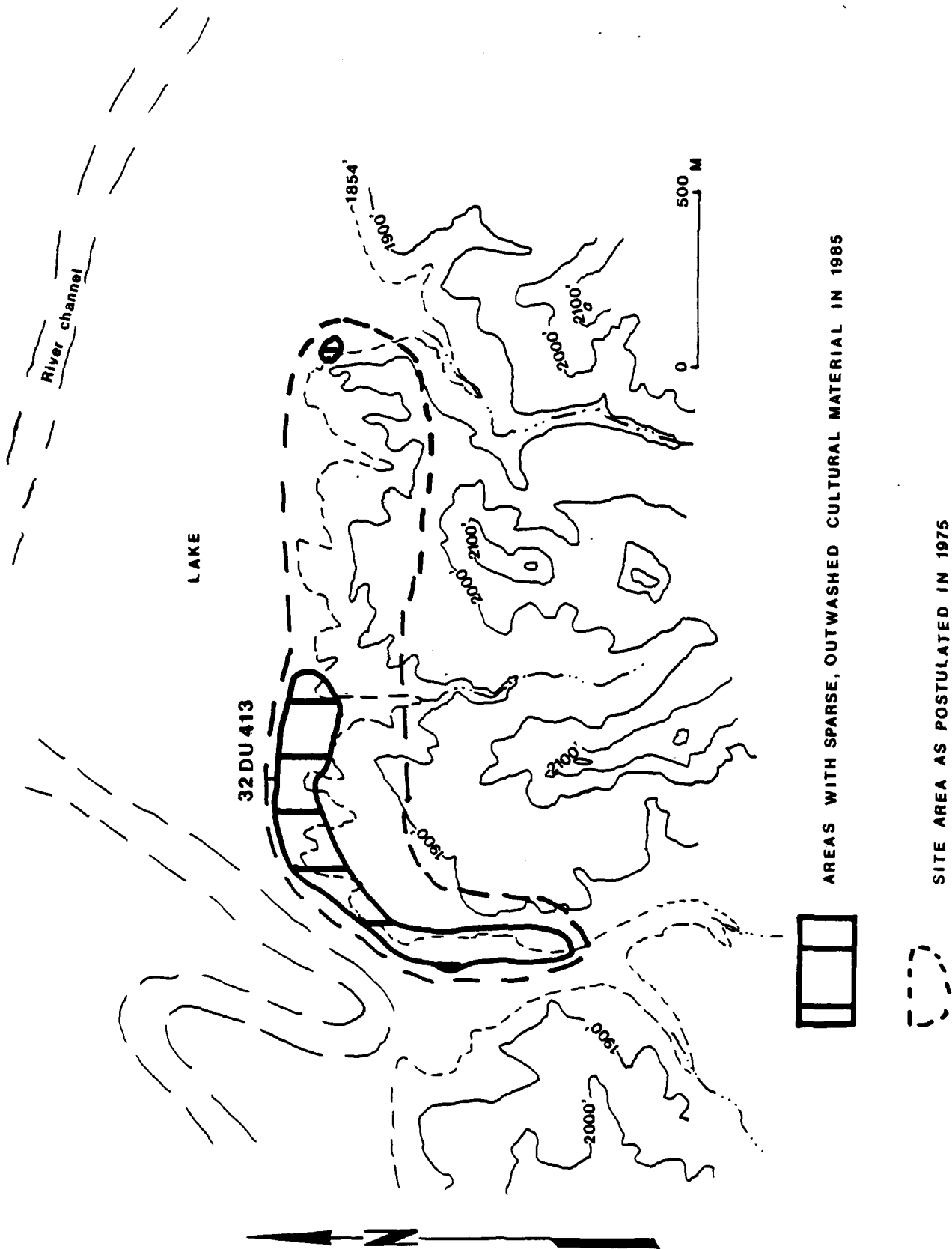


Figure 37. Plan of site 32DU413, showing site area as postulated in 1975 and areas of sparse outwashed materials located in

Site number: 32DU414 Site name:
County: Dunn. State: North Dakota. Site map: Figure 38
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Recorded as a campsite (?) / artifact scatter by Leaf (1976).
The site was not relocated in 1985.
Component(s): Late Prehistoric?
Elevation (m): n/a.
Topographic position: n/a.
Site size: Leaf recorded the site as covering 30 x 10 meters on the beach.
Strata and depth: Unknown/surficial.
Vegetation: n/a.
Ground surface visibility (%): n/a (100% on beach in supposed site area).
Nearest water: n/a.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: The site was not relocated in 1985 and is presumed eroded away.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Two cores, one triangular biface, three projectile point fragments, 79 flakes or flake fragments, and seven shatter, all of KRF. One flake fragment of jasper was also collected.
Data plotted on site map: Leaf's map of the site location. The site was not relocated in 1985.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work.
Remarks: No cultural material was located in the recorded site area in 1985. The site is presumed destroyed by reservoir erosion.

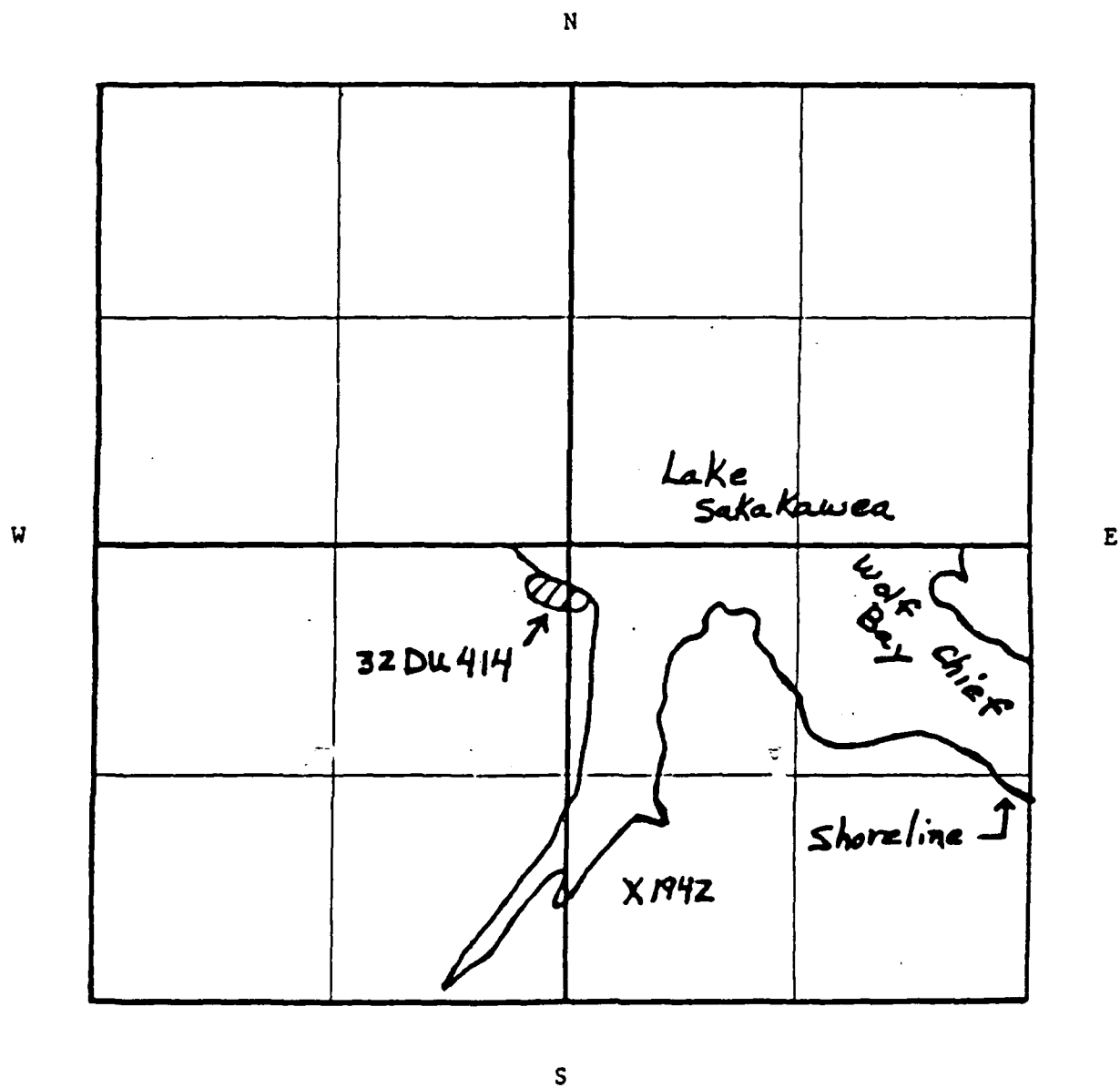


Figure 38. 1975 map of site 32DU414, not relocated in 1986.

Site number: 32DU415 Site name: Bobber site.
County: Dunn. State: North Dakota. Site map: Figure 39
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On beach on the west side of Wolf Chief Bay
(Little Missouri River embayment).
Site size: 80m².
Strata and depth: Outwashed/surficial.
Vegetation: Beach.
Ground surface visibility (%): 100%.
Nearest water: Hans Creek - 350m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: Appears completely eroded out.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: One piece of fire-cracked granite, one quartz
flake fragment, and 131 items of KRF (including two triangular biface
fragments, 123 flakes or flake fragments and six shatter).
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work is recommended. The site's integrity is
destroyed.
Remarks: Leaf recorded that this site covered an area 40 x 2 meters
along the beach, with cultural material actively eroding. In 1985
inspection of the cutbanks in this area revealed no in situ cultural
material. Only 13 items (all KRF) were observed.

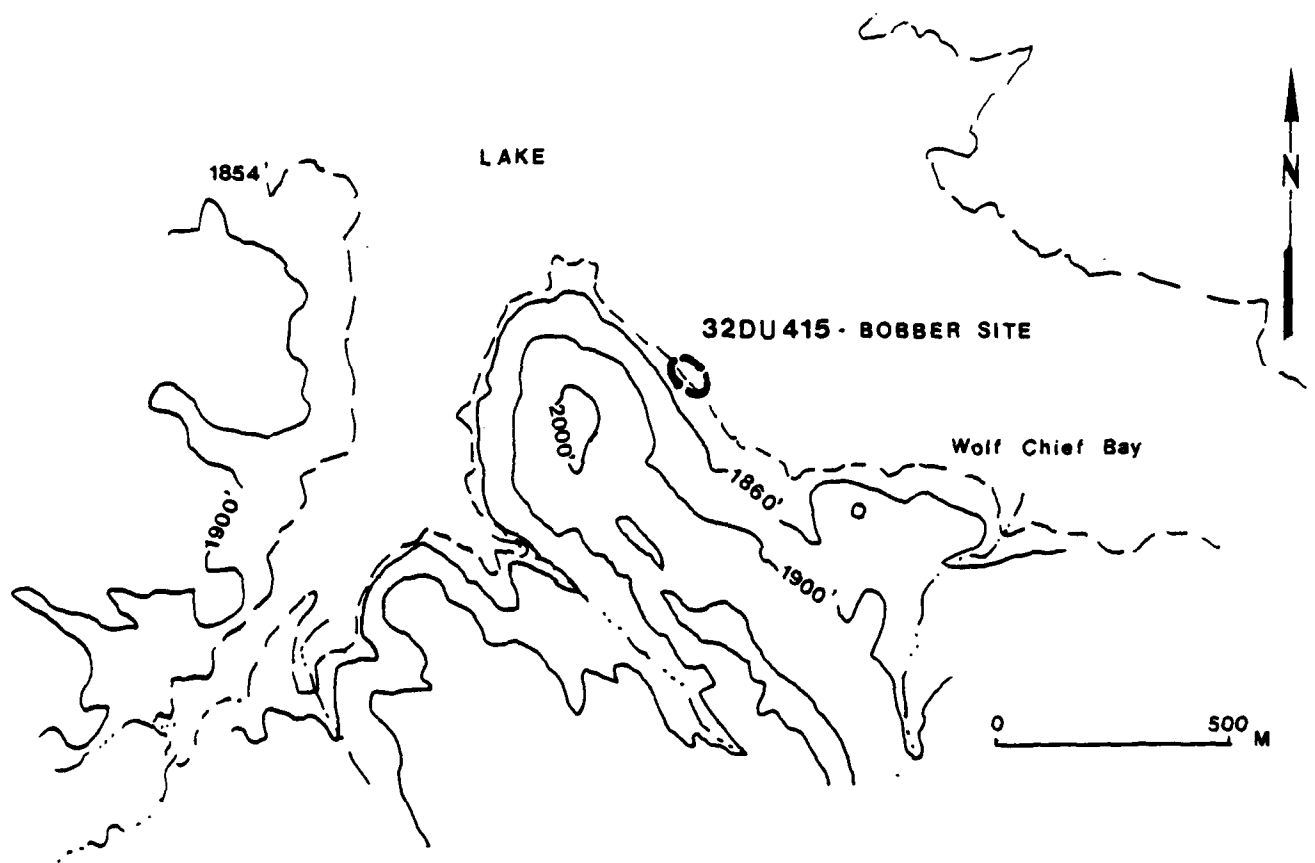


Figure 39. Plan of site 32DU415, generally as recorded in 1975 but now essentially outwashed.

Site number: 32DU416 Site name:
County: Dunn. State: North Dakota. Site map: Figure 40
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Recorded as a flint cache by Leaf (1976:27). The site was not relocated in 1985 (had been completely collected).
Component(s): Unknown.
Elevation (m): n/a.
Topographic position: Leaf recorded the site eroding out of the beach on the west side of Wolf Chief Bay (Little Missouri River embayment).
Site size: n/a.
Strata and depth: n/a.
Vegetation: Sparse grasses in suspected site area.
Ground surface visibility (%): 75-100% in suspected site area.
Nearest water: n/a.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: Lake erosion. Cache collected in 1975.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: KRF items included two unmodified pieces, two tested pieces, one core, one flake and four flake fragments. One quartzite hammerstone and quartz tested raw material were also collected.
Data plotted on site map: Leaf's location of this site; the location was not relocated in 1985.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: No further work is recommended.
Remarks: There has been continued erosion in this area. Despite the excellent surface visibility there was no cultural material present in the suspected site area.

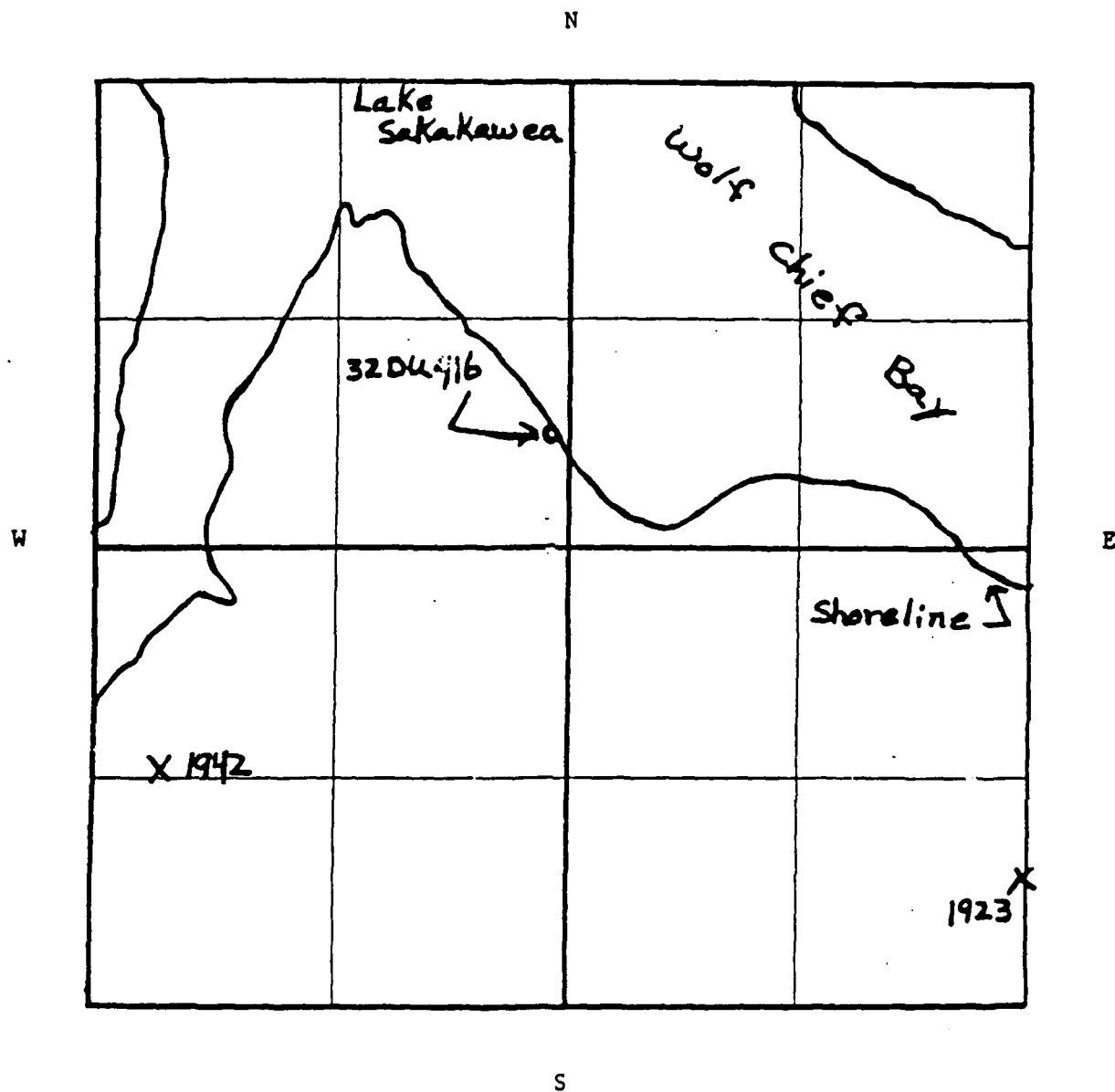


Figure 40. 1975 map of site 32DU416, not relocated in 1986.

Site number: 32DU417 Site name:
County: Dunn. State: North Dakota. Site map: Figure 41
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Log cabin remnants/historic artifact scatter.
Component(s): Euro-American.
Elevation (m): 570.
Topographic position: On the side of a ridge on the west side of Wolf Chief Bay.
Site size: 600m².
Strata and depth: Surficial.
Vegetation: Medium grasses mixed with common yarrow and yellow sweet clover.
Ground surface visibility (%): 10%.
Nearest water: Hans Creek - 200m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: Leaf (1976:28) recorded a log cabin at this site. The 1985 survey crew found that the cabin had been removed, along with much portable material. Only debris remains.
Surface collections (by whom and when): Leaf 1975.
Collected artifacts: Old metal spoon, truncated and fashioned into a hide scraper.
Previous investigations: Leaf 1976.
Location of artifacts: Unknown.
Other material reported by owner: None.
Recommendations: The site is relatively recent and lacks integrity. It is not considered eligible for nomination to the National Register of Historic Places and no further work is recommended in this regard. Basic records already exist from the current survey and from Leaf's previous survey.
Remarks: Leaf recorded a small log cabin, 4 by 5 meters, consisting of one room; an outhouse; an old dirt road or trail; and a yard full of trash. The site appears to be what is left of a small farm occupied from the 1930s to early 1950s. The remains were not considered a significant cultural resource. In 1985 the survey located some of the "yard trash", but clearly much had been removed - including the cabin and outhouse. A line of flat rock footings and milled lumber identified the probable foundation of the log cabin. The site is associated with the Voight family and is considered to have been a farm dating from the 1930s to 1950s.

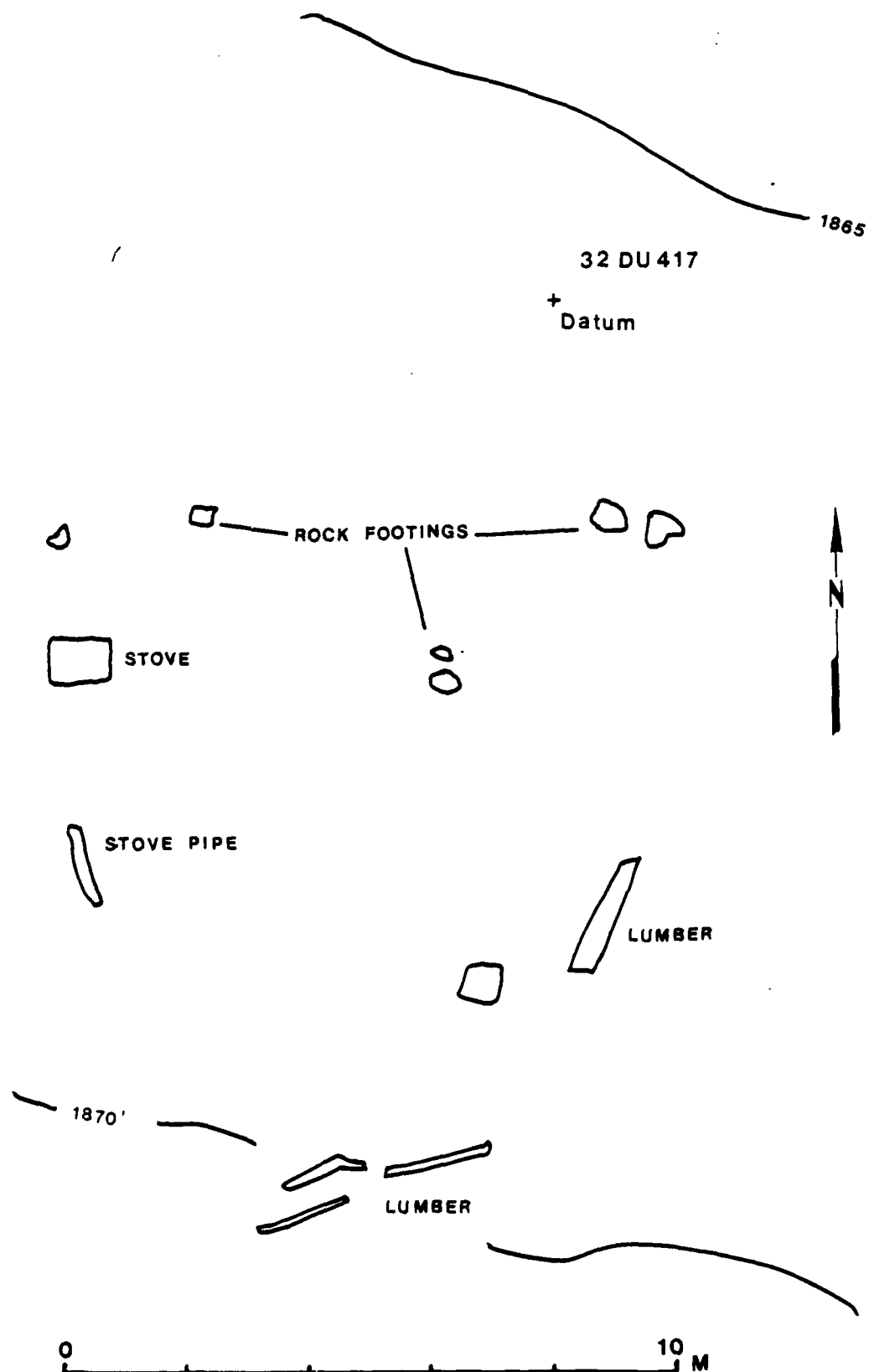


Figure 41. Plan of site 32DU417.

Site number: 32DU418 Site name:
County: Dunn. State: North Dakota. Site map: Figure 42
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Pelican Lake/Late Prehistoric?
Elevation (m): 563.
Topographic position: On beach on south shore of the Little Missouri River embayment.
Site size: 2000m².
Strata and depth: Outwashed/surficial.
Vegetation: Beach/yellow sweet clover, foxtail grass, flax.
Ground surface visibility (%): 70-100%.
Nearest water: Little Missouri River - 150m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: Appears totally outwashed.
Surface collections (by whom and when): Leaf 1975; ALCWS 1986.
Collected artifacts: Leaf: seven flakes or flake fragments, one core and one small side-notched projectile point, all of KRF. ALCWS: Pelican Lake projectile point midsection and base, produced on KRF.
Data plotted on site map: A=point base; B=KRF tertiary flake; C=KRF tertiary flake.
Previous investigations: Leaf 1976.
Location of artifacts: Leaf - unknown; ALCWS - State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: No further work is recommended.
Remarks: Leaf recorded this sparse lithic scatter as being completely under water at high water level. In 1985 only three lithic items were noted in the area; all three items were on the beach. No material was noted in cutbanks. The site appeared totally outwashed.

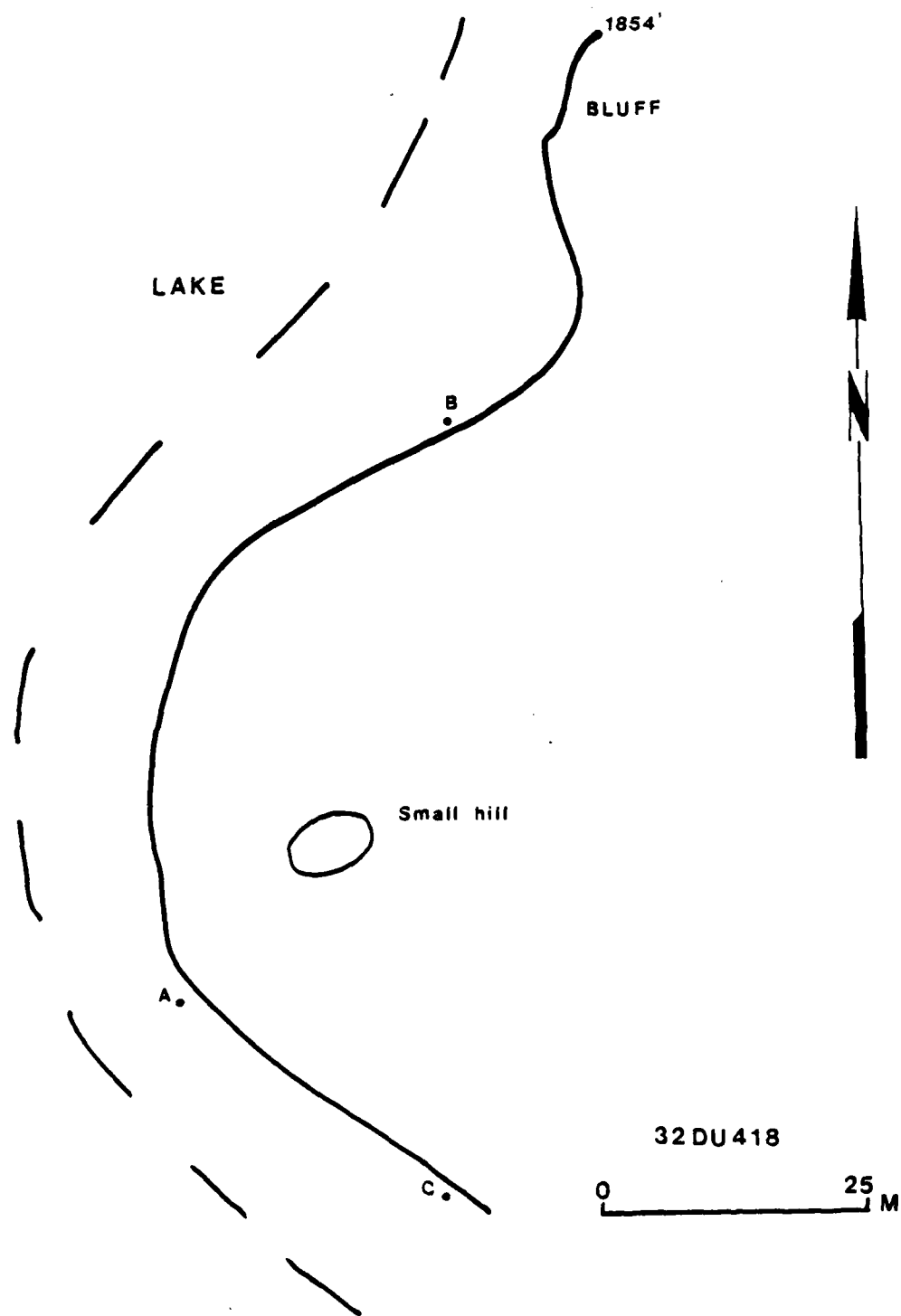


Figure 42. Plan of site 32DU418.

Site number: 32DU419 Site name:
County: Dunn. State: North Dakota. Site map: Figure 43
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Log cabin and historic artifact scatter.
Component(s): Euro-American.
Elevation (m): 576.
Topographic position: On the side of a ridge on the south side of the Little Missouri embayment.
Site size: 625m².
Strata and depth: Surficial.
Vegetation: Various grasses, wild rose, wild strawberries, and ash trees along the ridge bottom slope.
Ground surface visibility (%): 10%.
Nearest water: Little Missouri River - 675m.
Site condition - impacts: The log cabin is collapsing and portable artifacts have been removed; otherwise the site has fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: Plan of log cabin with surrounding fenced yard. What remains is roofless and on a foundation of crumbling concrete with very large slab rock inclusions. It measures 8.92m x 5.45m.
Previous investigations: Leaf 1976.
Other material reported by owner: None.
Recommendations: The integrity of the site as a standing structure is very poor. There is no known connection with a person or event of significance. Deeds records and structural data suggest it is of relatively late (1915-1930) construction. There is no historical or architectural importance in terms of design, style, materials, or craftsmanship, and it is not a prototype for diagnostic purposes. It is not considered eligible for nomination to the National Register of Historic Places and no further work is recommended in that regard.
Remarks: The site has changed very little since it was recorded by Leaf in 1975.

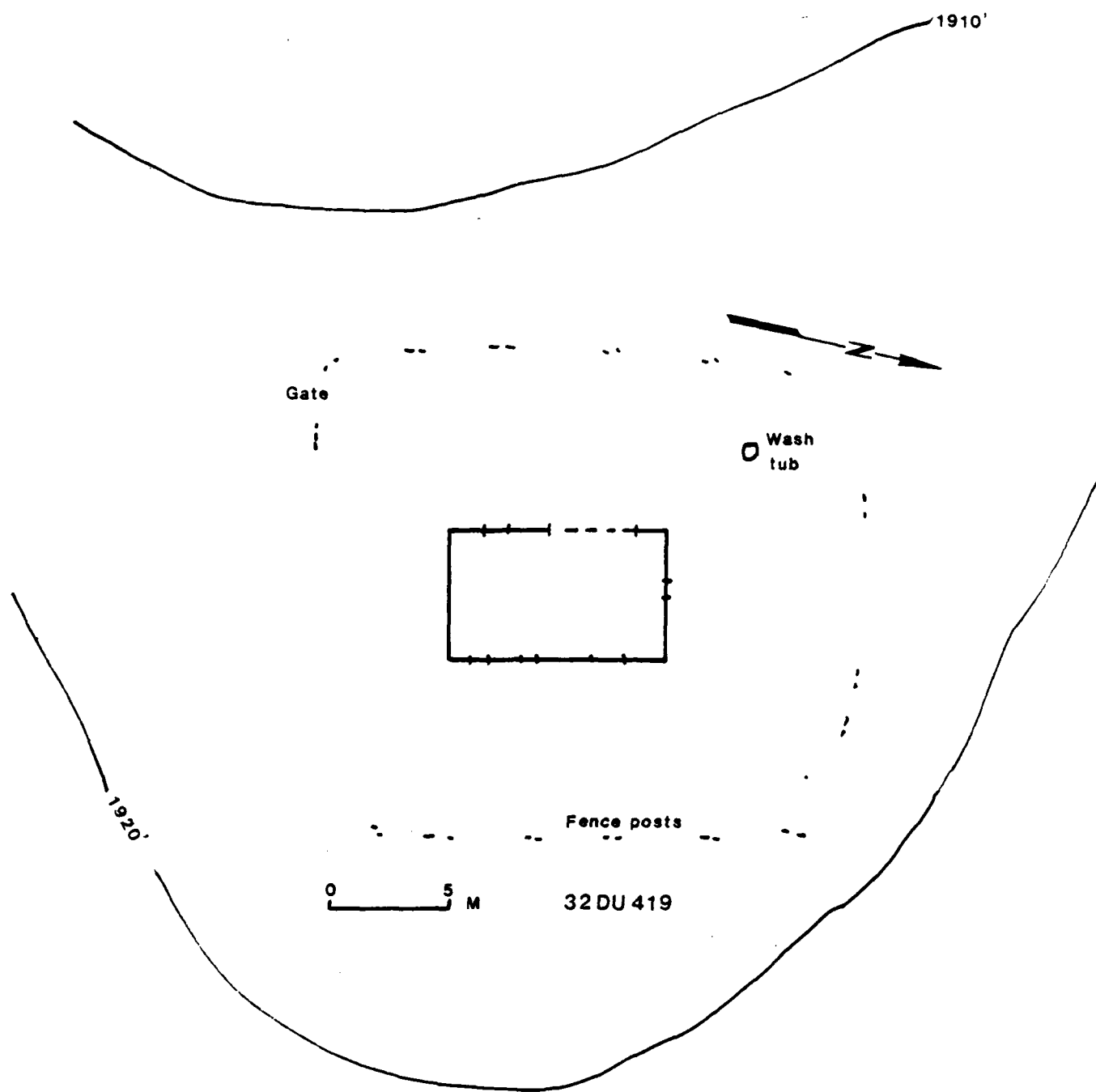


Figure 43. Plan of site 32DU419.

Site number: 32DU628 Site name:
County: Dunn. State: North Dakota. Site map: Figure 44
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 583.
Topographic position: On the bottom and sides of a ridge in Badlands terrain above the cutbank of Lake Sakakawea. Locally the topography is very dissected.
Site size: 6,000m².
Strata and depth: Surficial.
Vegetation: Mostly bare ground with some short grass.
Ground surface visibility (%): 100%.
Nearest water: Little Missouri River - 350m.
Site condition - impacts: Active slope erosion and lack of vegetation suggest this site is largely eroded out/redeposited.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: No further work is recommended.
Remarks: About 30 KRF flakes and three porcelanite flakes were observed at this site.

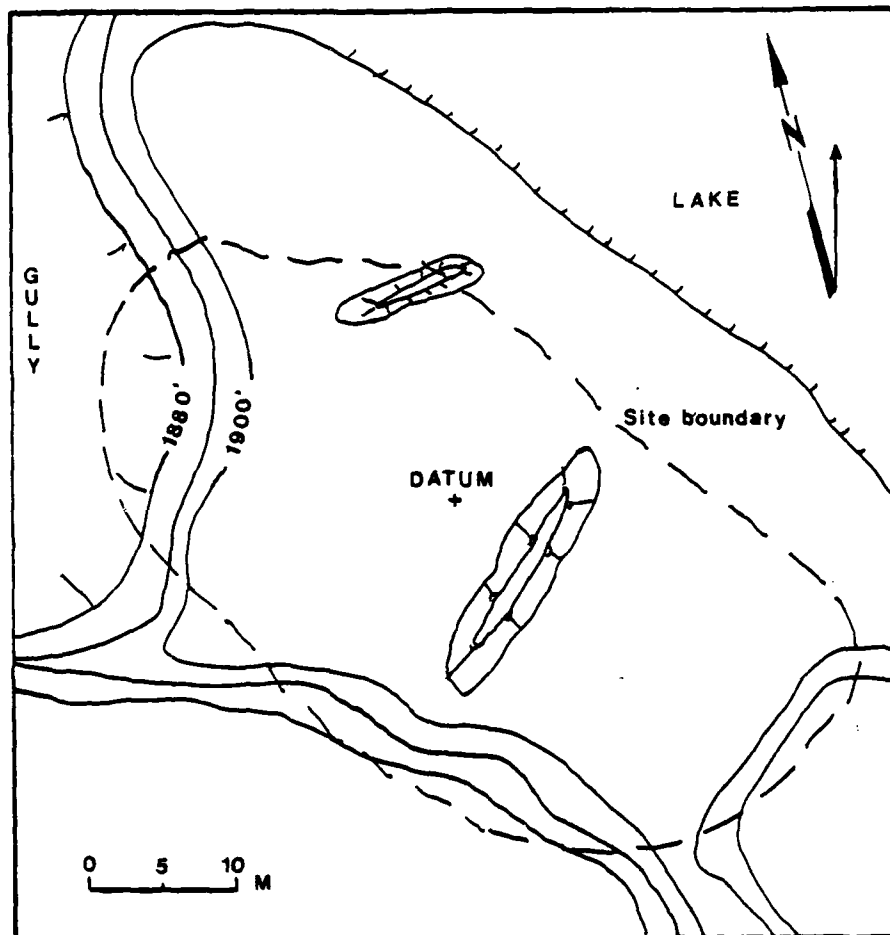


Figure 44. Plan of site 32DU628.

Site number: 32DU629 Site name:
County: Dunn. State: North Dakota. Site map: Figure 45
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the top and sides of a small knoll or hill.
Site size: 13,200m².
Strata and depth: Surficial.
Vegetation: Short grass, prickly pear cactus, sagebrush.
Ground surface visibility (%): 85%.
Nearest water: Little Missouri River - 650m.
Site condition - impacts: Moderate to severe surface erosion has
removed and redeposited some material. There is little soil depth and
the site is clearly surficial.
Surface collections (by whom and when): ALCWS 1985.
Collected artifacts: Retouched core platform removal flake and four
cobble core fragments of KRF; one secondary flake and one tertiary flake
of grey/brown mottled chert.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site's integrity is poor, and research potential is
limited. It is not considered eligible for nomination to the National
Register of Historic Places and no further work is recommended in that
regard.
Remarks: Over 90 items were noted; most were produced on KRF, but
petrified wood, porcelanite and chert were also present.

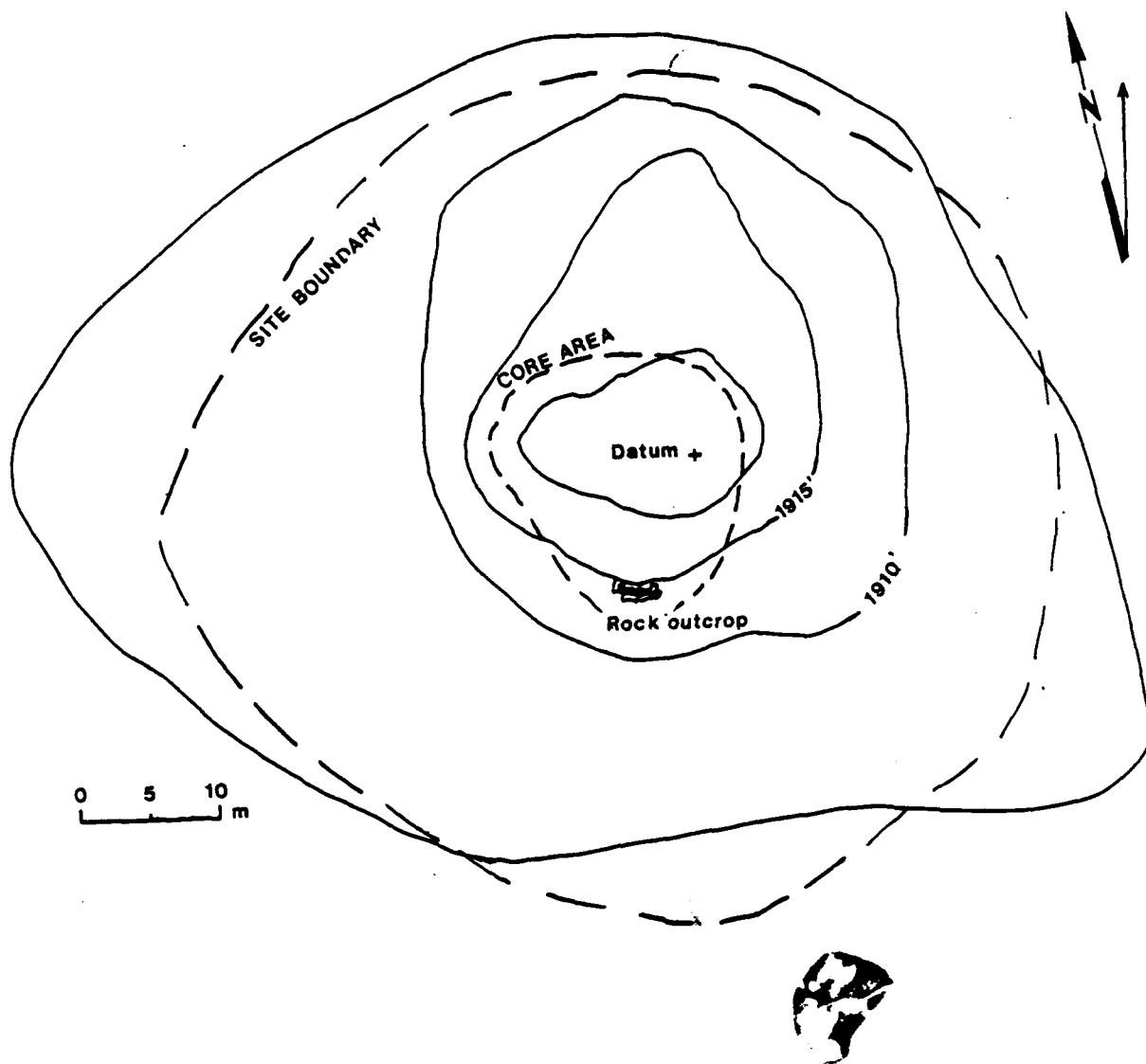


Figure 45. Plan of site 32DU629.

Site number: 32DU630 Site name:
County: Dunn. State: North Dakota. Site map: Figure 46
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 572.
Topographic position: On the top and side of a ridge slope above a draw.
Site size: 4,000m².
Strata and depth: Surficial.
Vegetation: Medium and short grasses, sagebrush and prickly pear cactus.
Ground surface visibility (%): 40-100%.
Nearest water: Intermittent stream - 125m.
Site condition - impacts: Most items observed are on currently eroding surfaces and are probably not in situ. No buried material was present in the numerous cutbank exposures.
Surface collections (by whom and when): ALCWS 1985.
Collected artifacts: Preform reduction blank, KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site lacks integrity and has a very limited cultural assemblage. It is not considered eligible for nomination to the National Register of Historic Places and no further work is recommended in that regard.
Remarks: Over 30 items, all KRF, were recorded at this site. Most of the items were secondary and tertiary flakes.

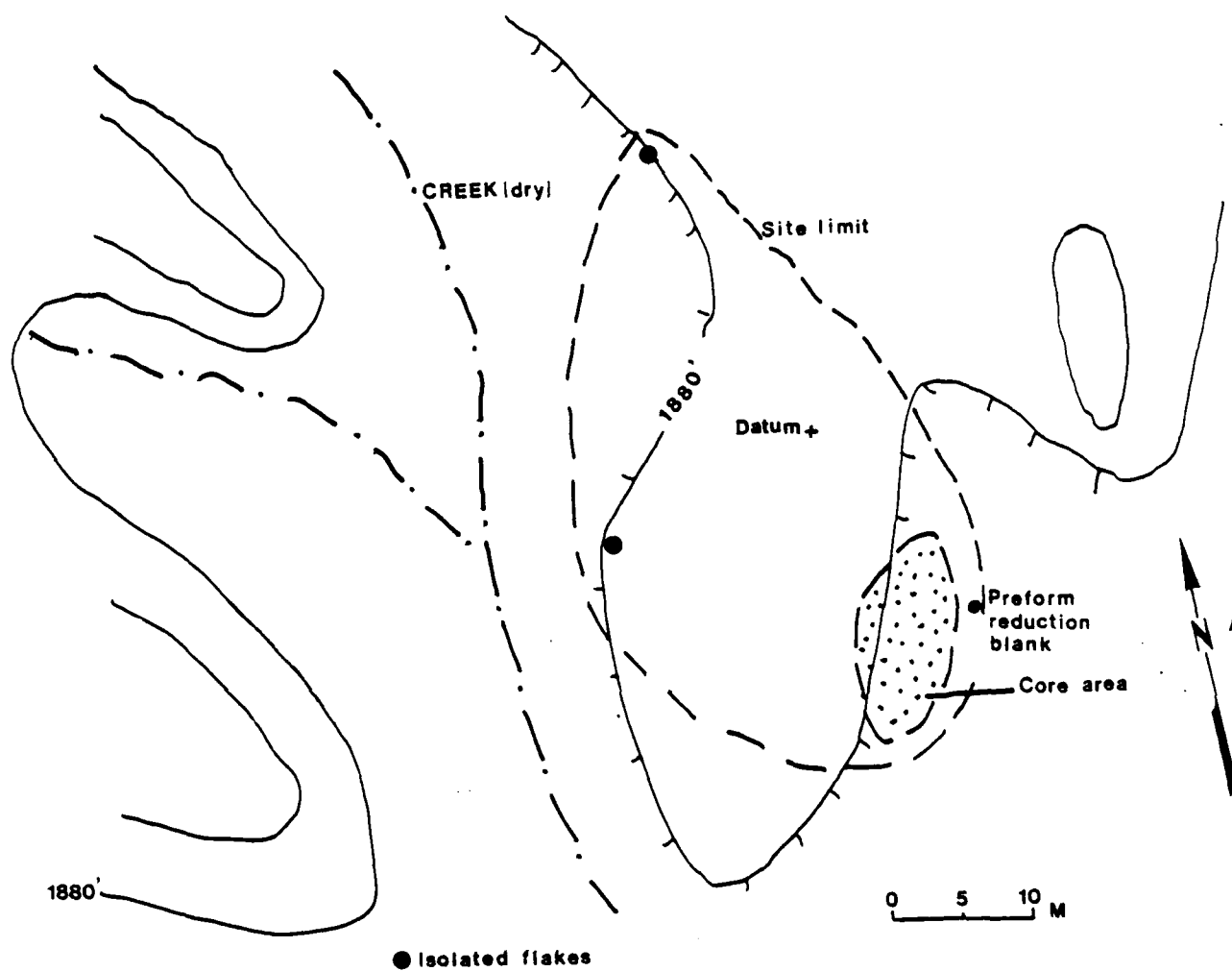


Figure 46. Plan of site 32DU630.

Site number: 32DU631 Site name:
County: Dunn. State: North Dakota. Site map: Figure 47, 48
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter and eagle trapping pit.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: On the top and sides of a ridge system on the south side of the Little Missouri River embayment.
Site size: 140,000m².
Strata and depth: Unknown.
Vegetation: Short grass, sagebrush and prickly pear cactus.
Ground surface visibility (%): 20-100%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: The pit appears relatively undisturbed, but the artifact scatters are located on eroding slopes and have poor spatial integrity.
Surface collections (by whom and when): None.
Data plotted on site map: Concentration A - over 40 items of KRF; Concentration B - over 250 items present. The pit is located on a high flat-topped portion of the ridge system. Between the two concentrations about 50 KRF items were scattered.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site represents a more extensive activity locus than many in the Little Missouri region and its relationship, if any, to the pit should be further investigated.
Remarks: The erosional state of the site denotes limited integrity; however, additional research into lithic procurement could be undertaken in addition to investigation of the pit.
Testing for National Register Eligibility (purpose of): To determine depth, components present, research potential and integrity.

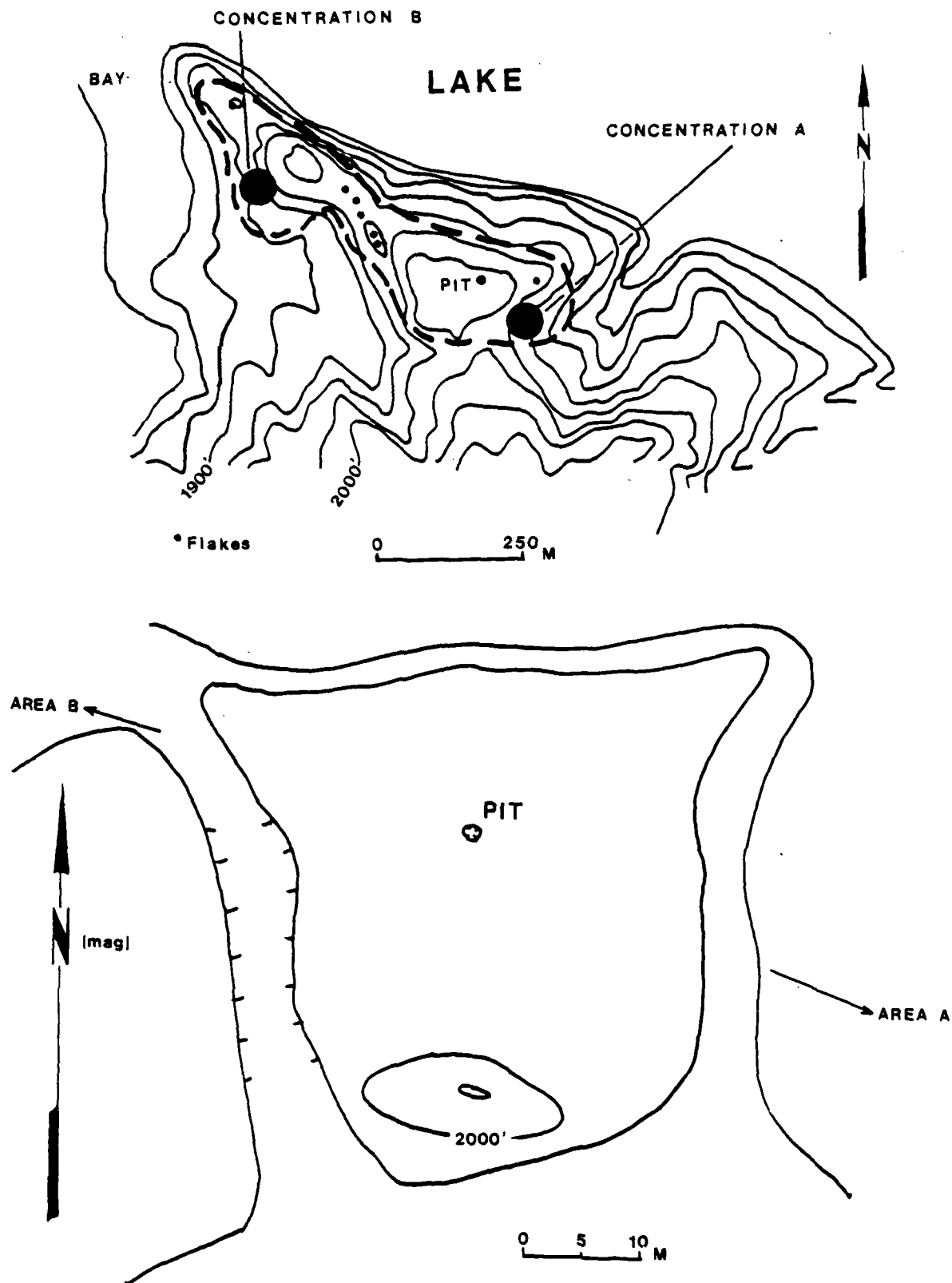


Figure 47. Overall plan of site 32DU631 and detail of pit location.

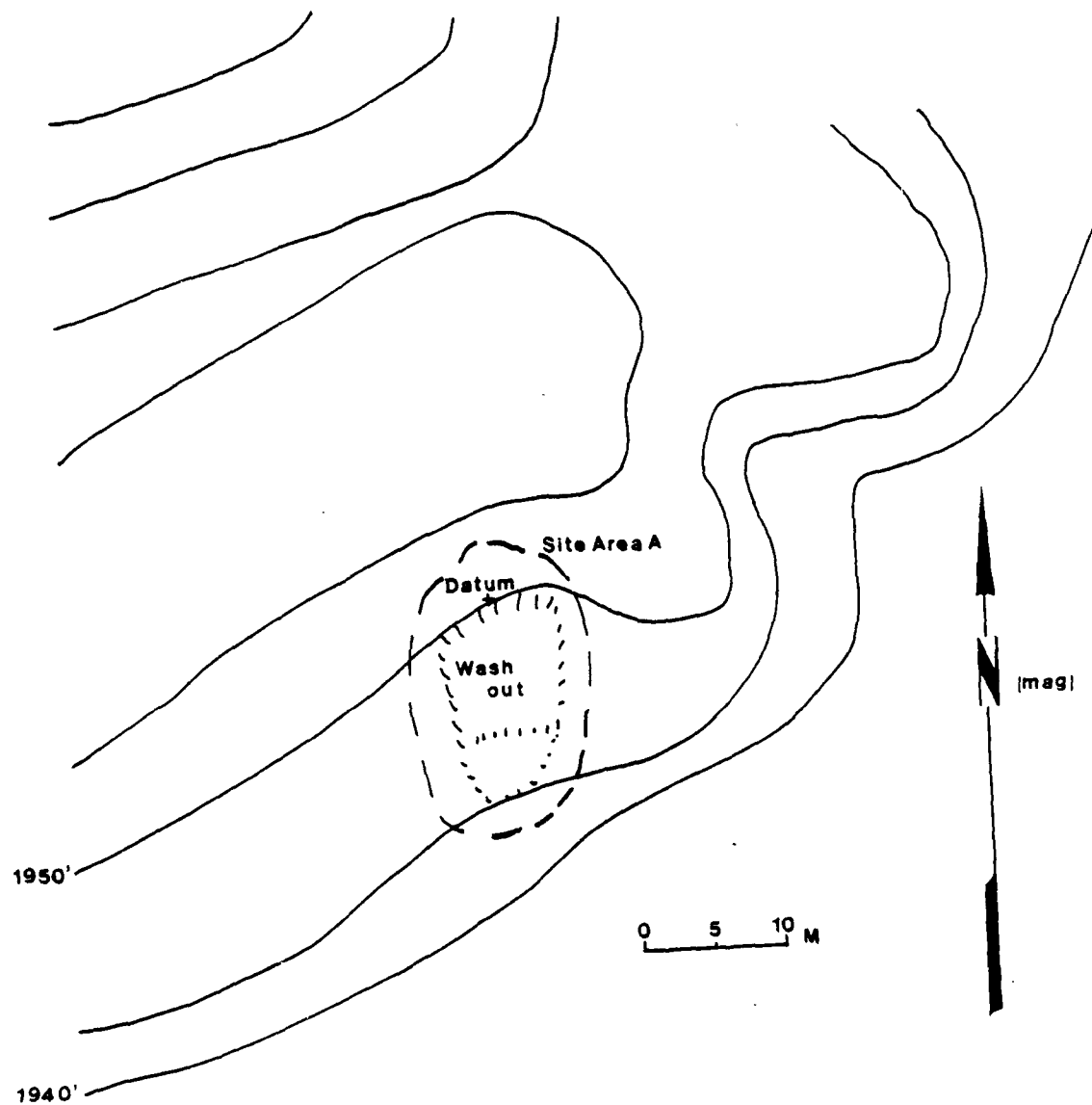


Figure 48. Plan of Area A, site 32DU631.

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Site number: 32DU632 Site name:
County: Dunn. State: North Dakota. Site map: Figure 49
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the top and side of a low knoll/hill on the
north side of what is now an island, with some material on the beach
below and to the east.
Site size: 150m².
Strata and depth: Surficial.
Vegetation: Short grass, prickly pear and yucca cactus.
Ground surface visibility (%): 90%.
Nearest water: Little Missouri River - 450m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: The site appears to be eroded out on actively
eroding slopes and beach. Gravels exposed with cultural material
indicate no soil depth. The site has poor integrity.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site lacks further research potential and
integrity. It is not considered eligible for nomination to the National
Register of Historic Places and no further work is recommended in this
regard.
Remarks: Approximately 28 KRF items were noted at this site as well as
unworked nodules of KRF on the beach.

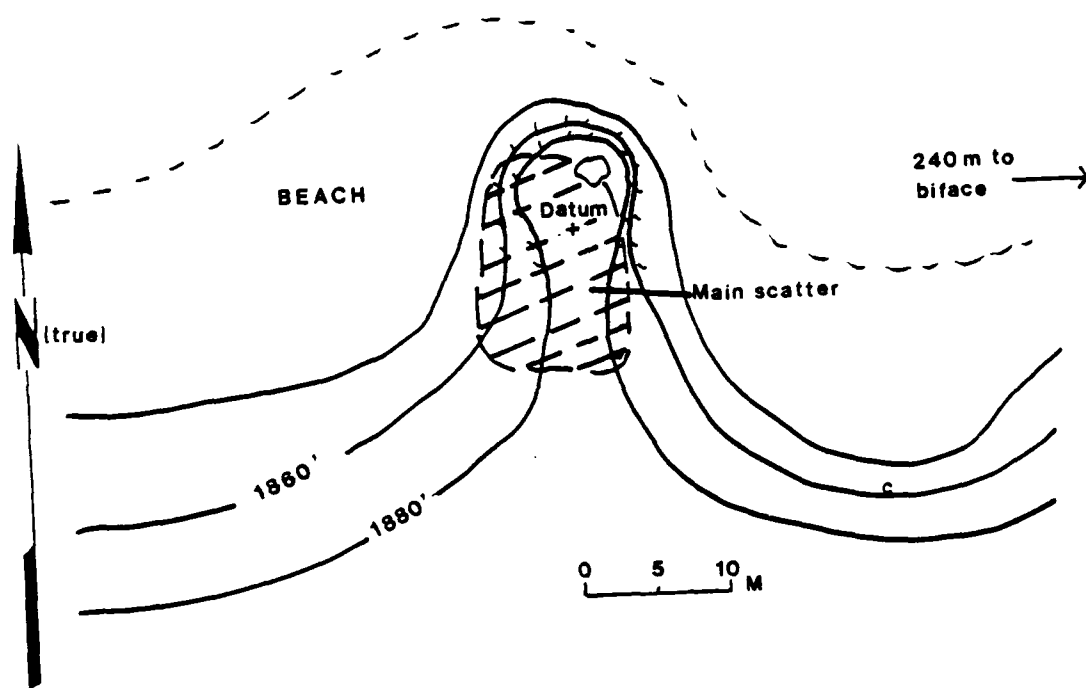


Figure 49. Plan of site 32DU632.

Site number: 32DU633 Site name:
County: Dunn. State: North Dakota. Site map: Figure 50
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Archaic - unspecified.
Elevation (m): 561.
Topographic position: On beach area around a small island formed by the damming of the Little Missouri River.
Site size: 7850m².
Strata and depth: Surficial.
Vegetation: Beach.
Ground surface visibility (%): 100%.
Nearest water: Little Missouri River - 200m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: This site is totally eroded out and lacks all integrity.
Surface collections (by whom and when): ALCWS 1985.
Collected artifacts: One Yonkee-like projectile point; two retouched flakes, a secondary flake, seven tertiary flakes and 24 fragments of KRF cobbles.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site lacks integrity and is not eligible for nomination to the National Register of Historic Places. No further work is recommended in that regard.
Remarks: Over 200 items of KRF were noted, with a few chert and brown chalcedony flakes also present. Much of the material is altered by wave action; otherwise it is unworked.

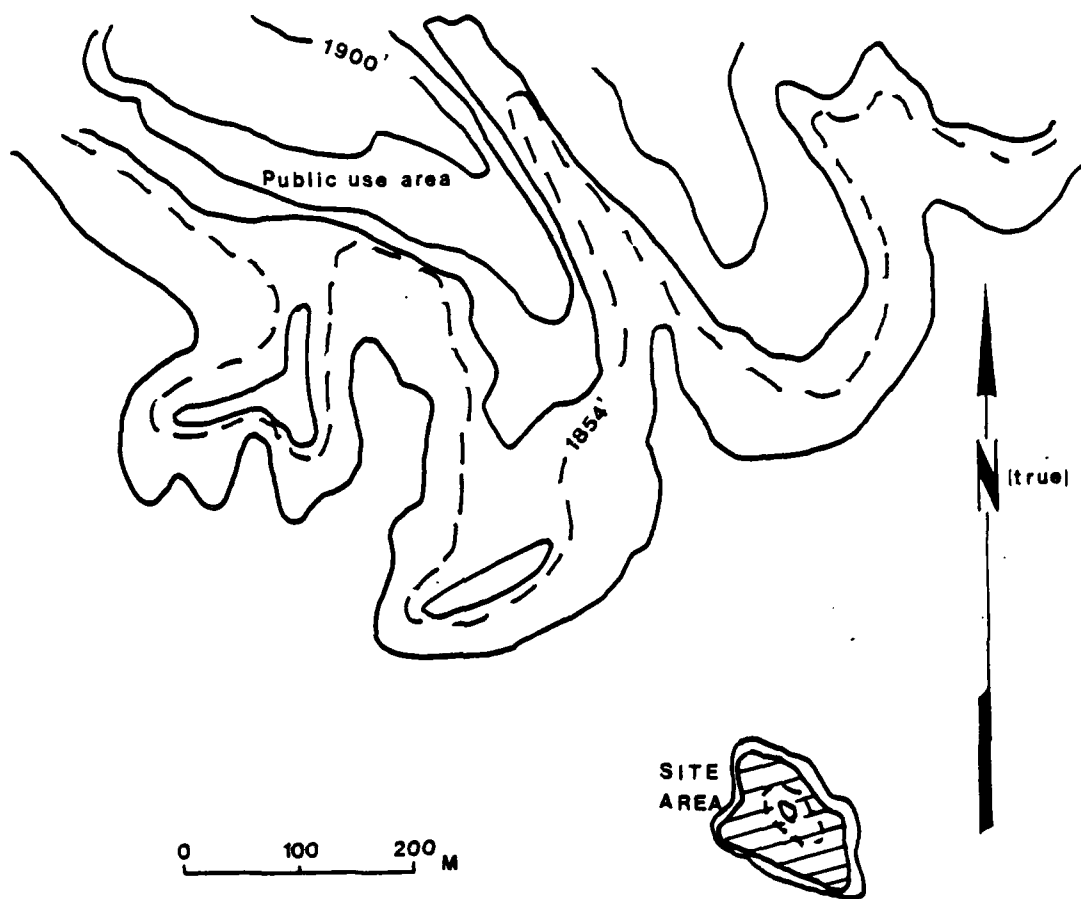


Figure 50. Plan of site 32DU633.

Site number: 32DU634 Site name:
County: Dunn. State: North Dakota. Site map: Figure 51
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 561.
Topographic position: The site is currently on an island within the Little Missouri River embayment area. The site is totally outwashed and the island is usually under water.
Site size: 7850m².
Strata and depth: Surficial.
Vegetation: Beach weeds and grasses.
Ground surface visibility (%): 100%.
Nearest water: Permanent stream - 360m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: Outwashed and usually inundated by the reservoir.
Surface collections (by whom and when): ALCWS 1985.
Collected artifacts: Biface fragment, KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site is outwashed, lacks integrity and is not eligible for nomination to the National Register of Historic Places. No further work is recommended in that regard.
Remarks: Over 300 items were observed; most were produced on KRF but some chert and brown chalcedony was also present. A single biface and some retouched flakes were the only worked items noted. Much of the material was water-rolled fragments; otherwise it was unworked.

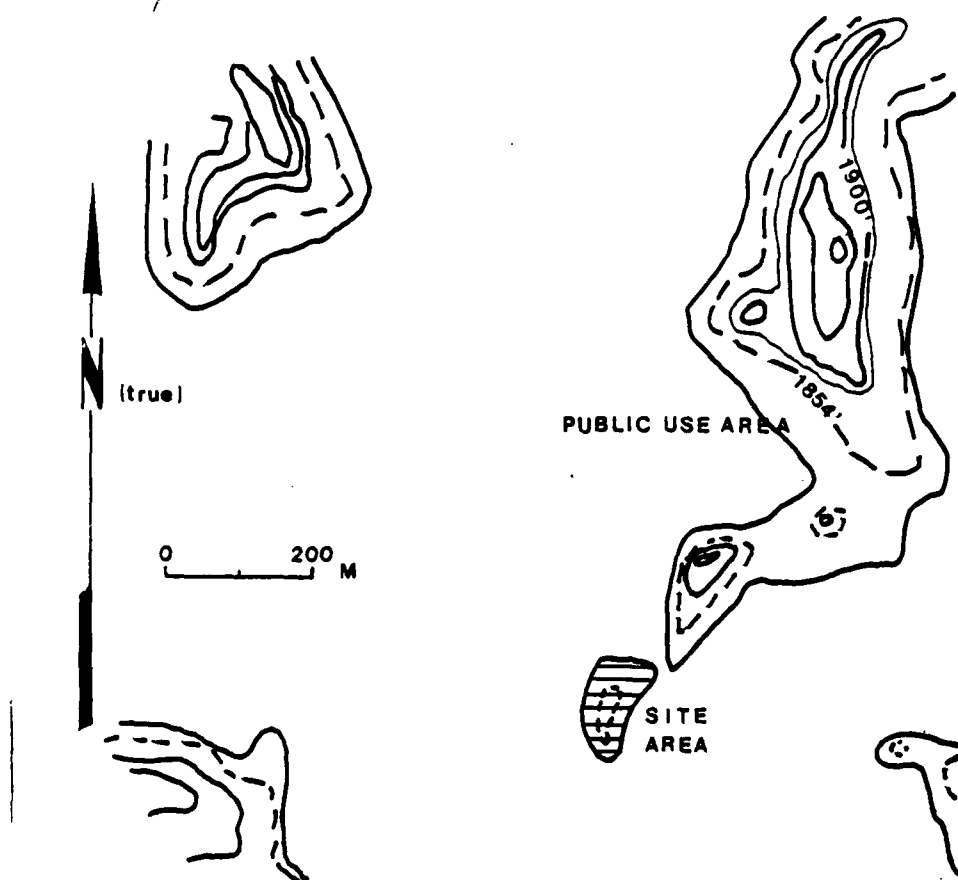


Figure 51. Plan of site 32DU634.

Site number: 32DU635 Site name:
County: Dunn. State: North Dakota. Site map: Figure 52
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the middle and lower slopes of a ridge spur.
Site size: 78m².
Strata and depth: Surficial.
Vegetation: Short grass, prickly pear cactus.
Ground surface visibility (%): 80%.
Nearest water: Jim Creek - 100m.
Site condition - impacts: Material was observed only on a steep slope
which was actively eroding. Presumably the material has washed out from
the ridge above and has lost all integrity of location.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: No further work is recommended.
Remarks: Twenty-five items of KRF were noted, including nodules,
flakes, shatter and cores.

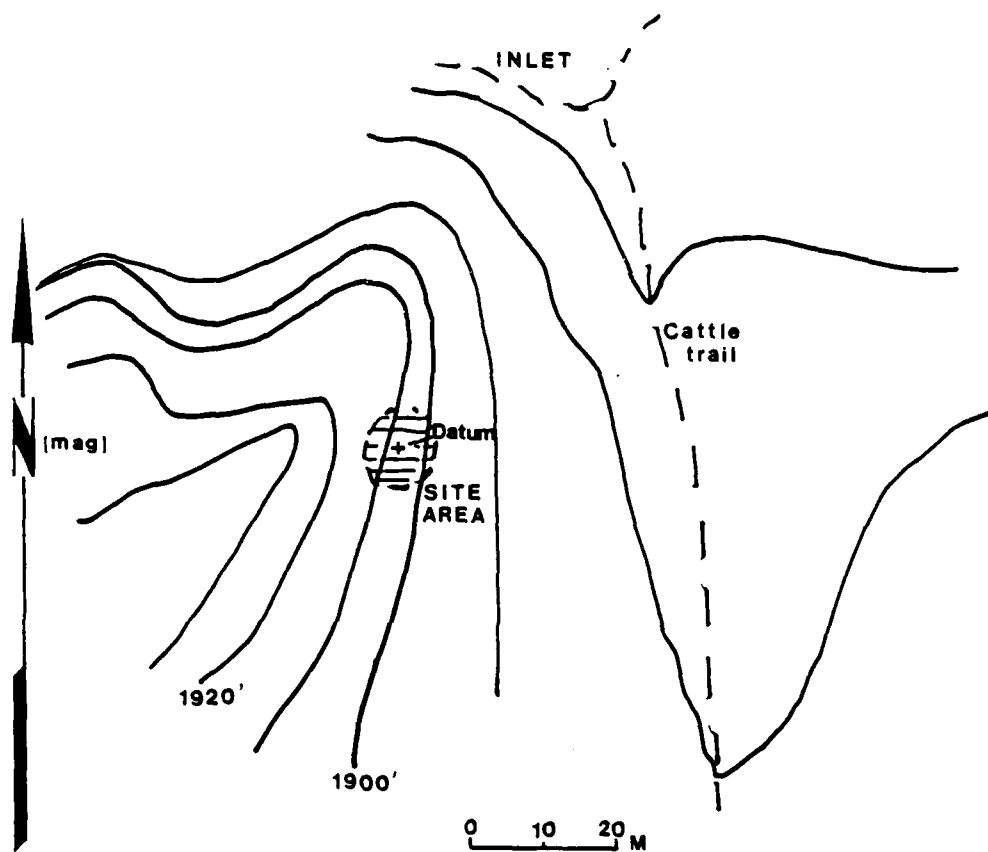


Figure 52. Plan of site 32DU635.

Site number: 32DU636 Site name:
County: Dunn. State: North Dakota. Site map: Figure 53
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the side of a saddle, just below the high
point of a knoll on a spur of a ridge and 10 meters from a vertical
cutbank.
Site size: 4m².
Strata and depth: Pit is 45cm deep.
Vegetation: Short grass, prickly pear cactus.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 150m.
Site condition - impacts: The general landscape has been altered by the
reservoir, but the site area has good integrity.
Surface collections (by whom and when): No material present.
Data plotted on site map: Pit, 2.25m x 1.7m and 45-50cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is threatened, the nature of the pit
should be determined.
Remarks: The pit may or may not be man-made, but the size and location
are appropriate for an eagle trapping pit. As such it has the potential
to inform on an activity that was important in prehistory.
Testing for National Register Eligibility (purpose of): To determine
components present and research potential.

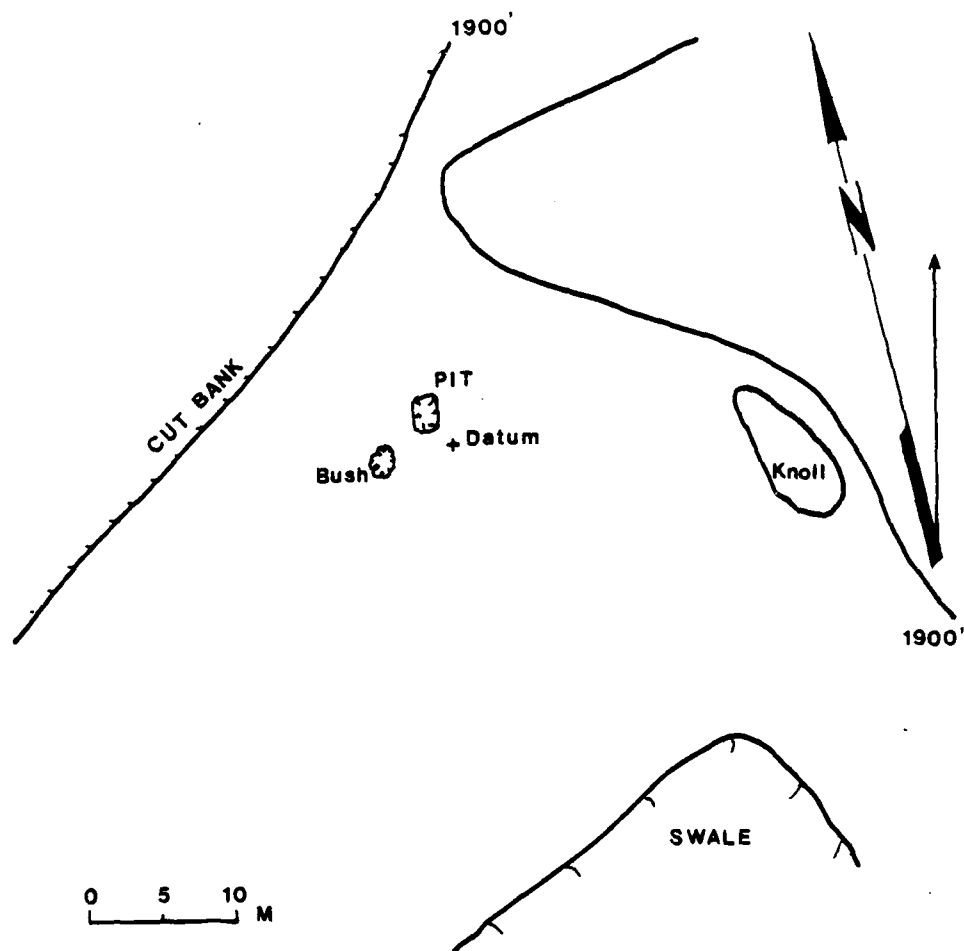


Figure 53. Plan of site 32DU636.

Site number: 32DU637 Site name:
County: Dunn. State: North Dakota. Site map: Figure 54
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the lower slopes of a ridge/terrace system at the confluence of Dry Creek and the reservoir.
Site size: 70,650m².
Strata and depth: Unknown.
Vegetation: Short grass/pasture grass, sagebrush and prickly pear cactus.
Ground surface visibility (%): 35% + cutbanks and beach areas.
Nearest water: Dry Creek - 10m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: The landscape has been altered by the reservoir. No material is exposed in the cutbanks. The site is a sparse scatter, but has the potential for buried deposits. Trails, animal burrows and slope erosion are also impacting the site.
Surface collections (by whom and when): None.
Data plotted on site map: Location of the eight flakes noted at this site.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because the site lacks any particular focus of cultural material, testing would probably reveal nothing additional to that which was identified by an inspection of the cutbanks - i.e., nothing. If the area is to be affected by impacts other than those already in force (reservoir), further evaluation should be undertaken. Otherwise, monitor the site area for signs of a focus of activity.
Remarks: This is a good location for a site, with potential for buried deposits. Despite only locating eight flakes, this area would be worth re-examining in the future.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

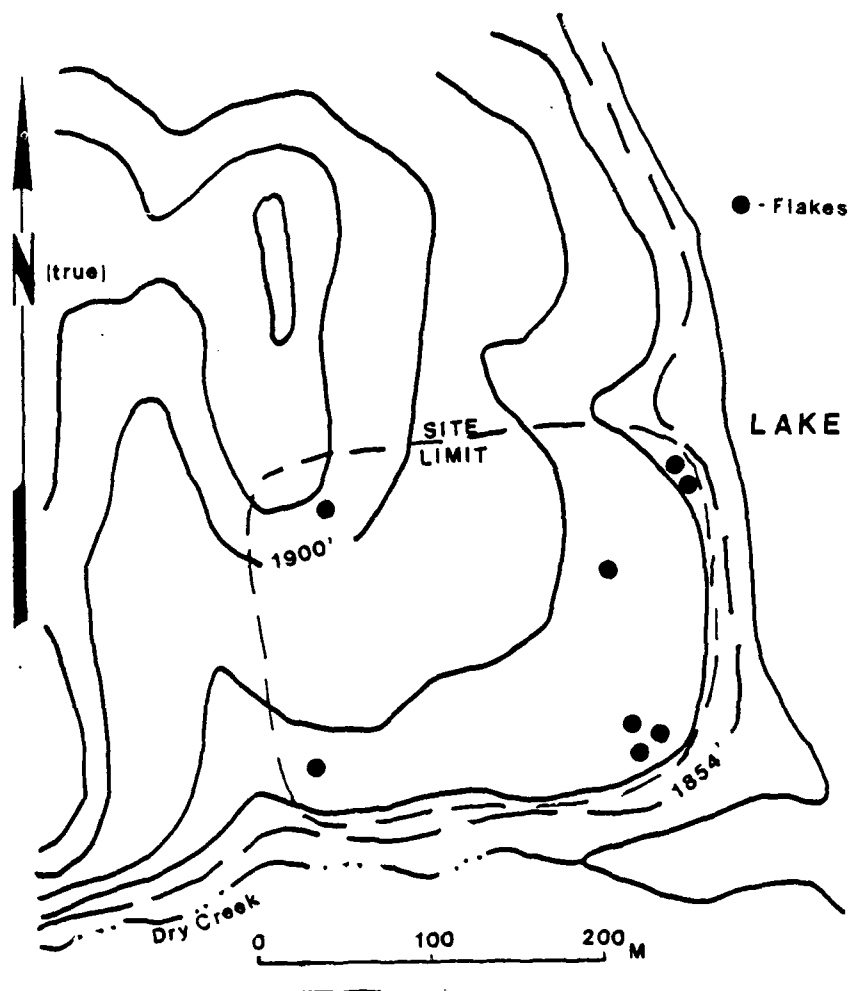


Figure 54. Plan of site 32DU637.

Site number: 32DU638 Site name:
County: Dunn. State: North Dakota. Site map: Figure 55
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Depression.
Component(s): Euro-American.
Elevation (m): 567.
Topographic position: On top of a low ridge or elongated rise adjacent to the Little Missouri River embayment.
Site size: 90m².
Strata and depth: Depression is 200cm in depth.
Vegetation: Pasture/short grass. Depression full of chokecherries and trees.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 220m.
Pool elevation (feet), when applicable: 1839' amsl.
Site condition - impacts: The location has been altered by the reservoir and whatever structure once existed here has been removed. Otherwise, the site has fair integrity.
Surface collections (by whom and when): No materials present.
Data plotted on site map: Depression aligned NE-SW, 9m long, 6.1m wide excluding a 1m wide berm.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is in no immediate danger. It probably represents the remains of a 1920s homestead and as such might contain information significant in understanding the homesteading period in this area. If the site is threatened, further evaluation would be recommended.
Remarks: The homestead of Bert and Mabel Sauvageau was in this area in 1920. A person identified as Rasmus Jensen, of Killdeer, was associated with the area from 1921-1924. A record dated April 17, 1944 records the distributions of the estate of Rasmus Jensen.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

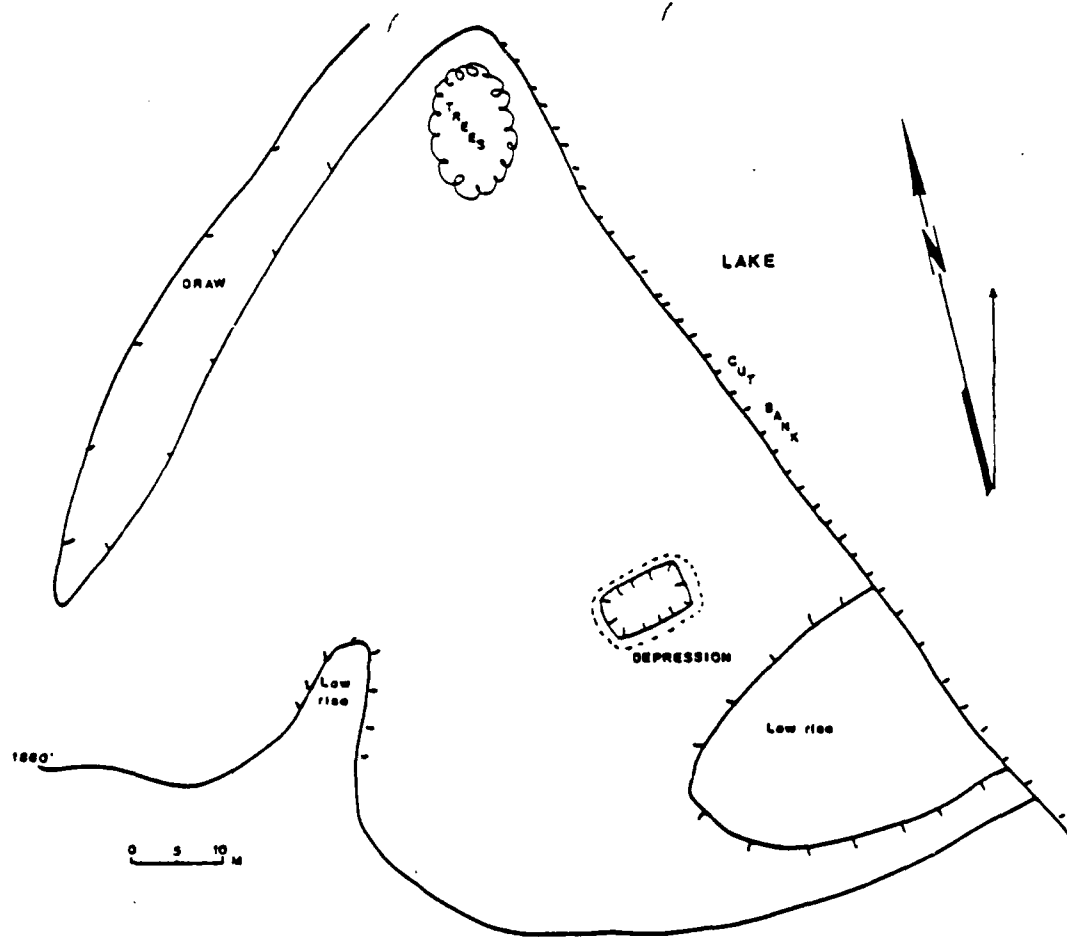
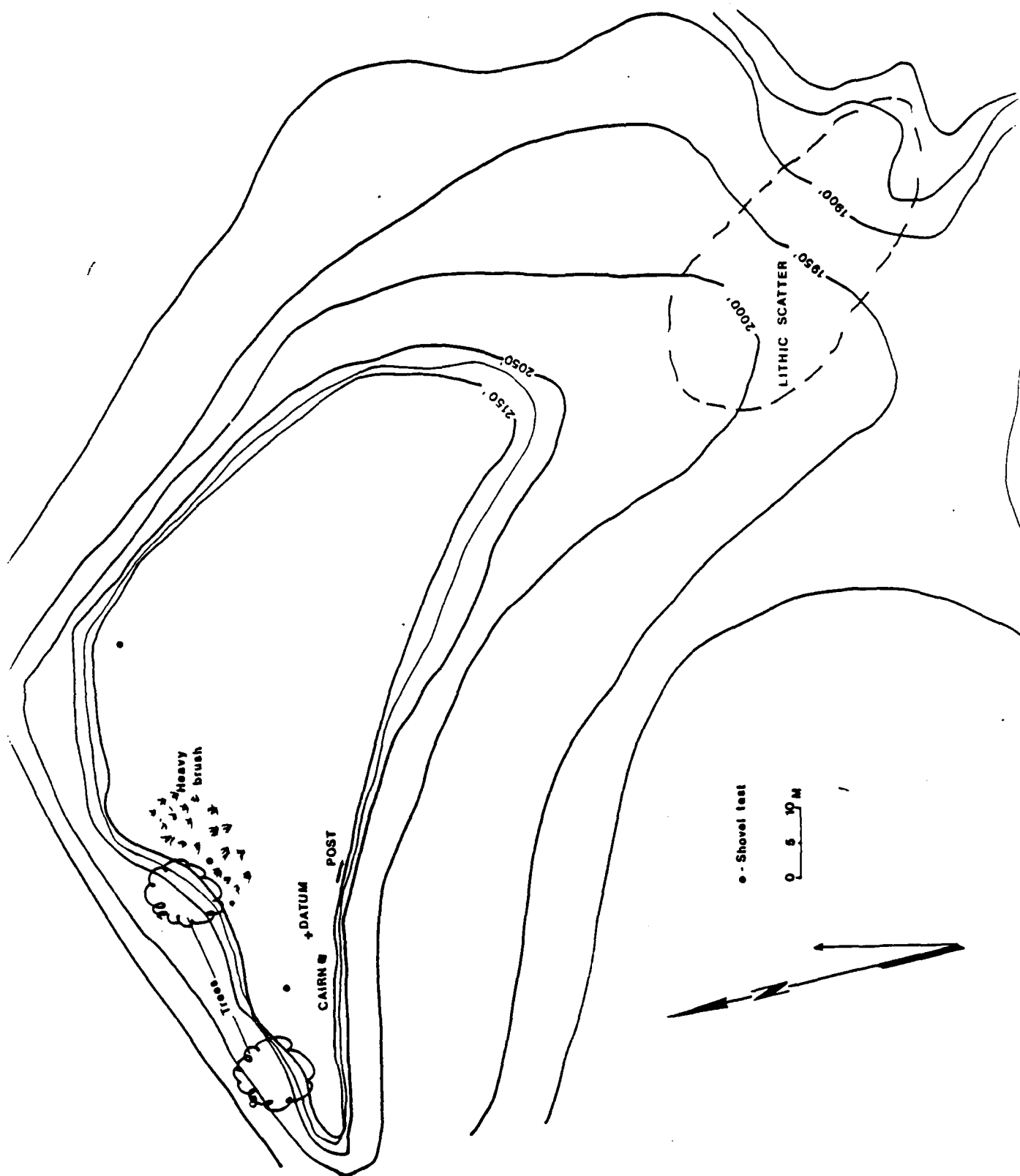


Figure 55. Plan of site 32DU638.

Site number: 32DU639 Site name:
County: Dunn. State: North Dakota. Site map: Figure 56
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cairn, wooden post, artifact scatter.
Component(s): Unknown.
Elevation (m): 669.
Topographic position: On a high butte top and sides.
Site size: 1000m².
Strata and depth: 0-10cm.
Vegetation: Spreading juniper, short grasses.
Ground surface visibility (%): 5% butte top, 100% slopes.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The cairn is relatively undisturbed, but the lithic material was all observed on steep eroding slopes.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn, post and three shovel tests on butte top; artifact scatter on slope.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The lithic scatter has no remaining integrity, but the cairn is intact. It may simply be a base for the nearby wooden post, and relate to signs for travelers in this area; however, it could be prehistoric and have some other significance. If the cairn is threatened, it should be further examined.
Remarks: The three shovel tests on the butte top hit bedrock at 15-20cm b.s. No subsurface cultural material was located or observed in situ in cutbanks and exposures around the butte.
Testing for National Register Eligibility (purpose of): To determine components present and research potential.



Site number: 32DU640 Site name:
County: Dunn. State: North Dakota. Site map: Figure 57
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the top and side of a spur on the undulating
ridges of the foothills of the Badlands above the Little Missouri River.
Site size: 2220m².
Strata and depth: 0-5cm; material eroding from immediately under the
surface.
Vegetation: Short grass/pasture with prickly pear cactus.
Ground surface visibility (%): 45-90%
Nearest water: Intermittent stream - 110m.
Site condition - impacts: Site actively eroding, but no material noted
in cutbanks. Fair to poor integrity.
Surface collections (by whom and when): ALCWS 1985.
Collected artifacts: A KRF transverse scraper.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site is not considered eligible for nomination to
the National Register of Historic Places and no further work is recom-
mended in this regard.
Remarks: Only 18 items of cultural material were observed in a very
exposed area. The soil is shallow in the cutbanks, and while there is
some potential for subsurface materials, the lack of a concentration
suggests the site is of extremely limited research potential.

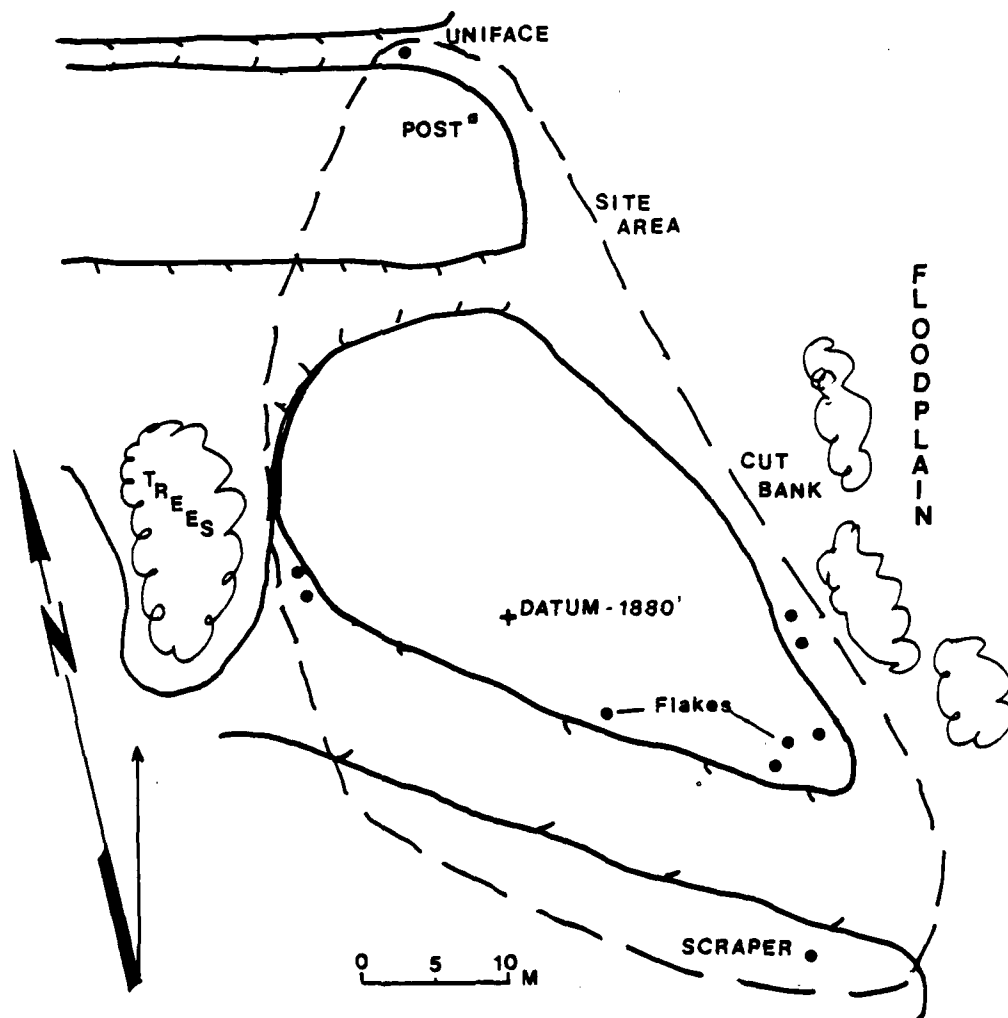


Figure 57. Plan of site 32DU640.

Site number: 32DU641 Site name:
County: Dunn. State: North Dakota. Site map: Figure 58
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 604.
Topographic position: On the top and side of a ridge with bedrock
outcrops.
Site size: 300m².
Strata and depth: Surficial.
Vegetation: Short grass.
Ground surface visibility (%): 75%.
Nearest water: Intermittent stream - 110m.
Site condition - impacts: The ridge top has no soil depth. The site is
surficial on an eroding surface with no real integrity.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is not considered eligible for nomination to
the National Register of Historic Places, and no further work is recom-
mended in this regard.
Remarks: Only eight flakes of KRF were noted in this area, and all were
in eroded contexts. The site has no further research potential.

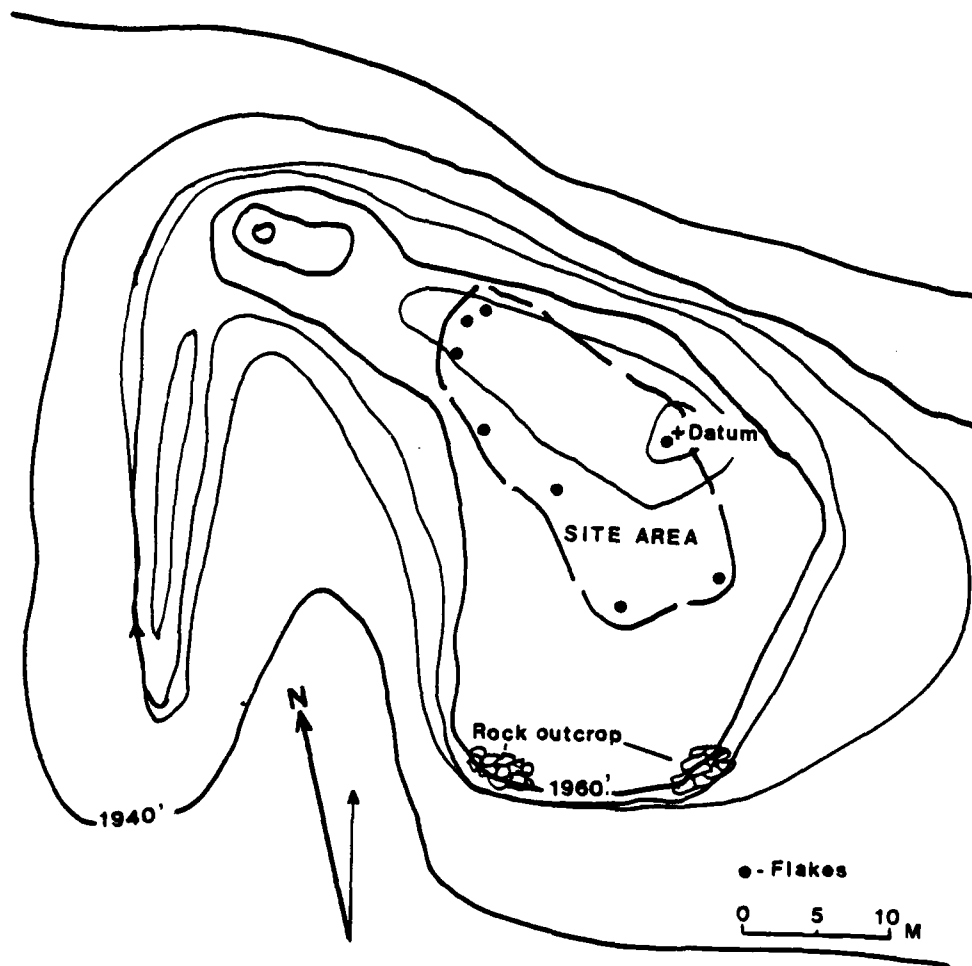


Figure 58. Plan of site 32DU641.

Site number: 32DU642 Site name:
County: Dunn. State: North Dakota. Site map: Figure 59
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: Located on two low knolls that form a spur to a
ridge system to the north.
Site size: 1765m².
Strata and depth: Surficial.
Vegetation: Short grass.
Ground surface visibility (%): 50%.
Nearest water: Intermittent stream - 30m.
Site condition - impacts: All materials were located in eroding
contexts in very shallow soil. The integrity is poor.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is not considered eligible for nomination to
the National Register of Historic Places and no further work is recom-
mended in this regard.
Remarks: Six flakes and a shatter fragment were the only items noted at
this site. There is no further research potential.

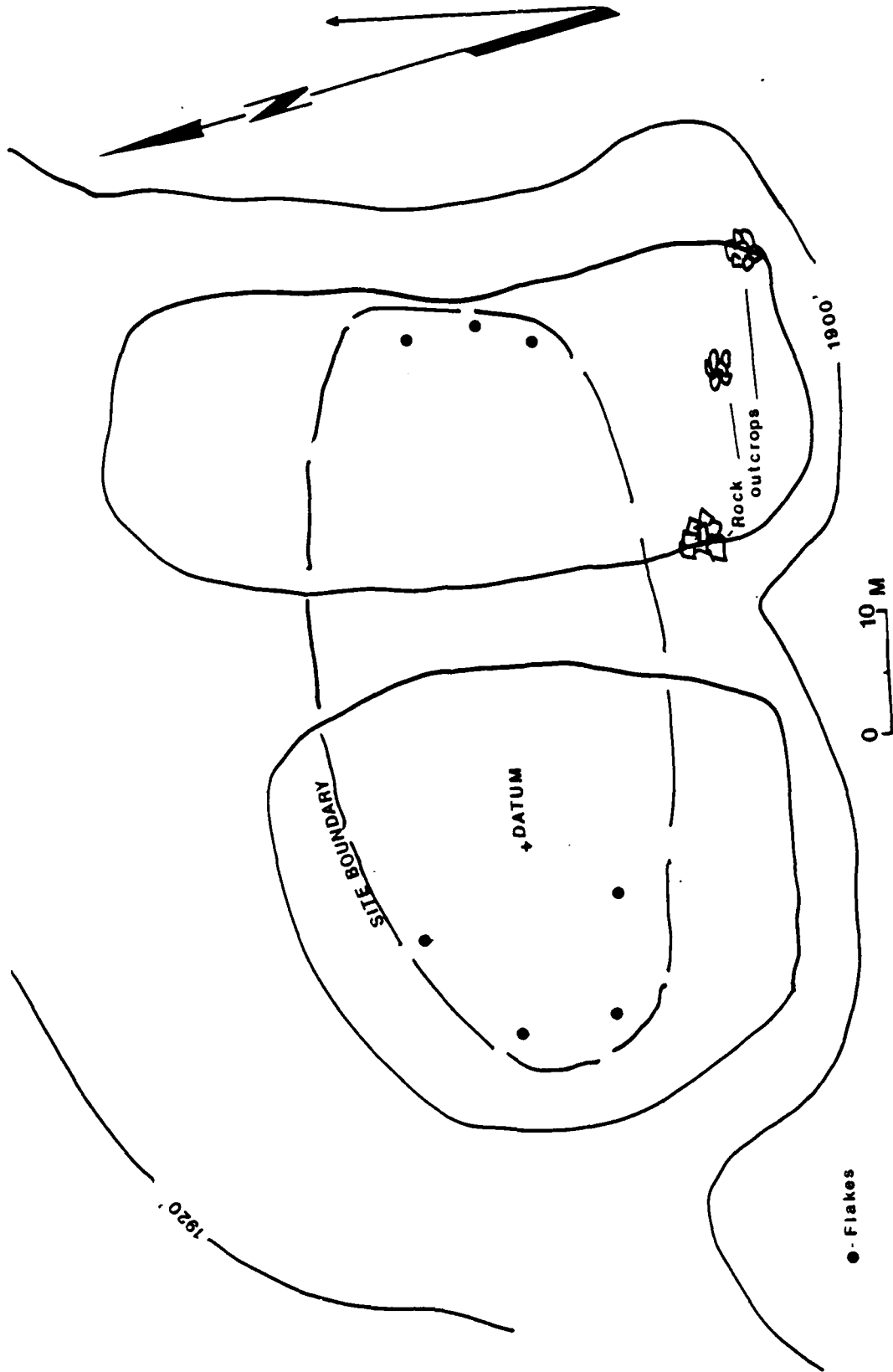


Figure 59. Plan of site 32DU642.

Site number: 32DU643 Site name:
County: Dunn. State: North Dakota. Site map: Figure 60
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On top of a terrace above the Little Missouri floodplain.
Site size: 200m².
Strata and depth: 0-10cm based on material exposed in prairie dog mounds.
Vegetation: Pasture - denuded by prairie dogs.
Ground surface visibility (%): 90%.
Nearest water: Little Missouri River - 500m.
Site condition - impacts: All items were recorded out of context and none were exposed in cutbanks. The material scatter is very sparse, but there is a limited potential for buried material. Overall the site has fair to poor integrity.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If this area is to be further impacted, testing should be undertaken to determine if buried material is present. If it is present, its extent should be determined.
Remarks: Only nine flakes and a biface of KRF were noted in this site area, but the terrace location seems ideal for a site. The lack of material in the cutbanks and most prairie dog burrows suggests there is little potential for a major site at this location, but further testing should be undertaken to confirm this assessment if the area is to be disturbed.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

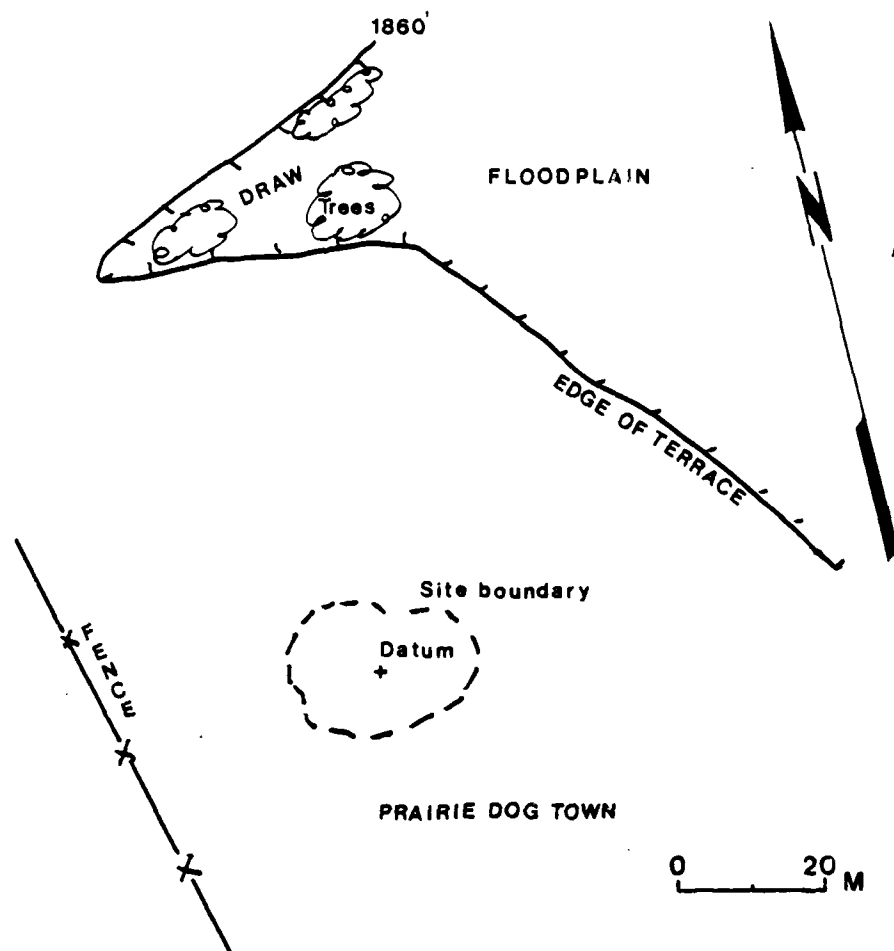


Figure 60. Plan of site 32DU643.

Site number: 32DU644 Site name:
County: Dunn. State: North Dakota. Site map: Figure 61
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter and cairn.
Component(s): Unknown.
Elevation (m): 581.
Topographic position: On a boulder-strewn ridge knoll and slopes.
Site size: 200m².
Strata and depth: Surficial, 0-5cm.
Vegetation: Short grass and prickly pear cactus.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 260m.
Site condition - impacts: The site is undergoing moderate slope wash
and most items were eroded out of the shallow soil. The cairn, if
artificial, would have some integrity.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn and scatter. Cairn is a setting of six
stones suggestive of being artificial, but this statement could not be
confirmed.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is further threatened with disturbance,
the nature of the stone setting should be investigated.
Remarks: Thirty-four lithic items were noted here, most of KRF,
including a biface and two retouched flakes.
Testing for National Register Eligibility (purpose of): To determine
depth, components present, research potential and integrity -
specifically of the stone setting.

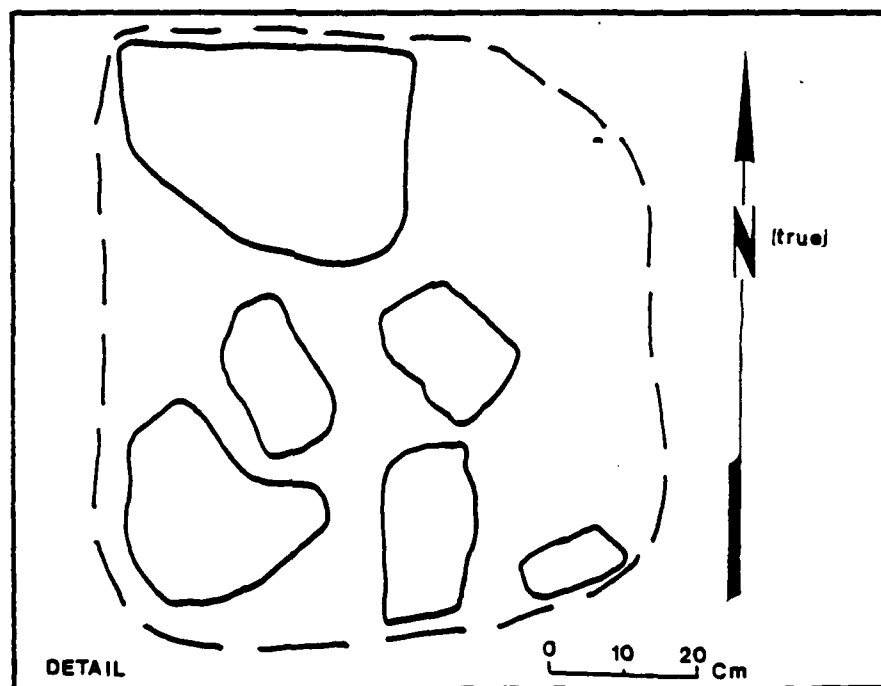
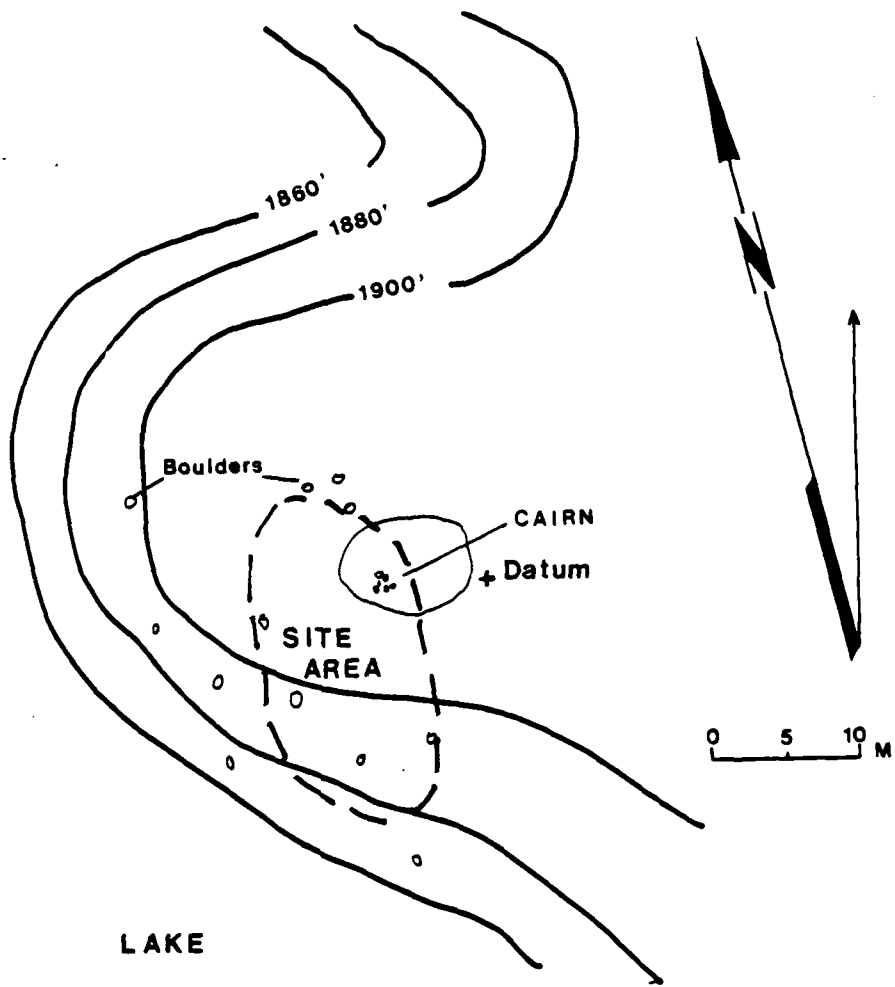


Figure 61. Plan of site 32DU644, with detail of cairn.

Site number: 32DU645 Site name:
County: Dunn. State: North Dakota. Site map: Figure 62
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the bottom and sides of a ridge system on the left (east) bank of an intermittent stream that drains into Squaw Creek.
Site size: 11,000m².
Strata and depth: 0-10cm based on depth of soil in cutbank.
Vegetation: Shortgrass, prickly pear and little bluestem.
Ground surface visibility (%): 10%; plus 100% in the cowpath, several erosional areas and cutbank.
Nearest water: Intermittent stream - 1m.
Site condition - impacts: Cultural materials were exposed where areas were eroding - indicating potential for buried deposits. However, no material was noted in the cutbank, where soil was only 10cm in depth. Integrity is fair to good.
Surface collections (by whom and when): None.
Data plotted on site map: 1=KRF tertiary flake; 2=one tertiary flake, one retouched flake and one tabular core of KRF; 3=one KRF tertiary flake; 4=one KRF tertiary flake; 5=two KRF flake fragments; 6=KRF biface; 7=KRF secondary flake; 8=KRF secondary flake.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If disturbances to this site area increase, it should be tested for National Register of Historic Places eligibility.
Remarks: Only 11 items were noted in the site area, but all were in erosional areas. The soil depth is only 10cm, but there are likely to be additional materials shallowly buried in this area. The lack of concentrations of material, however, suggests this site has a very limited research potential. Further testing would be needed to confirm this assessment.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

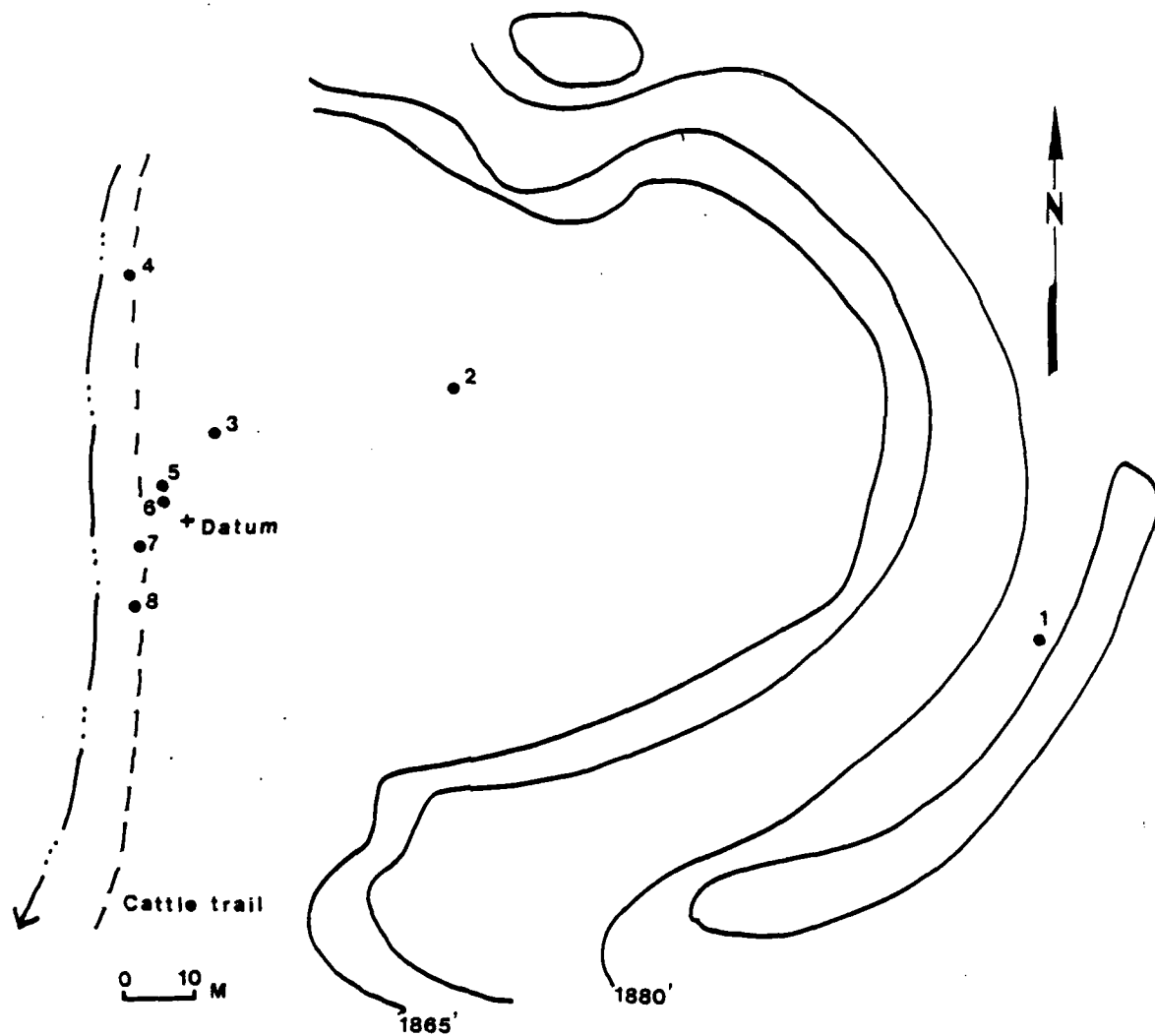


Figure 62. Plan of site 32DU645.

Site number: 32DU646 Site name:
County: Dunn. State: North Dakota. Site map: Figure 63
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter and prehistoric quarry pits.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On the side and base of a hill or knoll.
Site size: 300m².
Strata and depth: Surficial - soil depth ca. 10cm.
Vegetation: Buffaloberry, yucca and shortgrass.
Ground surface visibility (%): 65%.
Nearest water: Squaw Creek - 145m.
Site condition - impacts: Much slope and surface erosion has occurred; otherwise integrity is fair.
Surface collections (by whom and when): None.
Data plotted on site map: 1=KRF shatter; 2=KRF secondary flake; 3=cut 3.5m x 2m; 4=cut 2m x 1m.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is not considered eligible for nomination to the National Register of Historic Places and no further work is recommended in this regard.
Remarks: Only two lithic items were noted despite excellent visibility and shallow and eroded soils. There is no indication that the quarrying activity can be further researched at this site. A reviewer noted that a small-scale, one time quarrying activity area might be just the type of KRF quarry site wherein answers to some of the research questions raised by complex, multiple component KRF quarry sites may be worked out. That statement is true, but in this case, the surveyors feel that the site in question does not have sufficient research potential to be considered for nomination to the National Register of Historic Places. This does not mean, however, that the site has absolutely no value in future KRF procurement studies - only that its value is considered limited.

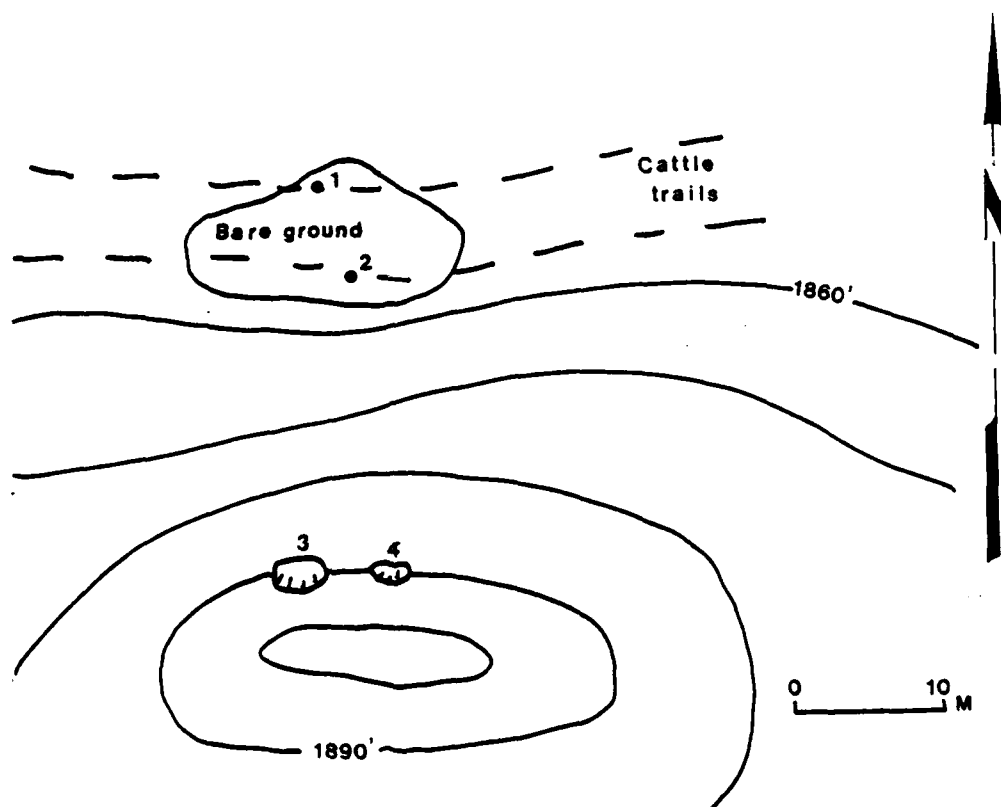


Figure 63. Plan of site 32DU646.

Site number: 32DU647 Site name:
County: Dunn. State: North Dakota. Site map: Figure 64
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn and artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of a ridge saddle.
Site size: 2400m².
Strata and depth: Material eroding out of shallow (0-10cm deep) soil.
Vegetation: Short grass, yucca, prickly pear.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 45m.
Site condition - impacts: Cairn appears undisturbed, but artifact
scatter subject to slope and surface erosion.
Surface collections (by whom and when): None.
Data plotted on site map: 1=KRF tertiary flake; 2=KRF secondary flake
and shatter; 3=KRF tertiary flake; 4=KRF tested cobble.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If this area is to be disturbed to any degree, deter-
mine the nature of the cairn.
Remarks: Only five KRF items were noted here, and the site has limited
research potential. However, the cairn needs to be evaluated if it is
threatened with destruction.
Testing for National Register Eligibility (purpose of): To determine
components present, research potential and integrity of the cairn.

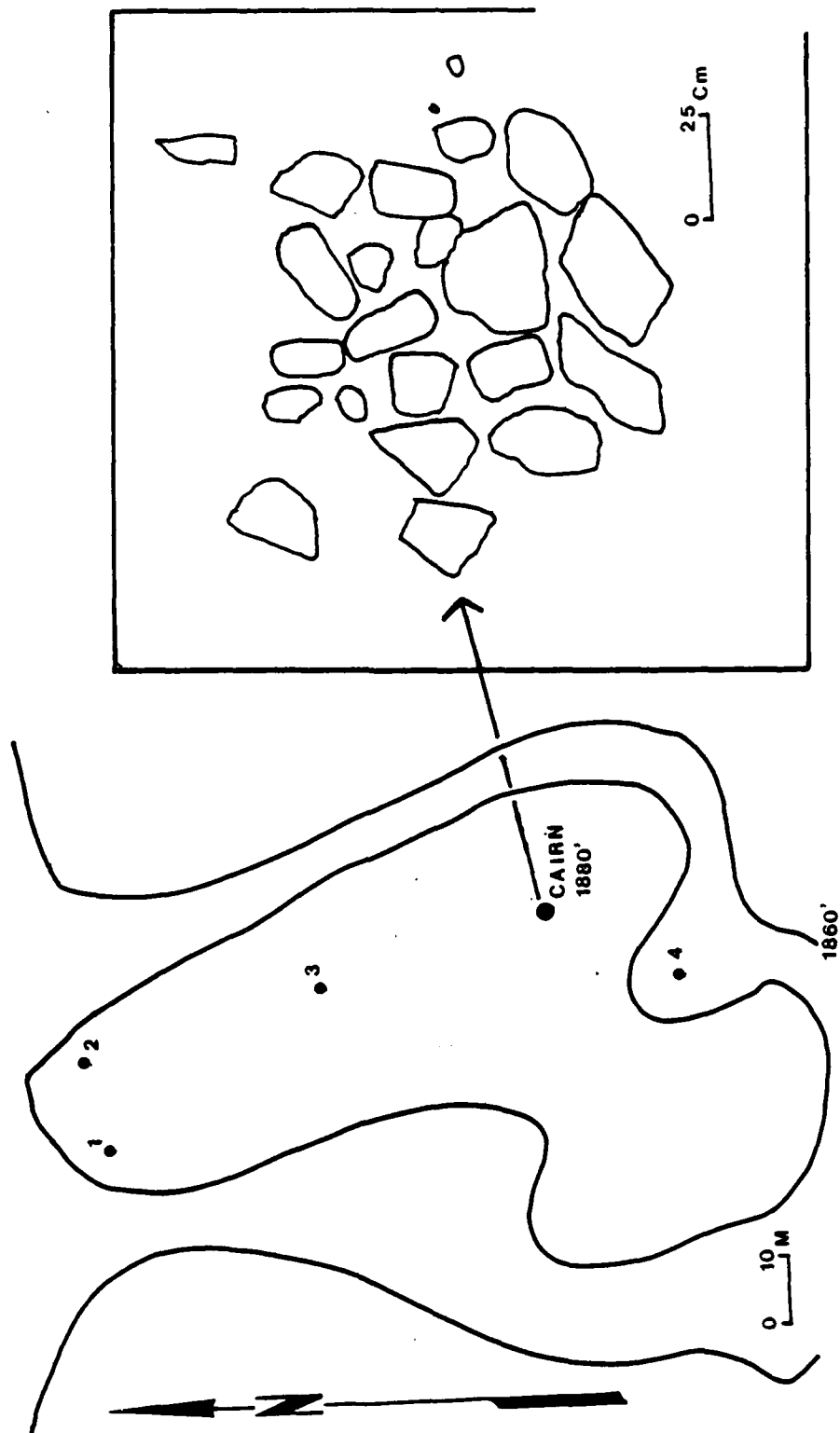


Figure 64. Plan of site 32DU647, with detail of cairn.

Site number: 32DU648 Site name:
County: Dunn. State: North Dakota. Site map: Figure 65
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: On top of a rocky outcrop on top of a ridge.
Site size: 4m².
Strata and depth: Surficial.
Vegetation: None.
Ground surface visibility (%): 100%.
Nearest water: Squaw Creek - 360m.
Site condition - impacts: Appears undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 3 ft. (1m) high and 1-1½m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Monitor the erosion of this cairn. If it is likely to be destroyed, investigate further to determine what, if any, additional information can be derived from it.
Remarks: As the cairn is set on bedrock, it is unlikely that there is anything "buried" under it. However, some cultural material may be located within the cairn, and its construction might be able to be recorded. Very probably this is a marker cairn for travelers.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

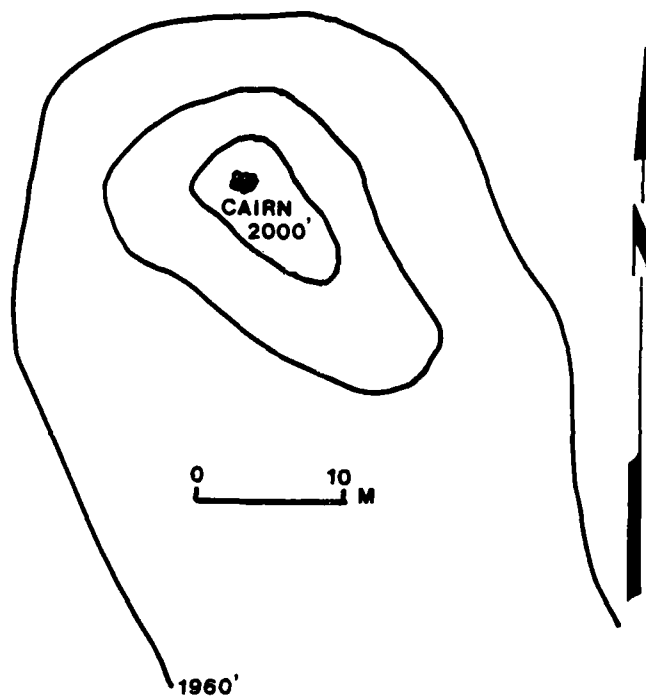


Figure 65. Plan of site 32DU648.

Site number: 32DU649 Site name:
County: Dunn. State: North Dakota. Site map: Figure 66
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 622.
Topographic position: On top of two knolls on top of a ridge, with
material between the knolls.
Site size: 23,000m².
Strata and depth: Surficial.
Vegetation: Bare ground, yucca, prickly pear, little bluestem, grasses.
Ground surface visibility (%): 60-100%.
Nearest water: Intermittent stream - 140m.
Site condition - impacts: Much slope and surface erosion has occurred
and there is little soil development here.
Surface collections (by whom and when): None.
Data plotted on site map: Site area with two concentrations of material
- A and B.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site lacks integrity and is not considered
eligible for nomination to the National Register of Historic Places. No
further work is recommended in that regard.
Remarks: Over 25 items were noted in Concentration A and over 50 in
Concentration B; all were produced on KRF. All of the items were eroded
out of context.

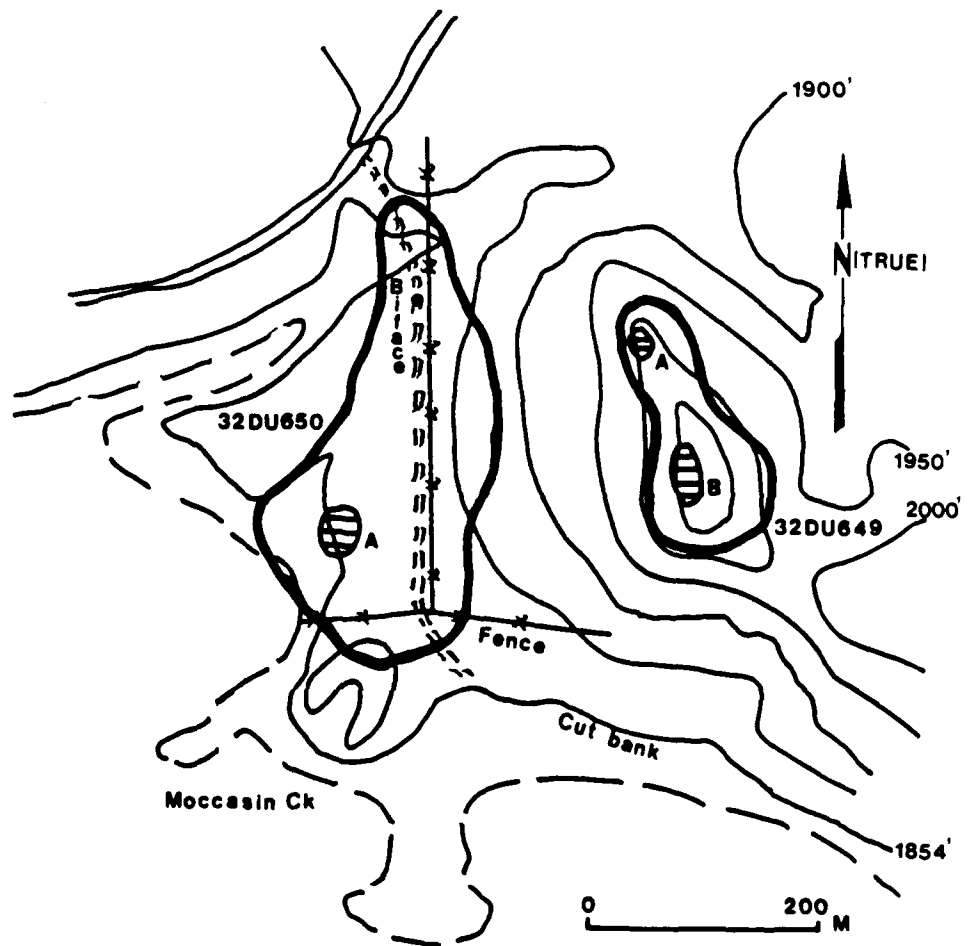


Figure 66. Plan of site 32DU649.

Site number: 32DU650 Site name:
County: Dunn. State: North Dakota. Site map: Figure 67
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the side of a ridge and base of a ridge slope drainage.
Site size: 72,000m².
Strata and depth: Unknown - surficial and shallow burial of material.
Vegetation: Short grass, sagebrush.
Ground surface visibility (%): 5-85%.
Nearest water: Intermittent stream - adjacent.
Site condition - impacts: The area is subject to slope erosion. Specific impacts from tracks, fences and cattle are occurring.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: A lateral scraper, a biface fragment and two early stage bifaces, all of KRF.
Data plotted on site map: A=Main concentration of material.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: There are a variety of raw materials and tool types at this site, and the potential for buried deposits. The site has additional research potential which should be evaluated if the area is subject to additional impacts.
Remarks: Over 800 cultural items were observed. The items were produced on the following raw materials: KRF, chert, chalcedony, Tongue River silica, quartzite, granite and porcelanite. The material concentration appears to have been artificially produced by movement of items downslope, and exposure by cattle.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

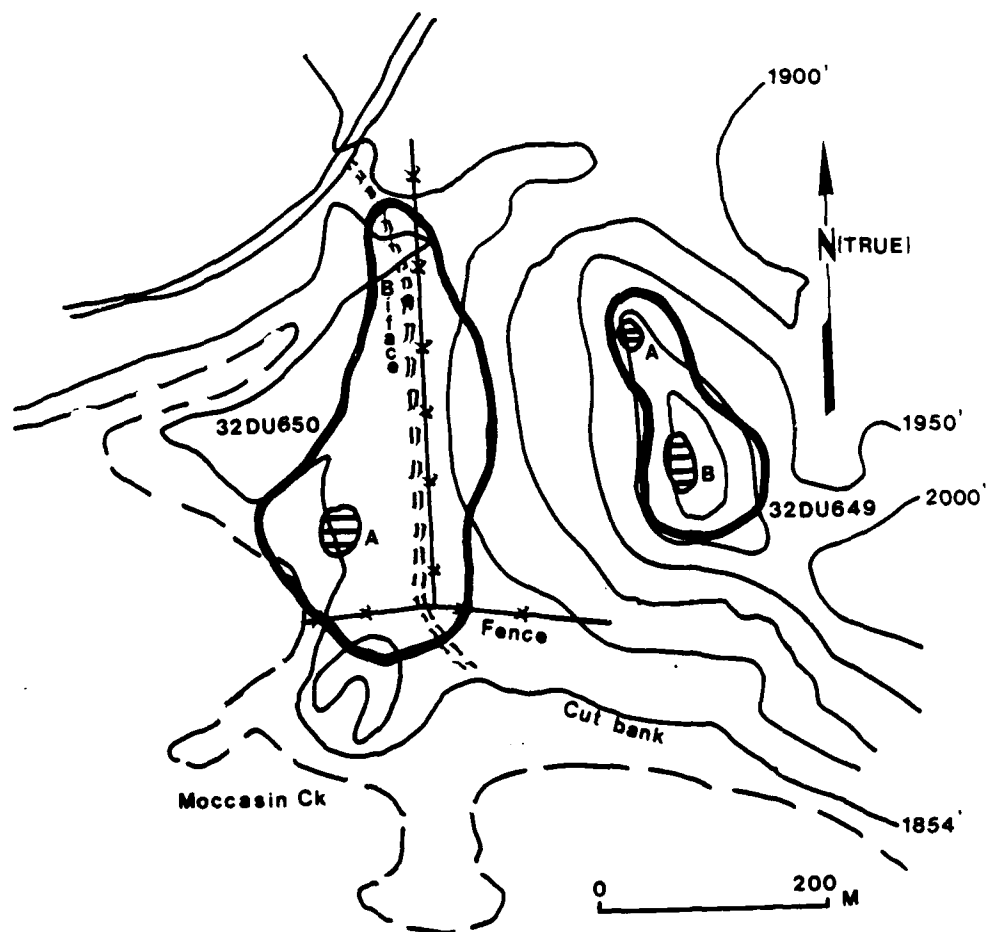


Figure 67. Plan of site 32DU650.

Site number: 32DU651 Site name:
County: Dunn. State: North Dakota. Site map: Figure 68
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter and cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a hilltop and on the ridges around the hill/knoll.
Site size: 2100m².
Strata and depth: Appears generally surficial.
Vegetation: Bare ground, short grasses and prickly pear.
Ground surface visibility (%): 15-60%.
Nearest water: Moccasin Creek - 40m.
Site condition - impacts: The cairn appears to be undisturbed, but the other cultural materials are in eroded contexts. A nearby road cut may have impacted the site.
Surface collections (by whom and when): None.
Data plotted on site map: 1=rock cairn (8 stones), 40cm N-S x 50cm E-W; 2=sparse scatter of KRF flakes; 3=KRF shatter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Further analysis if the site is to be impacted.
Remarks: Only five lithic items were noted in the vicinity of the cairn. The soil is very shallow and the site appears to have limited research potential beyond attempting to determine the nature of the cairn.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity - specifically of the cairn.

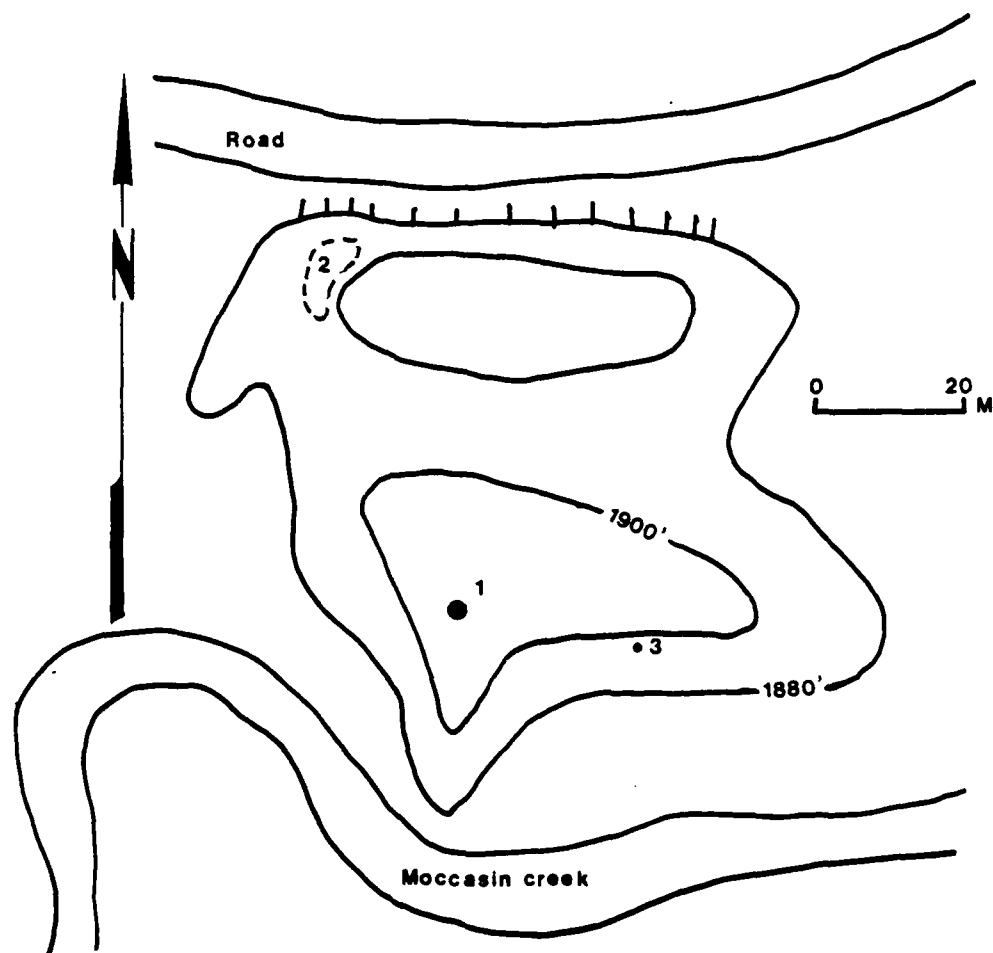


Figure 68. Plan of site 32DU651.

Site number: 32DU652 Site name:
County: Dunn. State: North Dakota. Site map: Figure 69
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 568.
Topographic position: On the side of a hill on which several springs
are visible today.
Site size: 50,000m².
Strata and depth: Unknown, but likely very surficial.
Vegetation: Bare ground, sparse grasses.
Ground surface visibility (%): 25-100%.
Nearest water: Moccasin Creek - 50m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: Slope wash and reservoir erosion have greatly
impacted the site. No in situ material was observed.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Two early stage KRF bifaces.
Data plotted on site map: Site area with the area of material concen-
tration indicated.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site appears to have poor integrity, but is fairly
typical of sites in this area. An analysis of the impacts to the site
and its current research potential should be undertaken before it is
determined ineligible for nomination to the National Register of Histor-
ic Places.
Remarks: Over 150 lithic items were observed here; none were in situ.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

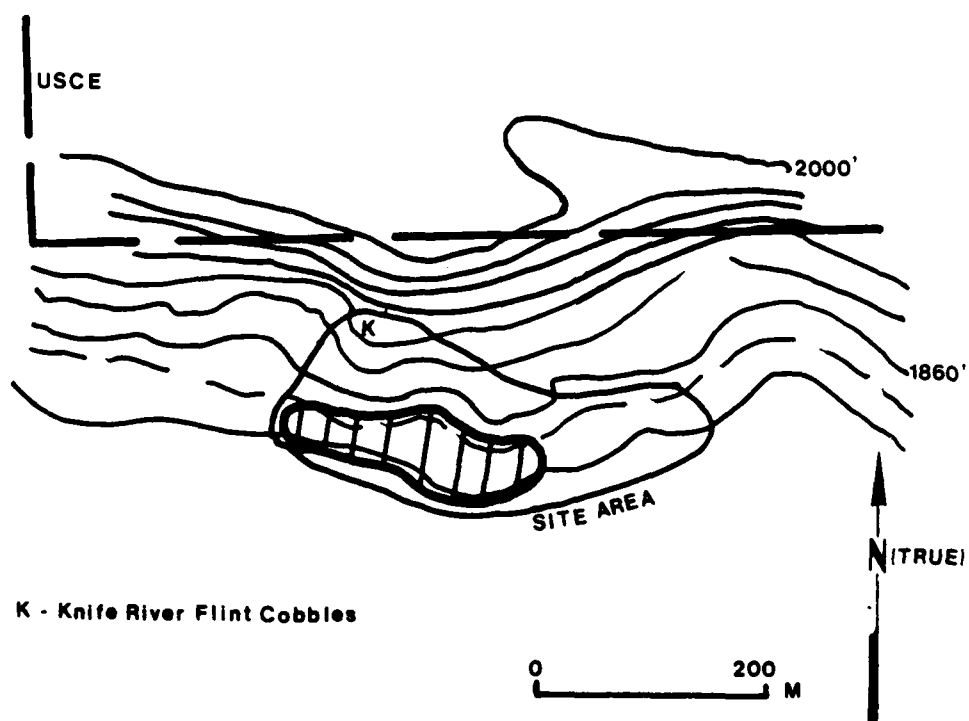


Figure 69. Plan of site 32DU652.

Site number: 32DU653 Site name:
County: Dunn. State: North Dakota. Site map: Figure 70
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: On the side of a ridge, currently the beach
formed by the reservoir.
Site size: 3300m².
Strata and depth: Surficial.
Vegetation: Bare ground, sparse grasses.
Ground surface visibility (%): 15-100%.
Nearest water: Moccasin Creek - 50m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: Slope and reservoir erosion have outwashed
this site. No in situ materials were observed in the cutbank.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is outwashed and not considered eligible for
nomination to the National Register of Historic Places. No further work
is recommended in this regard.
Remarks: About 35 items of KRF were noted on the beach.

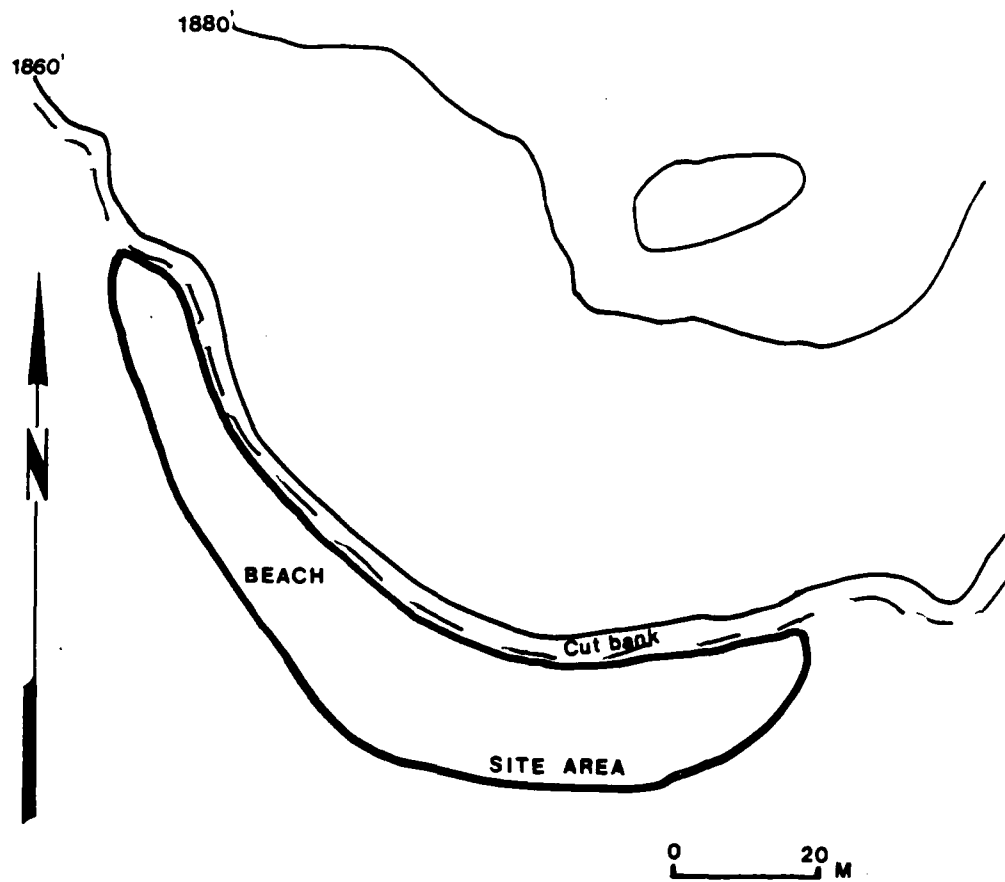


Figure 70. Plan of site 32DU653.

Site number: 32DU654 Site name:
County: Dunn. State: North Dakota. Site map: Figure 71
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: On top of a low hill/or knoll - currently an island in the reservoir.
Site size: 1050m².
Strata and depth: Appears largely surficial.
Vegetation: None.
Ground surface visibility (%): 100%.
Nearest water: Moccasin Creek - 60m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: The site is totally eroded out and inundated at normal pool level.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: A core and a retouched flake of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site is outwashed and apparently has no in situ material. However, the density of the material is such that an examination of the artifacts present might have some research value, since this site is one of several similar site types in the area. The site is not, however, considered eligible for nomination to the National Register of Historic Places.
Remarks: Over 800 items of lithic material were noted here, all of KRF. A bison vertebral bone was also present.

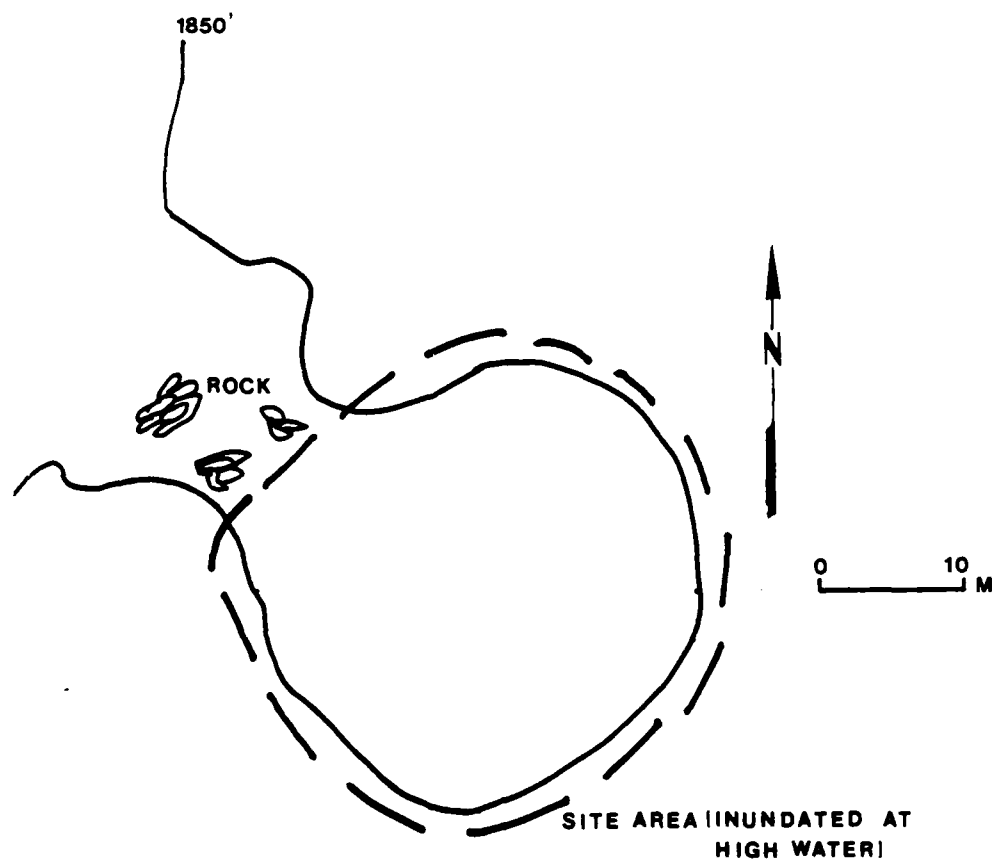


Figure 71. Plan of site 32DU654.

Site number: 32DU655 Site name:
County: Dunn. State: North Dakota. Site map: Figure 72
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Stone circle and artifact scatter.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On top of a truncated, flat-topped hill/knoll 20m in diameter.
Site size: 225m².
Strata and depth: 0-10cm, based on erosional indicators.
Vegetation: Bare ground, sparse grasses.
Ground surface visibility (%): 90%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The site is at the focus of a cattle wallowing area.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Make this area off limits to cattle or undertake test excavations to determine the site's research potential and integrity.
Remarks: Given good integrity, this site would be significant. As it exists today it is difficult to accurately assess what the site really was. Impacts (cattle) should be stopped and/or the site examined further to determine whether any significant data can be salvaged.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

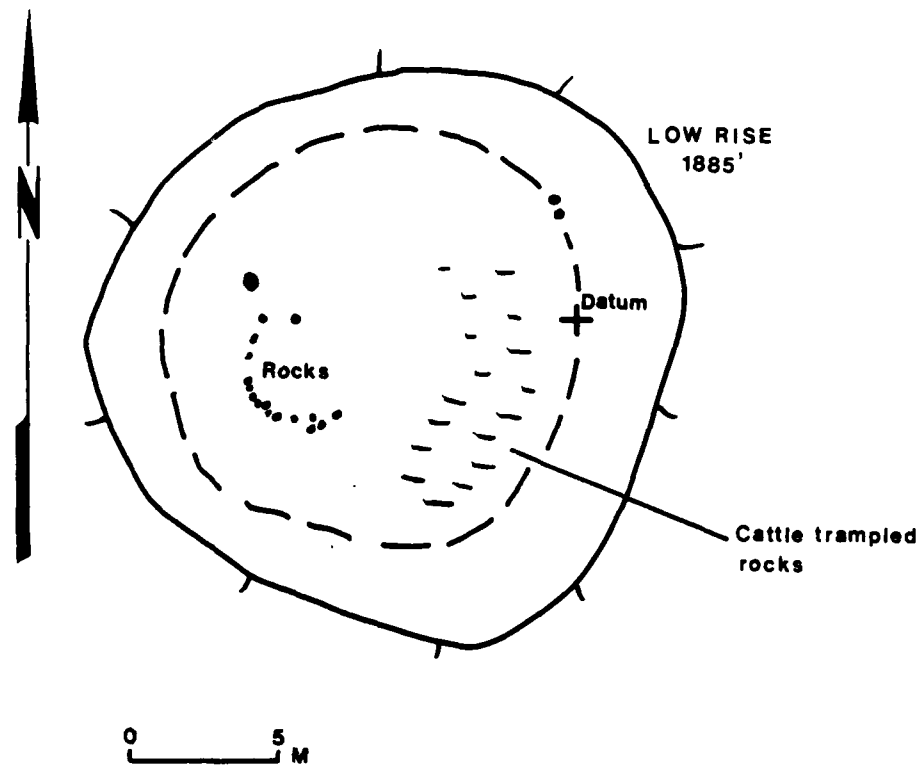


Figure 72. Plan of site 32DU655.

Site number: 32DU656 Site name:
County: Dunn. State: North Dakota. Site map: Figure 73
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 615.
Topographic position: On top of a ridge at a point where the ridge top
narrows.
Site size: 200m².
Strata and depth: Surficial.
Vegetation: Bare ground, sparse bunch grass, wild parsley.
Ground surface visibility (%): 75%.
Nearest water: Intermittent stream - 170m.
Site condition - impacts: Erosion has removed almost all soil cover on
this ridge. The site is a surface manifestation only.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Preform reduction blank fragment of KRF.
Data plotted on site map: Shaded site area.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The lack of integrity and limited research potential
make this site ineligible for nomination to the National Register of
Historic Places. No further work is recommended in that regard.
Remarks: Over 100 items of KRF, mostly flakes, were noted on this
eroded ridge.

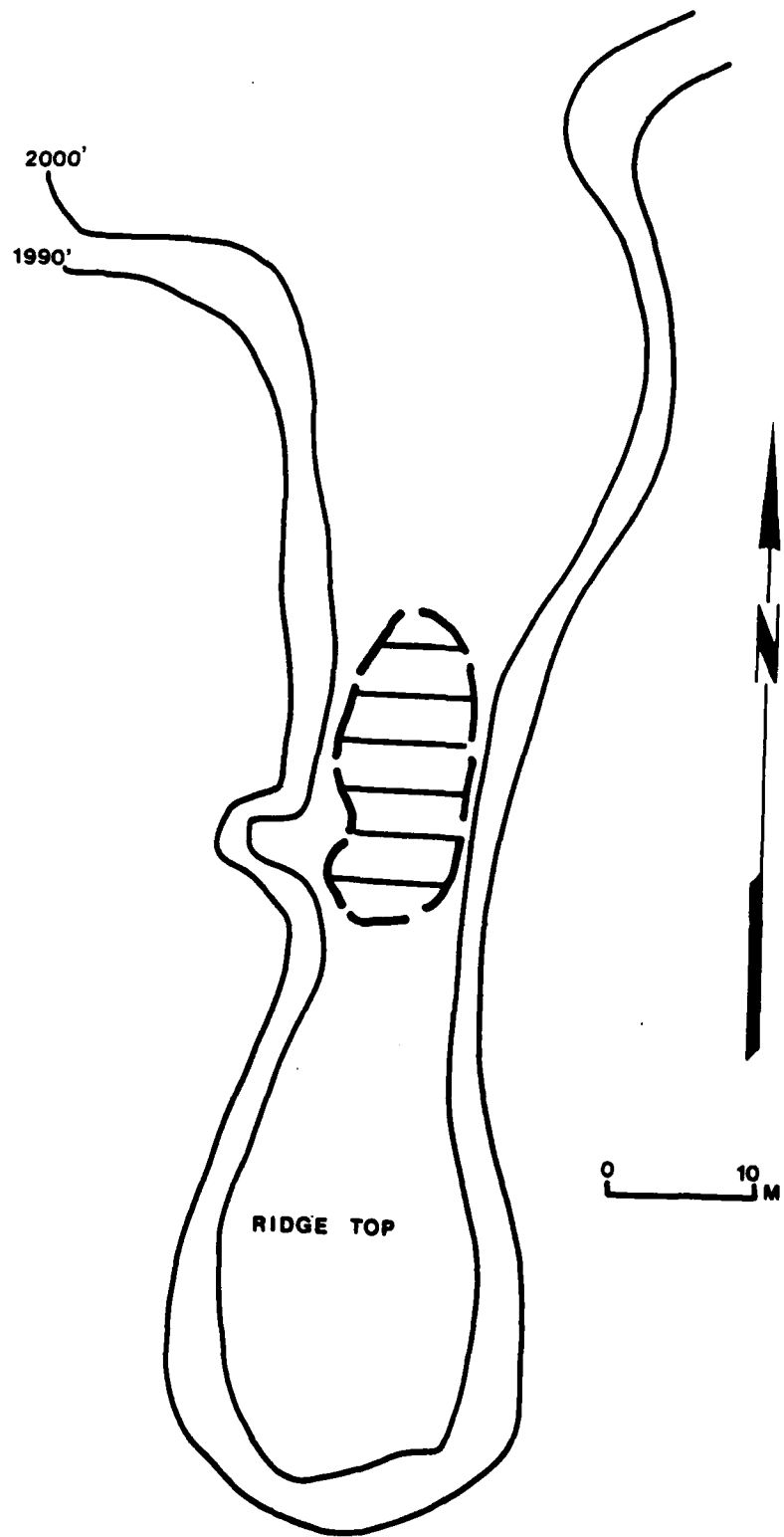


Figure 73. Plan of site 32DU656.

Site number: 32DU657 Site name:
County: Dunn. State: North Dakota. Site map: Figure 74
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 566.
Topographic position: On the top and sides of a stream terrace.
Site size: 70m².
Strata and depth: 0-10cm based on material in cutbank.
Vegetation: Sage, prickly pear, short grass, silver buffaloberry, and ash and elm trees in the draw.
Ground surface visibility (%): 15%, with 100% in animal tracks and cutbanks.
Nearest water: Moccasin Creek - 10m.
Site condition - impacts: The site is cut by a meandering stream and impacted by animal tracks, but a potential for buried materials away from the cutbank is indicated.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Only a limited assemblage was noted at this site, and the erosional status does not warrant immediate action. However, should additional impacts threaten the site it should be tested for National Register of Historic Places eligibility.
Remarks: Nine flakes, a core, and a biface of KRF were recorded at this site. One KRF flake was outwashed on a scree slope, apparently eroded out from a depth of ca. 10cm b.s.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

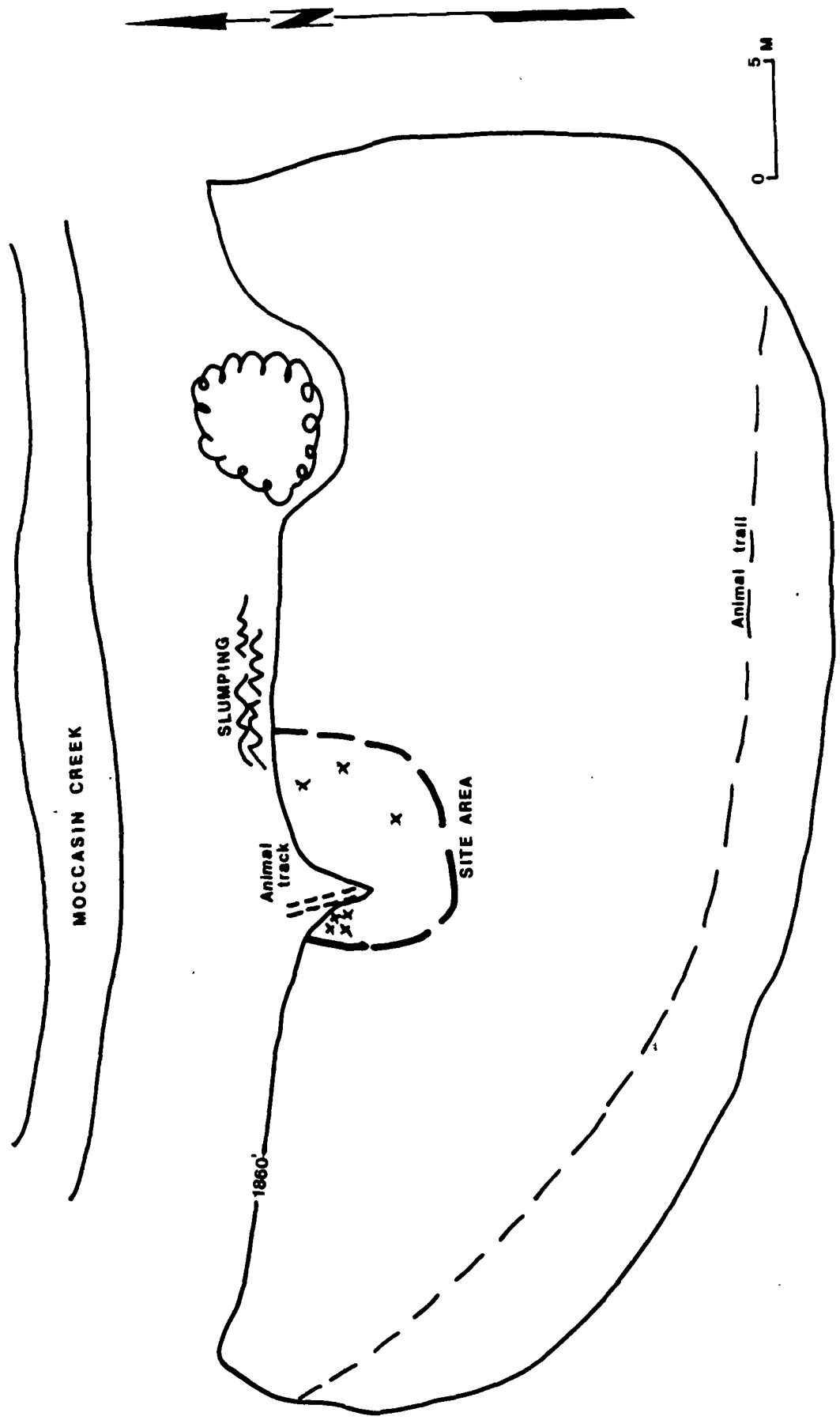


Figure 74. Plan of site 32DU657.

Site number: 32DU658 Site name:
County: Dunn. State: North Dakota. Site map: Figure 75
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On a lower hill slope above Moccasin Creek.
Site size: 18,600m².
Strata and depth: Unknown.
Vegetation: Short grass, bare ground, prickly pear and sagebrush.
Ground surface visibility (%): 10-100% (greater visibility in tracks, eroded banks, knolls and the cutbanks).
Nearest water: Moccasin Creek - 10m.
Site condition - impacts: Integrity appears fair, with materials noted only in eroded areas, indicating a potential for buried deposits.
Surface collections (by whom and when): None.
Data plotted on site map: Site area with a concentration (A) to the west.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Test for National Register of Historic Places eligibility if additional impacts threaten the site.
Remarks: Over 200 items of KRF were noted in the concentration in area A, and an additional 20+ items were within the defined site area. No in situ material was observed in the cutbanks, where only a shallow soil was evident. However, the location of materials only in eroded areas suggests some shallowly buried deposits are present.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

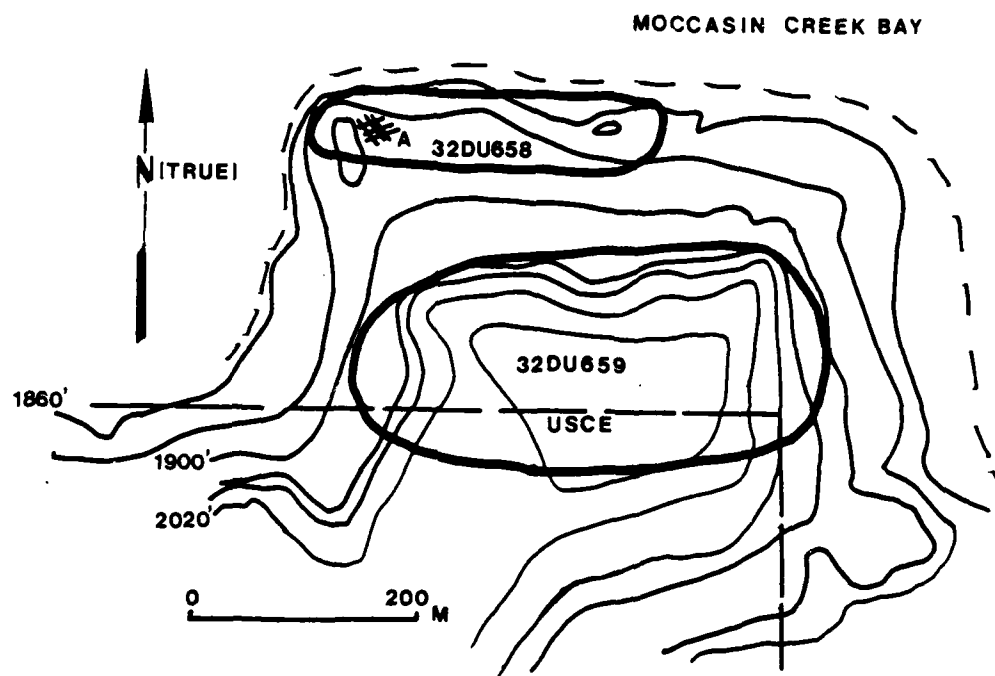


Figure 75. Plan of site 32DU658.

Site number: 32DU659 Site name:
County: Dunn. State: North Dakota. Site map: Figure 76
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 622.
Topographic position: On top of a flat ridge that is almost square in shape.
Site size: 86,600m².
Strata and depth: Unknown.
Vegetation: Buckbrush, short grass.
Ground surface visibility (%): 15-75% (on slopes and edges of the ridge).
Nearest water: Moccasin Creek - 90m.
Site condition - impacts: Extensive erosion has occurred along the ridge top edges and slopes but there is fair to good integrity on the ridge/hilltop itself.
Surface collections (by whom and when): None.
Data plotted on site map: Site area and U.S. Army Corps of Engineers boundary.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: This site is located on a dominant landform in the region. The site covers an extensive area and reflects the broader range of sites in this vicinity with extensive utilization of KRF. There is a good potential for buried cultural materials and if additional impacts threaten the site it should be evaluated for National Register of Historic Places eligibility. The square ridge/hilltop provides a natural site location, but a portion of this area is outside Corps boundaries and was not examined.
Remarks: Over 750 items of KRF were noted in the site area, almost all were flakes.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

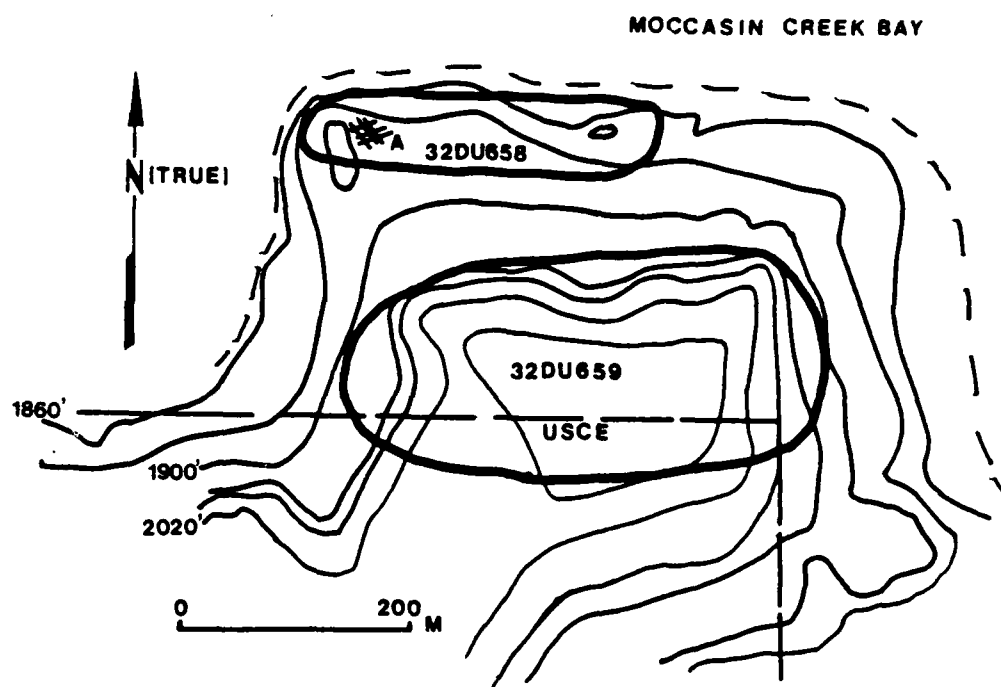


Figure 76. Plan of site 32DU659.

Site number: 32DU660 Site name:
County: Dunn. State: North Dakota. Site map: Figure 77
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: On the side/base of an eroded wave-cut knoll,
inundated at high water.
Site size: 200m².
Strata and depth: Outwashed.
Vegetation: Beach.
Ground surface visibility (%): 100%.
Nearest water: Moccasin Creek - 70m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: Outwashed.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is a sparse scatter lacking integrity and is
not considered eligible for nomination to the National Register of
Historic Places. No further work is recommended in that regard.
Remarks: About 30 flakes, and tested and untested cobbles of KRF were
noted.

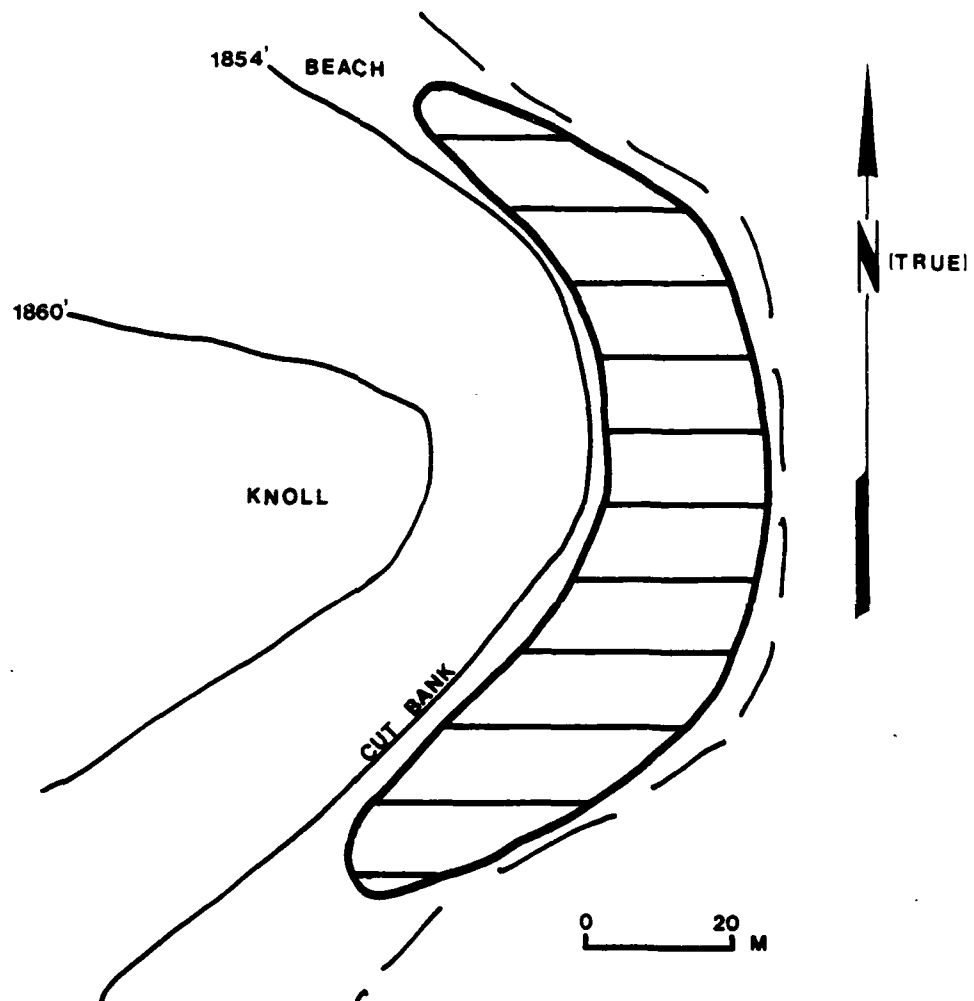


Figure 77. Plan of site 32DU660.

Site number: 32DU661 Site name:
County: Dunn. State: North Dakota. Site map: Figure 78
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: At the base of a finger ridge on a wave-cut eroded beach.
Site size: 600m².
Strata and depth: Probably outwashed/surficial.
Vegetation: Bare ground.
Ground surface visibility (%): 100%.
Nearest water: Moccasin Creek - 60m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: Appears outwashed.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Preform reduction blank of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site appears to be outwashed and no material was noted in the cutbank. The small area of flatter, lower ridge slope should, however, be tested to confirm the lack of in situ material before the site is determined ineligible for nomination to the National Register of Historic Places.
Remarks: Over 150 items were observed, all of KRF, except a split quartzite hammerstone.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

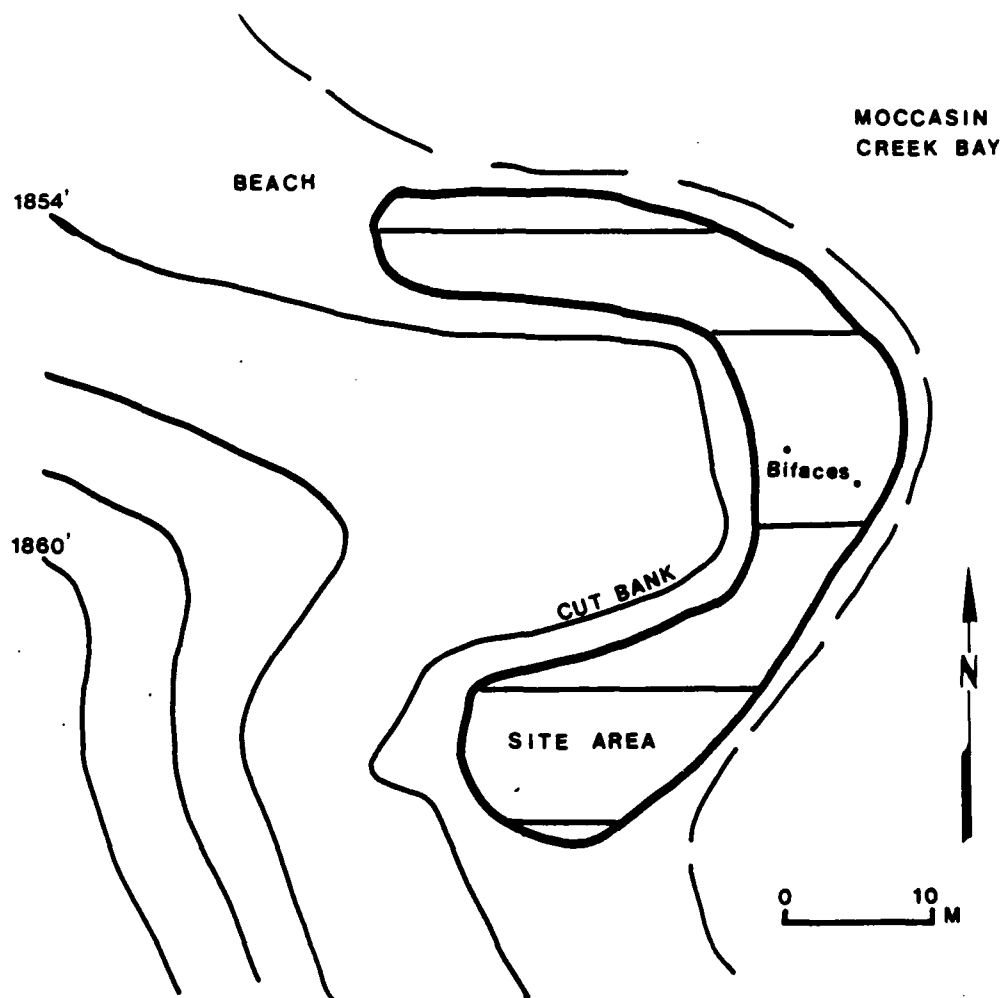


Figure 78. Plan of site 32DU661.

Site number: 32DU662 Site name:
County: Dunn. State: North Dakota. Site map: Figure 79
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Paleoindian (Agate Basin).
Elevation (m): 565.
Topographic position: On an eroded/inundated point and side of the base
of a ridge.
Site size: 3100m².
Strata and depth: Outwashed.
Vegetation: Beach.
Ground surface visibility (%): 100% on beach, 30% inland.
Nearest water: Moccasin Creek - 60m.
Pool elevation (feet), when applicable: 1837' amsl.
Site condition - impacts: Appears to be outwashed.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Preform reduction blank of KRF and the basal
portion of an Agate Basin projectile point produced on KRF.
Data plotted on site map: 1=scoria; 2=point and secondary flake;
3=bone; 4=preform reduction blank (KRF).
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site needs impact analysis/formal testing to
confirm or refute the apparent lack of in situ material. The
association of the site with a late Paleoindian point enhances its
potential significance if intact deposits are present.
Remarks: Forty-eight cultural items were recorded, including 31 flakes
and 10 tested cobbles of KRF.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity - if any.

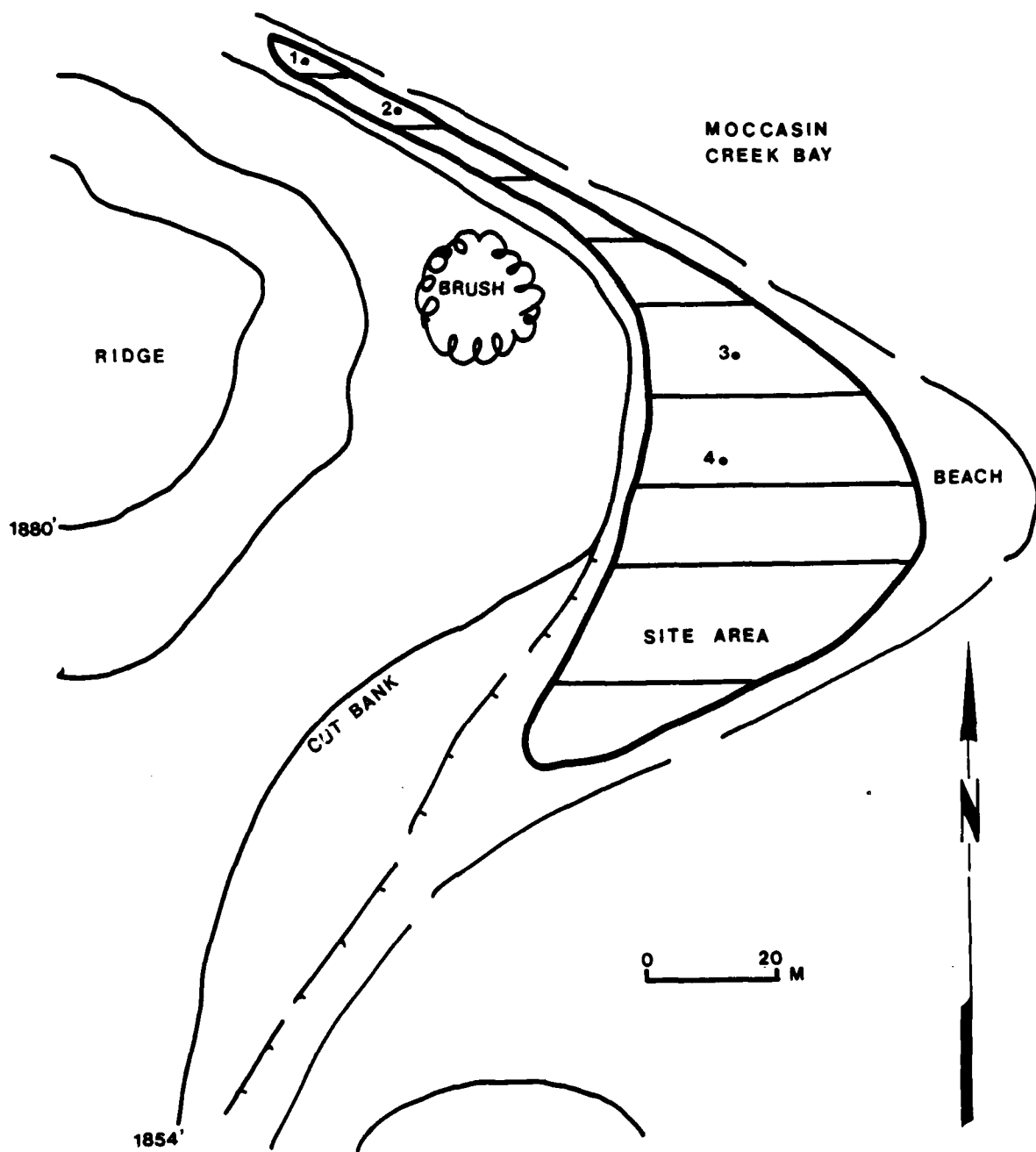


Figure 79. Plan of site 32DU662.

Site number: 32DU663 Site name:
County: Dunn. State: North Dakota. Site map: Figure 80
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter and depressions.
Component(s): Unknown.
Elevation (m): 591.
Topographic position: On top of a hill/knoll along a ridge system. One locus is in an erosional blow-out area along the edge of the ridge; a second locus is on another minor ridge.
Site size: 300m².
Strata and depth: Unknown - likely 0-10cm.
Vegetation: Dwarf juniper and chokecherry (Locus 1) and bunch grass and ball cactus (Locus 2).
Ground surface visibility (%): 70% in Locus 1; 30% in Locus 2.
Nearest water: Intermittent stream (Hidatsa Bay) - 300m.
Site condition - impacts: Two trenches are present at the site which may relate to the original site or be later disturbances. Material exposed in the erosional blow-out suggests the potential for other material buried nearby. But, the buried material is likely to be very shallow (0-10cm).
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is of limited potential, but some unusual features and possible buried material argue for additional testing to establish National Register of Historic Places eligibility if the site is to be impacted.
Remarks: Locus 2 contains two trench-like depressions with a couple of prominent granite boulders at the western end of the trenches. The combination of lithic material and granite boulders here suggests these may be anvil stones. Only 17 items of cultural material were noted at this site.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - and particularly to define the nature of the two trenches.

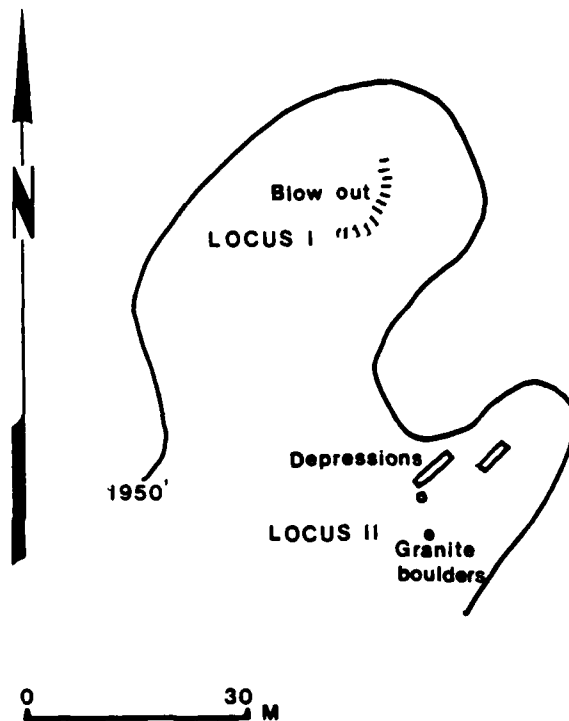


Figure 80. Plan of site 32DU663.

Site number: 32DU664 Site name:
County: Dunn. State: North Dakota. Site map: Figure 81
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Archaic - Besant and Pelican Lake.
Elevation (m): 563.
Topographic position: On top of a terrace, currently the beach on the shore of Hidatsa Bay.
Site size: 3750m².
Strata and depth: Appears to be outwashed/surficial.
Vegetation: None.
Ground surface visibility (%): 90-100%.
Nearest water: Little Missouri River - 900m.
Pool elevation (feet), when applicable: 1841' amsl.
Site condition - impacts: The site appears to be outwashed; no material was noted in the cutbank.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Two KRF projectile point fragments with base. One is Besant and the other is Pelican Lake.
Data plotted on site map: 1=Besant projectile point; 2=Pelican Lake projectile point; 3=biface fragment.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site appears to be outwashed and no in situ material was noted in the cutbank. The presence of two Archaic projectile points lends added significance to the site and formal testing inland should be undertaken to confirm or refute the apparent lack of site integrity.
Remarks: Over 400 items of KRF debitage were noted on the beach.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity, if any.

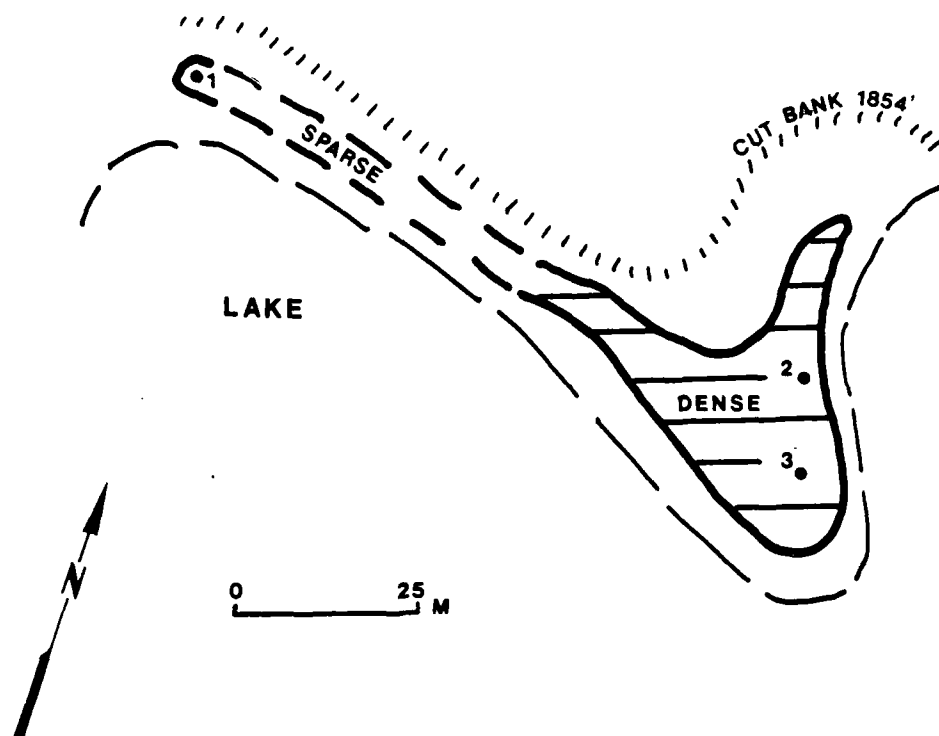


Figure 81. Plan of site 32DU664.

Site number: 32DU665 Site name:
County: Dunn. State: North Dakota. Site map: Figure 82
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On top of a terrace, now a beach of an unnamed bay on the north side of Squaw Creek Bay.
Site size: 1000m².
Strata and depth: Appears outwashed.
Vegetation: Beach.
Ground surface visibility (%): 90-100%.
Nearest water: Intermittent stream - 50m.
Pool elevation (feet), when applicable: 1841' amsl.
Site condition - impacts: All material was exposed on the wave-cut beach below the cutbank with no in situ material noted in the cutbank. Therefore, the site appears to be outwashed.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Biface tip of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site appears to be outwashed, but if a portion of the site existed inland it might provided significant data on prehistoric utilization of the area. Formal testing is recommended to confirm or refute the apparent lack of integrity of this site.
Remarks: Over 200 items of cultural material were noted at this site, including a bison thoracic vertebra and pieces of large mammal bone.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

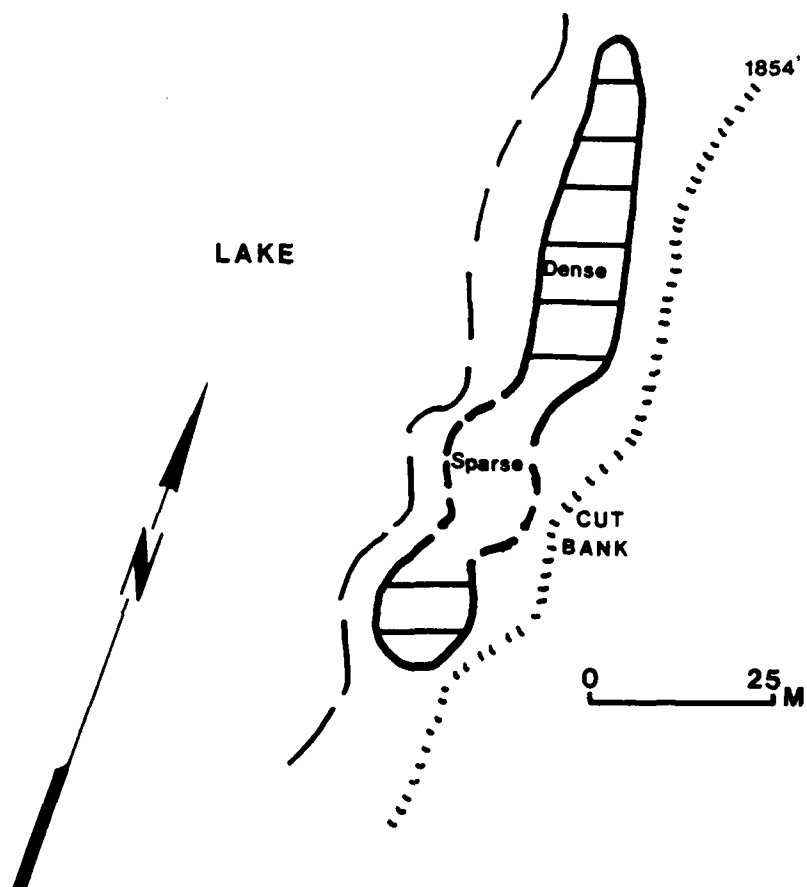


Figure 82. Plan of site 32DU665.

Site number: 32DU666 Site name:
County: Dunn. State: North Dakota. Site map: Figure 83
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On top of a prominent knoll with an overlook of
the Little Missouri River.
Site size: 528m².
Strata and depth: Unknown, but shallow soils.
Vegetation: Short bunch grass, yucca, prickly pear cactus.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 400m.
Site condition - impacts: Surface/slope erosion is the only current
impact.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site should be tested if it is to be additionally
impacted.
Remarks: The site is a limited activity area with only 29 cultural
items noted. These items included KRF and chalcedony debitage, and a
possible battered granitic cobble. Its significance is limited to
increasing the understanding of such activity sites, but for that
purpose it might provide significant data.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

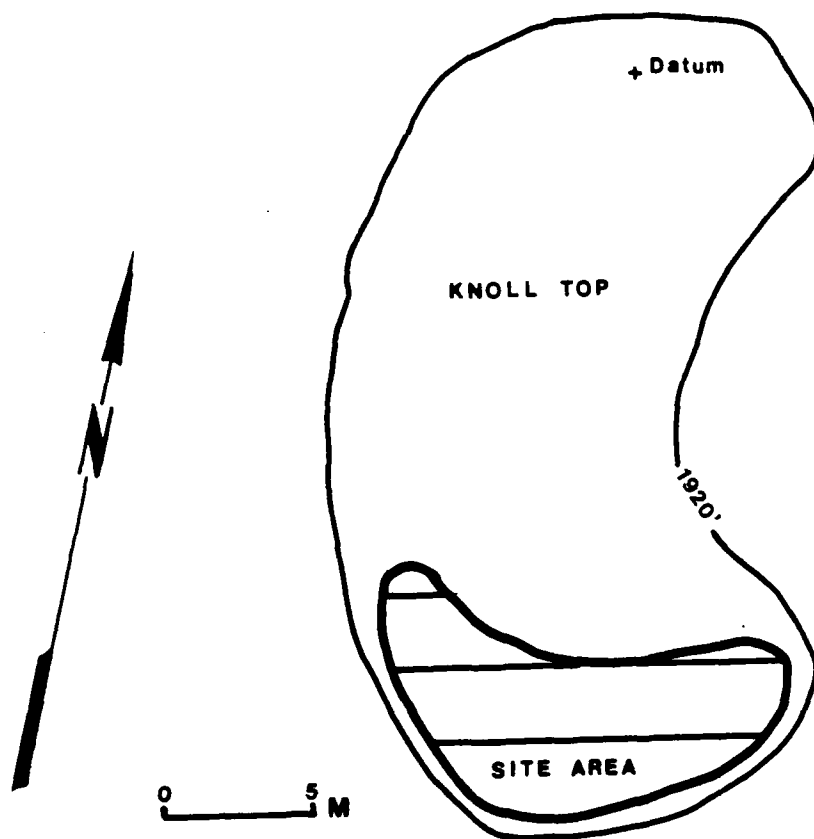


Figure 83. Plan of site 32DU666.

Site number: 32DU667 Site name:
County: Dunn. State: North Dakota. Site map: Figure 84
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On the side of a hill, now a beach of a small unnamed bay on the north side of the Little Missouri River.
Site size: 500m².
Strata and depth: Appears totally washed out/surficial.
Vegetation: None.
Ground surface visibility (%): 90-100%.
Nearest water: Intermittent stream - 100m.
Pool elevation (feet), when applicable: 1841' amsl.
Site condition - impacts: Site appears totally washed out.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Although the site appears to be outwashed and no in situ material was noted in the cutbank, formal testing should be undertaken to confirm or refute this observation. In situ material might provide significant research data; otherwise research activities would be limited to a study of outwashed debris.
Remarks: Over 200 items of KRF were noted - mostly debitage, cobbles and tested cobbles.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

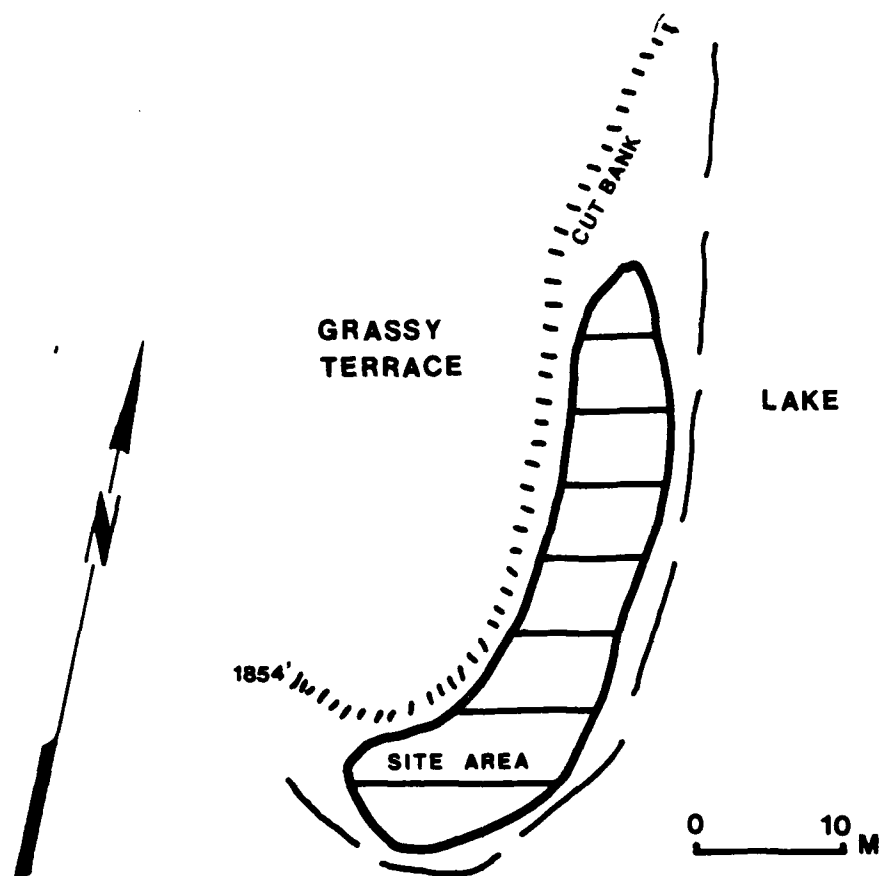


Figure 84. Plan of site 32DU667.

Site number: 32DU668 Site name:
County: Dunn. State: North Dakota. Site map: Figure 85
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: At the north end of a small hill.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Bunch grass, prickly pear cactus, wild rose and rubber
rabbitbrush.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 450m.
Site condition - impacts: The cairn appears to be undisturbed; the
knoll is eroding.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn of 10 rocks of a red, burned clinker
origin.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: It is unlikely that the cairn covers anything
significant, but such a possibility should be investigated if the site
is to be impacted.
Remarks: The cairn is 1.1m in diameter and 0.2m high.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

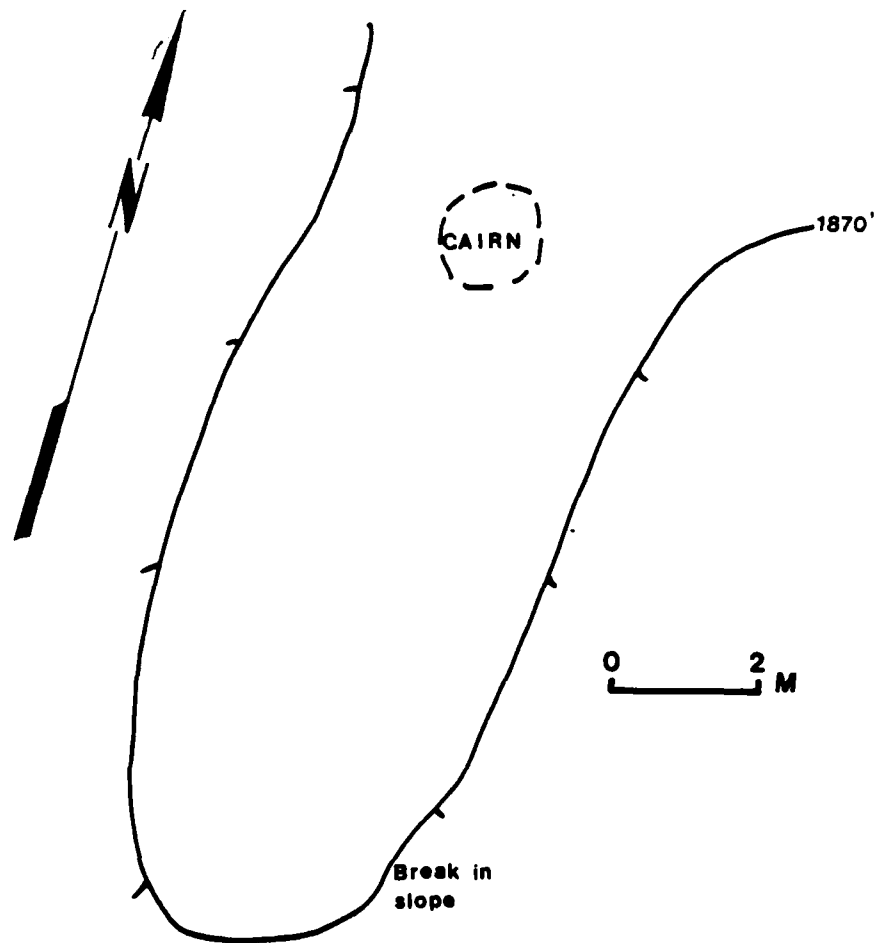


Figure 85. Plan of site 32DU668.

Site number: 32DU669 Site name:
County: Dunn. State: North Dakota. Site map: Figure 86
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Archaic - Pelican Lake.
Elevation (m): 564.
Topographic position: On top of a terrace, presently a beach along the
Little Missouri River.
Site size: 6250m².
Strata and depth: Pit exposed in cutbank - depth 60cm.
Vegetation: Grass clumps and dead Russian thistle.
Ground surface visibility (%): 80%.
Nearest water: Little Missouri River - 50m.
Pool elevation (feet), when applicable: 1842' amsl.
Site condition - impacts: Much of the site is apparently washed out,
but a pit exposed in the cutbank indicates the presence of in situ
material.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Projectile point base (Pelican Lake) of Tongue
River silica; obsidian flake fragment; KRF core, five early stage
bifaces of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: Immediate salvage of material exposed in the cutbank
and evaluation of the extent of the in situ material is recommended.
Remarks: The site has a relatively dense cultural material assemblage.
The pit in the cutbank, the presence of obsidian, and the Archaic
projectile point all add to its potential significance. It is actively
eroding out and immediate salvage is recommended.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity - specifically to salvage exposed material in the cutbank.

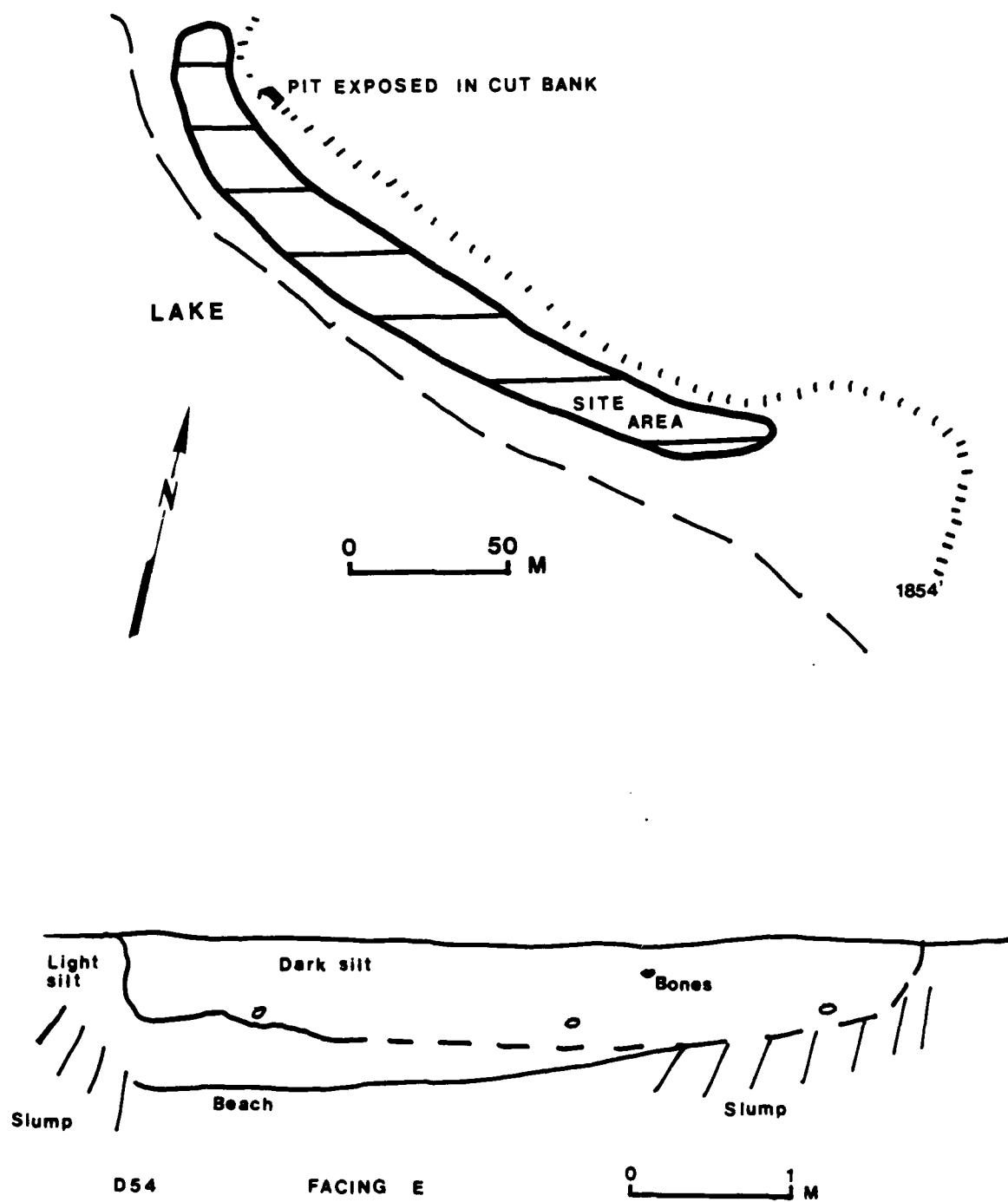


Figure 86. Plan of site 32DU669, with profile of pit exposed in cutbank.

Site number: 32DU670 Site name:
County: Dunn. State: North Dakota. Site map: Figure 87
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 561.
Topographic position: On a terrace, now the beach of the Little Missouri Arm of Lake Sakakawea.
Site size: 5000m².
Strata and depth: Appears outwashed/surficial.
Vegetation: Last year's thistle and smartweed.
Ground surface visibility (%): 80%.
Nearest water: Little Missouri River - 250m.
Pool elevation (feet), when applicable: 1842' amsl.
Site condition - impacts: The site appears to be completely outwashed and close inspection of the cutbanks revealed no in situ material.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Two scrapers of KRF; a biface fragment and two preform reduction blanks of KRF; five early stage biface fragments of KRF; and a tertiary flake of obsidian.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The density and variety of lithic material, including exotics, makes the research potential good if in situ deposits are present. The presence of in situ deposits appears unlikely, but formal testing should be undertaken to confirm or refute this observation.
Remarks: Hundreds of lithic items were noted, mostly KRF debitage, but obsidian and porcelanite were also present.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

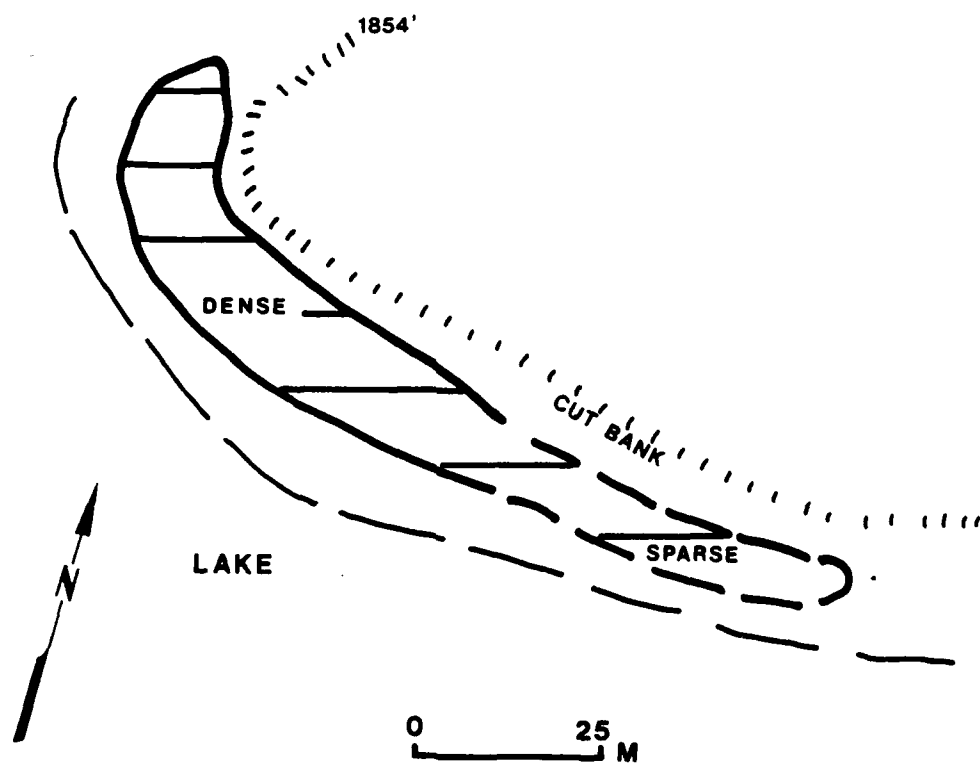


Figure 87. Plan of site 32DU670.

Site number: 32DU671 Site name:
County: Dunn. State: North Dakota. Site map: Figure 88
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 561.
Topographic position: On a terrace, now a beach along the Little
Missouri Arm of Lake Sakakawea.
Site size: 6250m².
Strata and depth: Appears outwashed/surficial.
Vegetation: Sweet clover and last year's smartweed.
Ground surface visibility (%): 70%.
Nearest water: Little Missouri River - 700m.
Pool elevation (feet), when applicable: 1842' amsl.
Site condition - impacts: Appears outwashed.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site appears to be totally outwashed with no in
situ material observed in the cutbank. However, formal testing is
recommended to confirm or refute this assessment.
Remarks: Hundreds of KRF lithic items were noted on the beach.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity - if any.

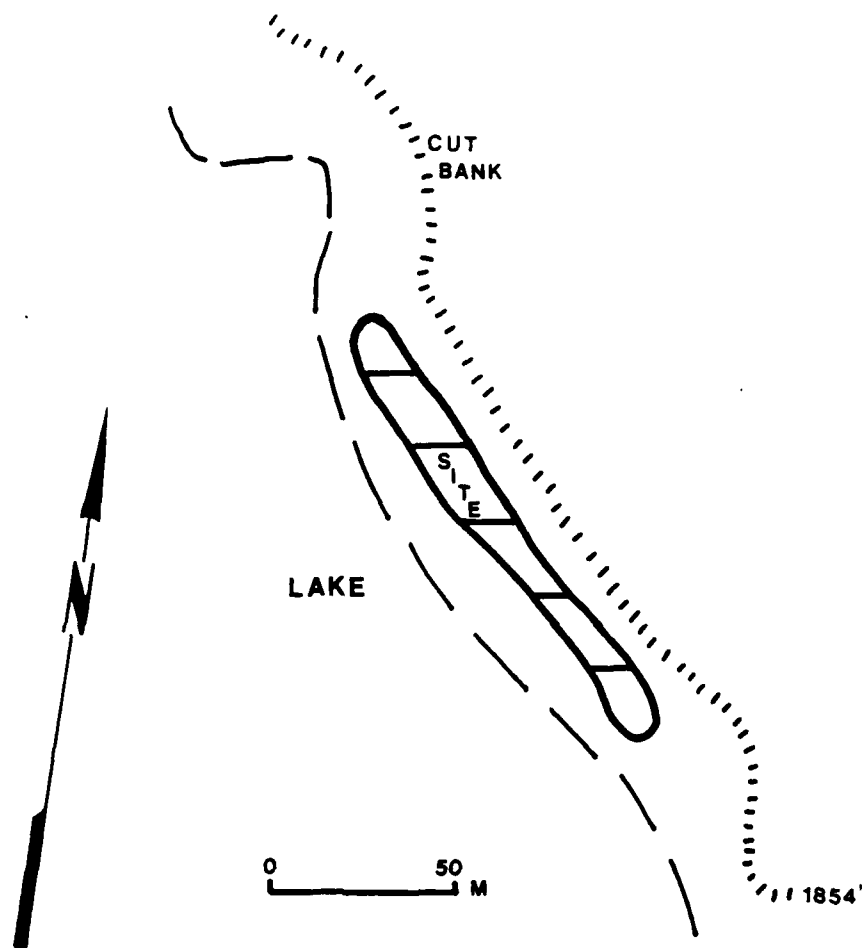


Figure 88. Plan of site 32DU671.

Site number: 32DU672 Site name:
County: Dunn. State: North Dakota. Site map: Figure 89
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On a terrace, now the beach line of Lake Sakakawea.
Site size: 500m².
Strata and depth: Appears outwashed/surficial.
Vegetation: Sweet clover and thistle.
Ground surface visibility (%): 70%.
Nearest water: Intermittent stream - 100m.
Pool elevation (feet), when applicable: 1842' amsl.
Site condition - impacts: Appears totally eroded out and redeposited.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Bifacial (knife?) midsection of petrified wood and a projectile point tip of KRF.
Data plotted on site map: 1=projectile point tip; 2=biface.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site appears to lack integrity, but a formal testing program is recommended to confirm or refute this assessment.
Remarks: Only 11 cultural items were observed along the beach; nothing was observed in the cutbanks.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

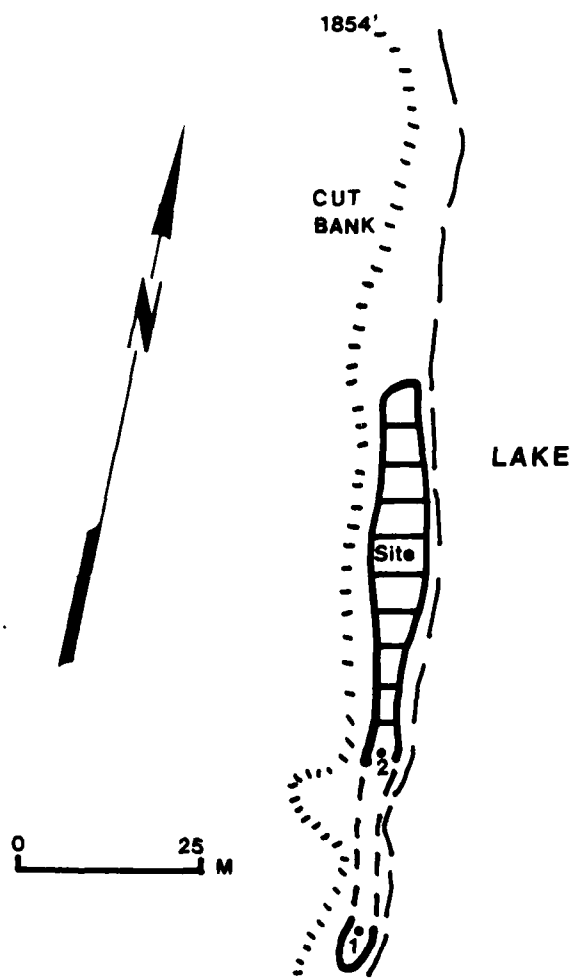


Figure 89. Plan of site 32DU672.

Site number: 32DU673 Site name:
County: Dunn. State: North Dakota. Site map: Figure 90
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 634.
Topographic position: On the edge of a bluff top.
Site size: 120m².
Strata and depth: Unknown - shallow burial of material only.
Vegetation: Short bunch grass.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The site is eroding out of the bluff edges,
but it appears to be shallowly buried on the bluff top with fair to good
integrity.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site has shallow buried deposits (0-10cm) which
retain spatial integrity for the most part. Testing to determine the
extent and research potential of the site is recommended if additional
impacts threaten it.
Remarks: Thirty-nine items of KRF were noted, including 32 flakes or
shatter.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

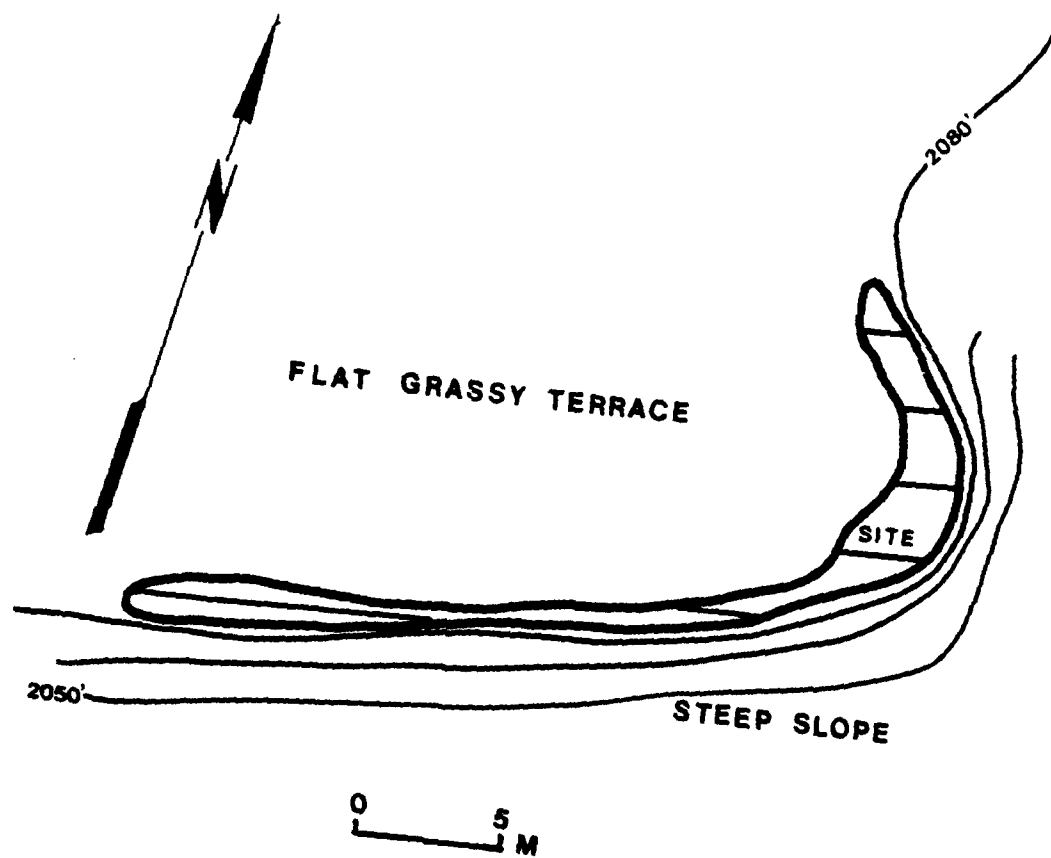


Figure 90. Plan of site 32DU673.

Site number: 32DU674 Site name:
County: Dunn. State: North Dakota. Site map: Figure 91
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 604.
Topographic position: On the NE edge of a long, narrow ridge/erosional remnant or bluff.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Buckbrush, chokecherry and short prairie grasses.
Ground surface visibility (%): 20%.
Nearest water: Missouri River - 300m.
Site condition - impacts: The pit is overgrown, but otherwise undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression/pit, 3m E-W by 2.1m N-S and 70cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, evaluate the nature of the pit.
Remarks: Size and location suggest this was an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine components present and research potential of the pit.

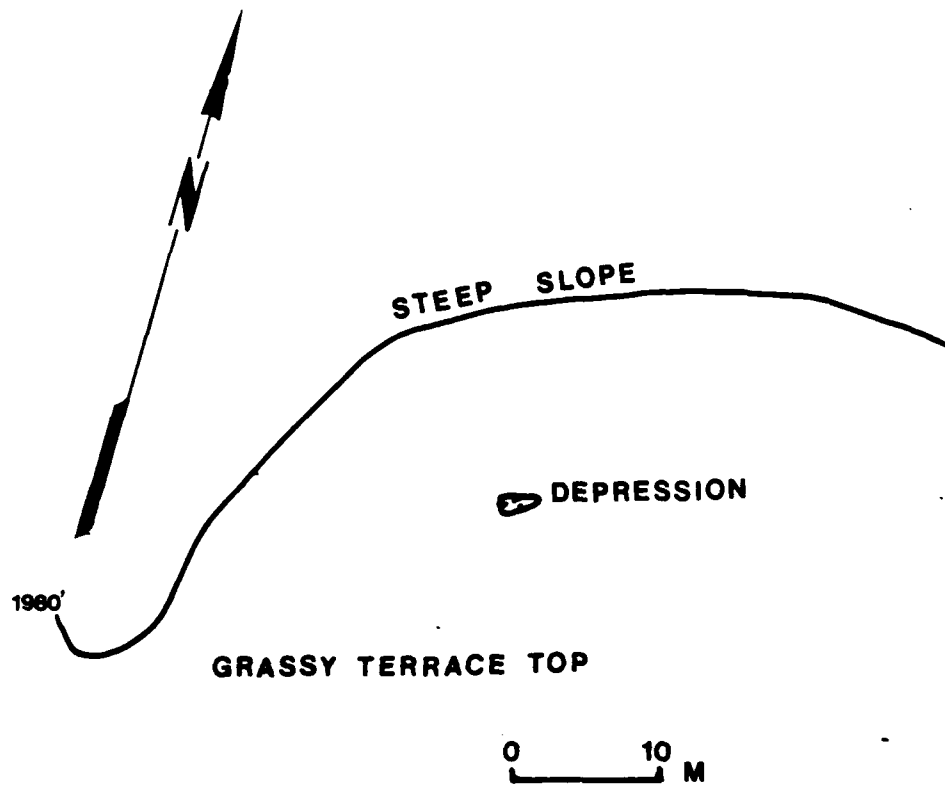


Figure 91. Plan of site 32DU674.

Site number: 32DU675 Site name:
County: Dunn. State: North Dakota. Site map: Figure 92
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: On a terrace, now the shoreline of Drags Wolf Bay
of Lake Sakakawea.
Site size: 500m².
Strata and depth: Appears outwashed/surficial.
Vegetation: Bunch grass.
Ground surface visibility (%): 70%.
Nearest water: Intermittent stream - 100m.
Pool elevation (feet), when applicable: 1842' amsl.
Site condition - impacts: Appears totally outwashed.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: KRF scraper.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: A formal testing program is recommended to confirm or
refute the observation that the site is totally outwashed.
Remarks: No in situ material was observed in the cutbank. Thirty
cultural items were present on the beach. All were produced on KRF,
including 25 flakes, shatter or fragments.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity - if any.

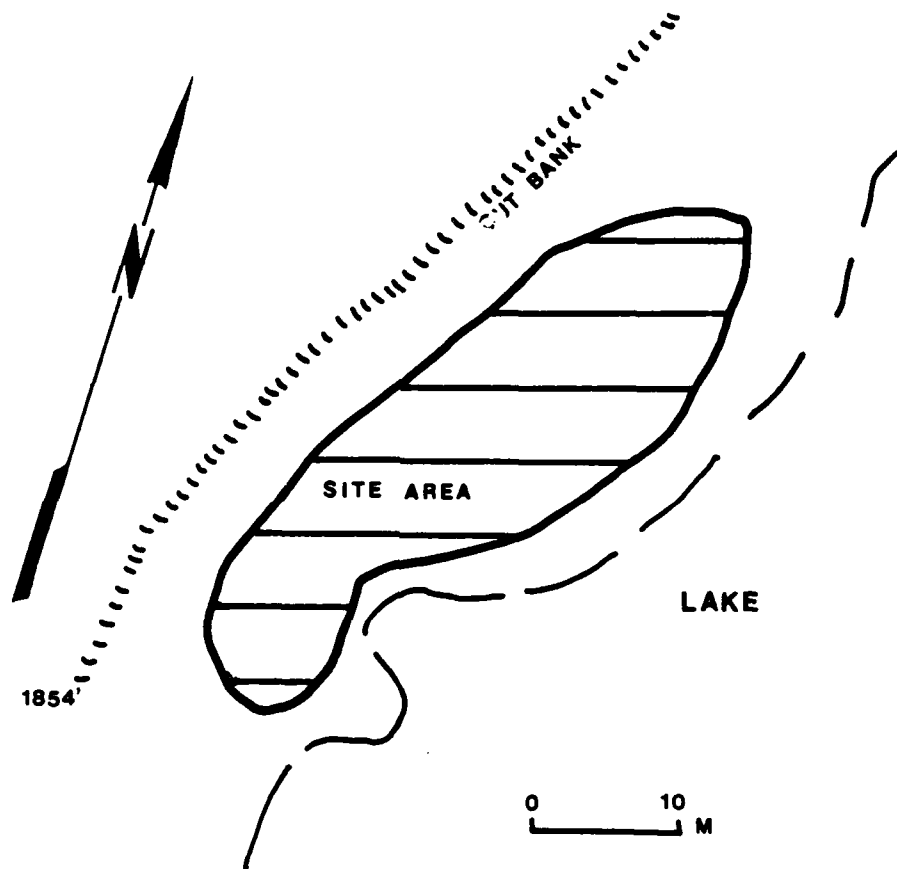


Figure 92. Plan of site 32DU675.

Site number: 32DU676 Site name:
County: Dunn. State: North Dakota. Site map: Figure 93
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: At the center of a small erosional remnant or
ridge protuberance.
Site size: 4m².
Strata and depth: Unknown - likely surficial.
Vegetation: Short native grasses with parsley.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: No obvious disturbances are present.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn - a denser area of two dozen rocks, 2m
E-W by 1.75m N-S. To the north, 10-15 rocks are spread in a more
diffuse pattern.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of
this cairn.
Remarks: The diffuse nature of the stones may mean this is a natural
occurrence, but it may also be an artificial cairn marking something
like a burial.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

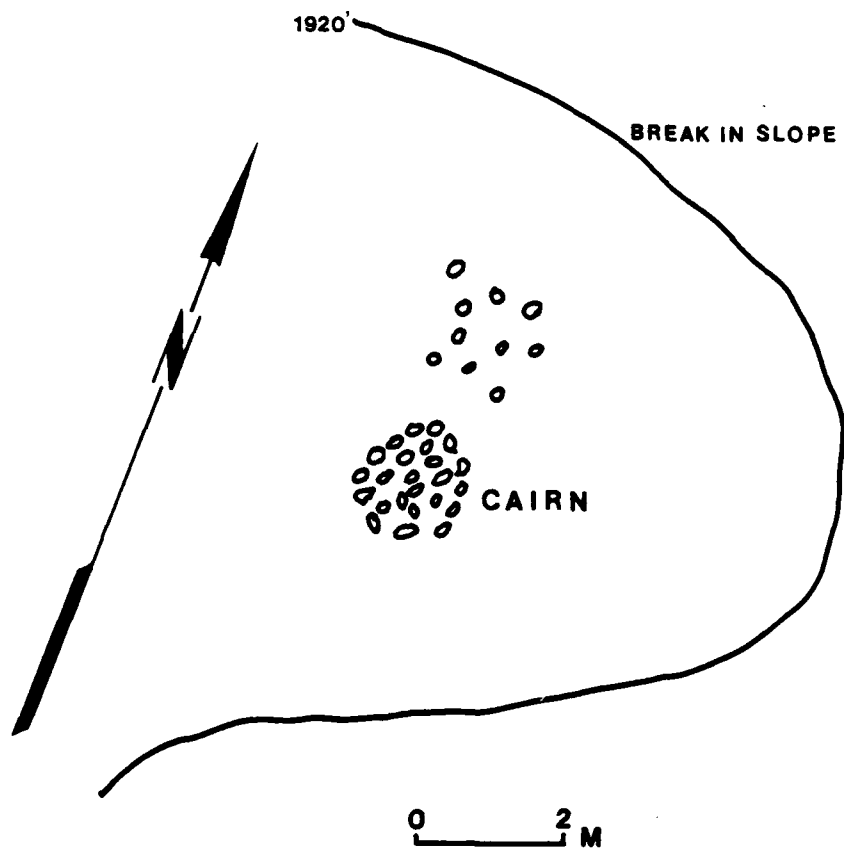


Figure 93. Plan of site 32DU676.

Site number: 32DU677 Site name:
County: Dunn. State: North Dakota. Site map: Figure 94
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On a mid-level ledge on a ridge.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Short grass and prickly pear cactus, with forbs and
dandelions in the depression.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression, 1.75m NW-SE by 1.5m NE-SW and
35cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of
the pit.
Remarks: The small depression may be an eagle trapping pit based on
its size and location.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

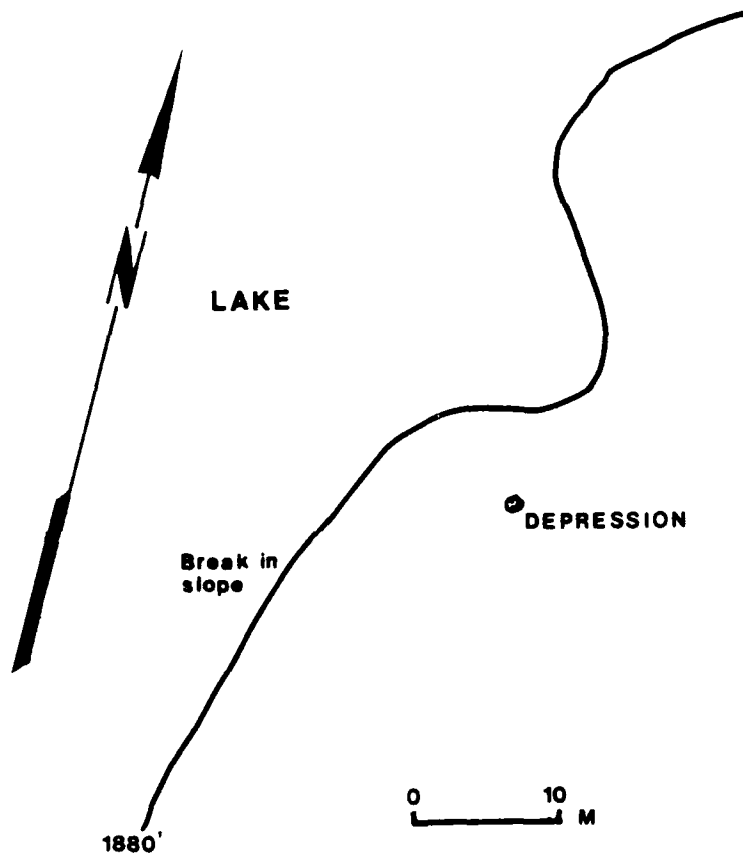


Figure 94. Plan of site 32DU677.

Site number: 32DU678 Site name:
County: Dunn. State: North Dakota. Site map: Figure 95
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Depression.
Component(s): Unknown (prehistoric?).
Elevation (m): 643.
Topographic position: On a high ridge or bluff edge.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Short prairie grass on high terrace; buckbrush and wild
rose in depression.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site is overgrown, but otherwise appears
undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression, 2.25m N-S by 1.65m E-W and 50cm
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of depression.
Remarks: The depression may relate to the nearby brass cap and,
therefore, be insignificant; or it may be an eagle trapping pit, as its
size and location are consistent for such features.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

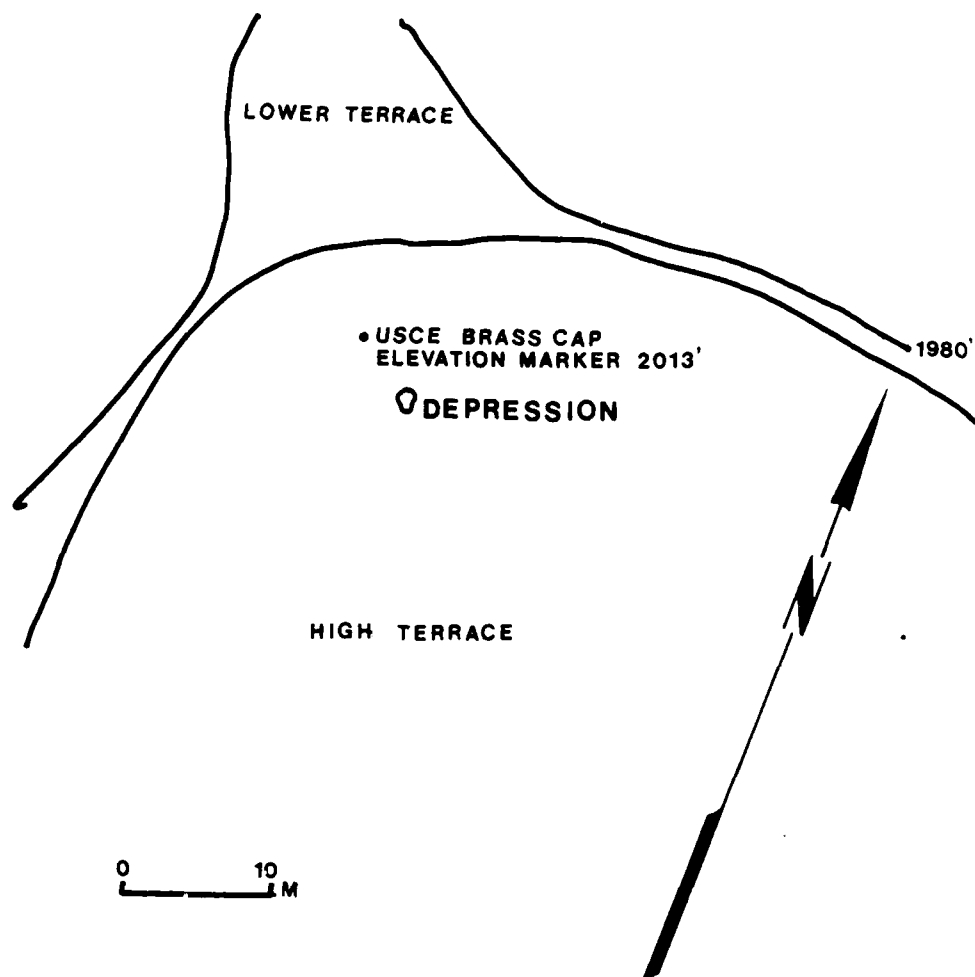


Figure 95. Plan of site 32DU678.

Site number: 32DU679 Site name:
County: Dunn. State: North Dakota. Site map: Figure 96
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pits.
Component(s): Unknown.
Elevation (m): 624.
Topographic position: On the edge of a high terrace/upland plain.
Site size: 40m².
Strata and depth: Unknown.
Vegetation: Buckbrush in one depression. Short grass prairie and
silver sagebrush.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: No obvious disturbances have occurred.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: 1=small, shallow depression, 1.7m in diameter
and 20cm deep; 2=small depression, 1.25m in diameter and 25cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of
the depressions.
Remarks: The depressions are probably eagle trapping pits based on
their size and location.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depressions and their research potential.

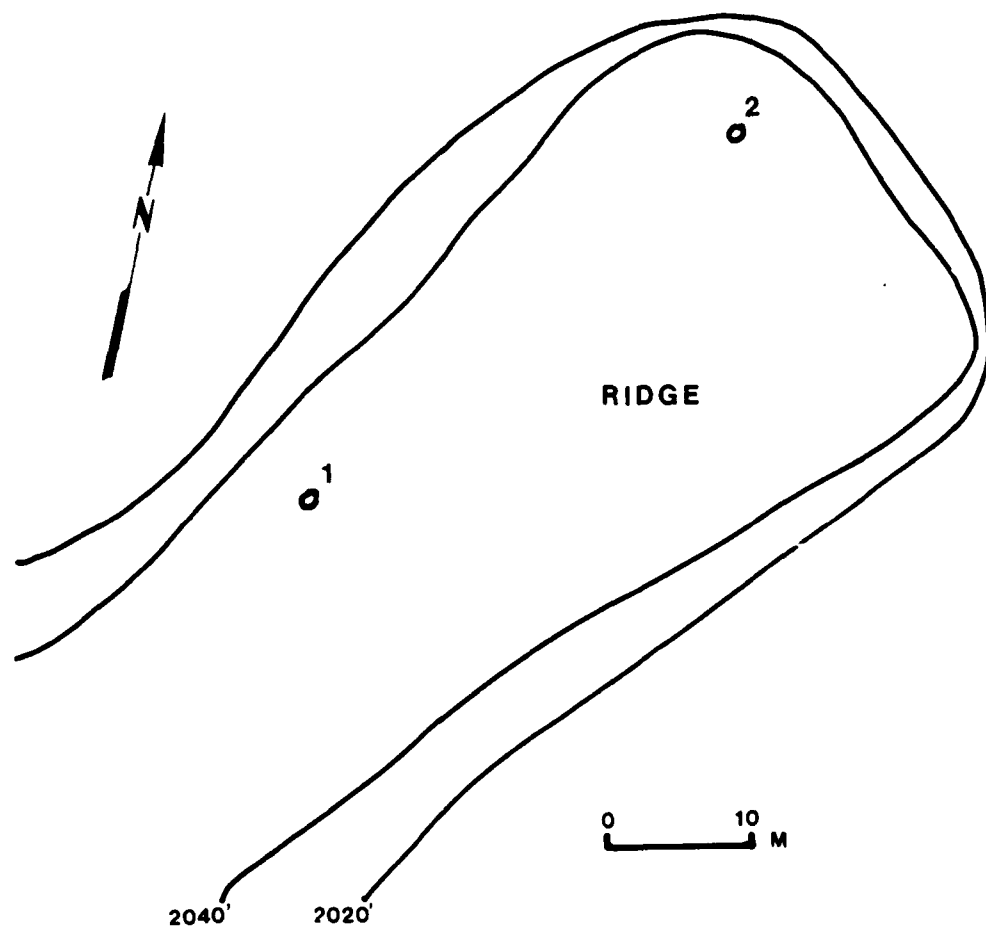


Figure 96. Plan of site 32DU679.

Site number: 32DU680 Site name:
County: Dunn. State: North Dakota. Site map: Figure 97
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: On the southeast edge of a long, narrow ridge.
Site size: 500m².
Strata and depth: Unknown.
Vegetation: Dwarf cedar, short prairie grasses, silver buffaloberry.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The site is partially eroded out, with the
potential for shallowly buried deposits. Integrity is fair.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Test for National Register of Historic Places
eligibility if additional impacts threaten the site.
Remarks: The site has good research potential for investigating this
shallow/surficial site type. Faunal material and a variety of lithic
raw materials (KRF, chalcedony, porcelanite) were present among the 154
cultural items noted.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

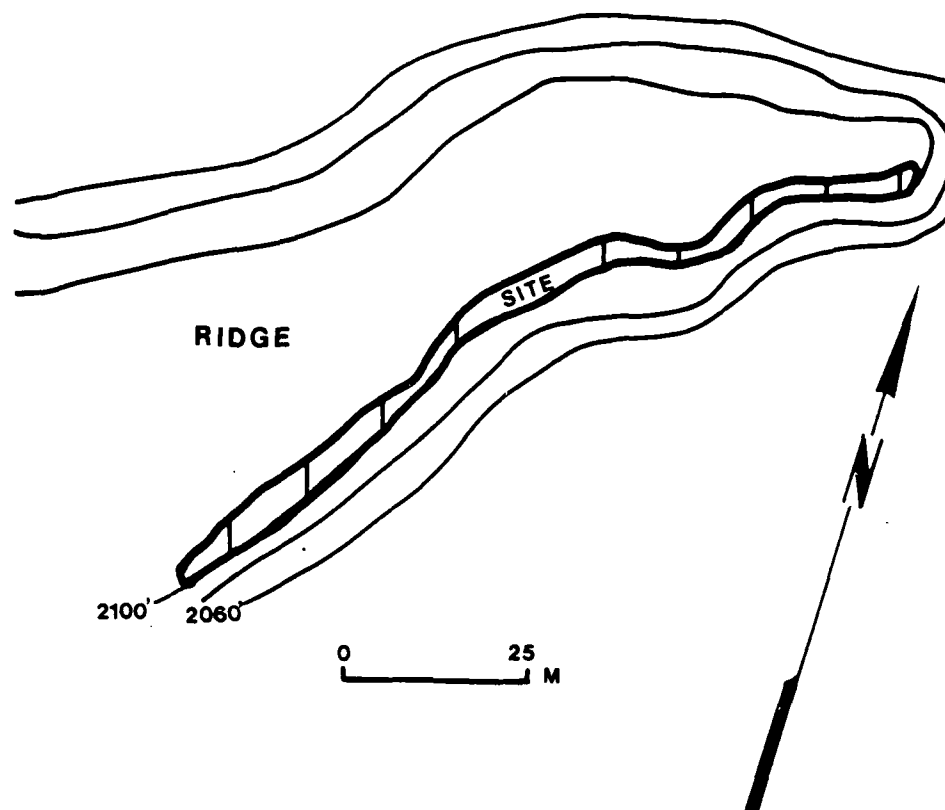


Figure 97. Plan of site 32DU680.

Site number: 32DU681 Site name:
County: Dunn. State: North Dakota. Site map: Figure 98
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 622.
Topographic position: On the edge of an upland plain, high terrace
ridge or bluff remnant.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Short prairie grasses, silver sagebrush.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression, 1.9m E-W by 1.6m N-S and 20cm
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test the depression.
Remarks: The nature of the depression is unknown, but its size and
location suggest an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

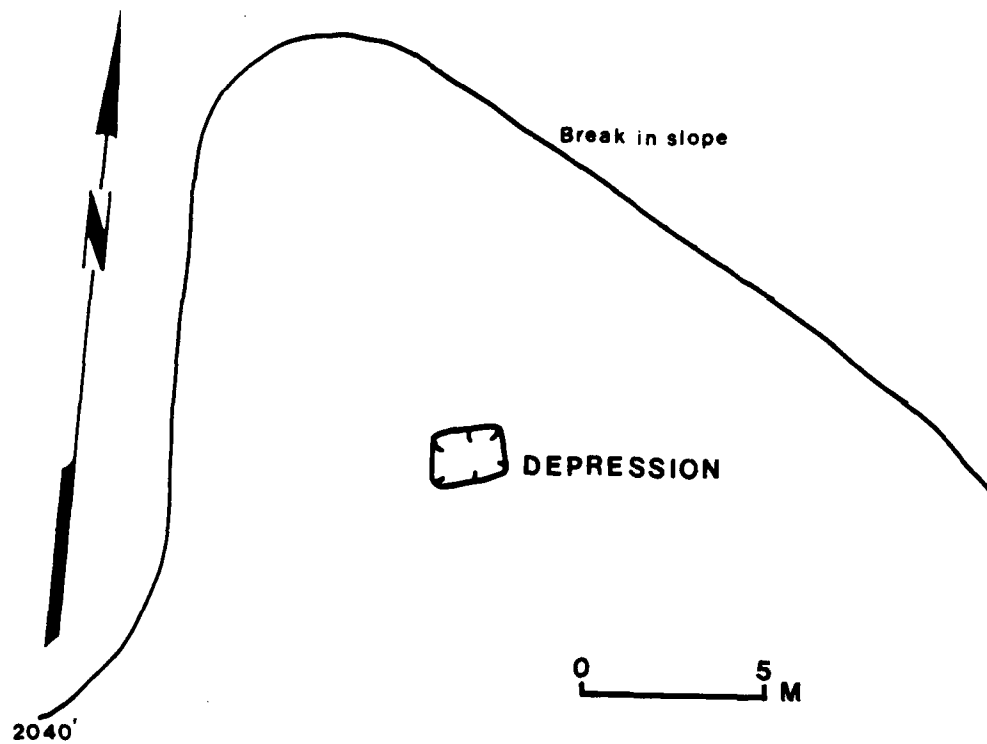


Figure 98. Plan of site 32DU681.

Site number: 32DU682 Site name:
County: Dunn. State: North Dakota. Site map: Figure 99
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: On the west edge of an upland plain/terrace or
bluff.
Site size: 5m².
Strata and depth: Unknown.
Vegetation: Short grass and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: A two-track runs nearby, but the depression
appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Roughly circular depression, 1.5m in
diameter and 20cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test the depression.
Remarks: The nature of the depression is unknown, but its size and
location are appropriate for an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

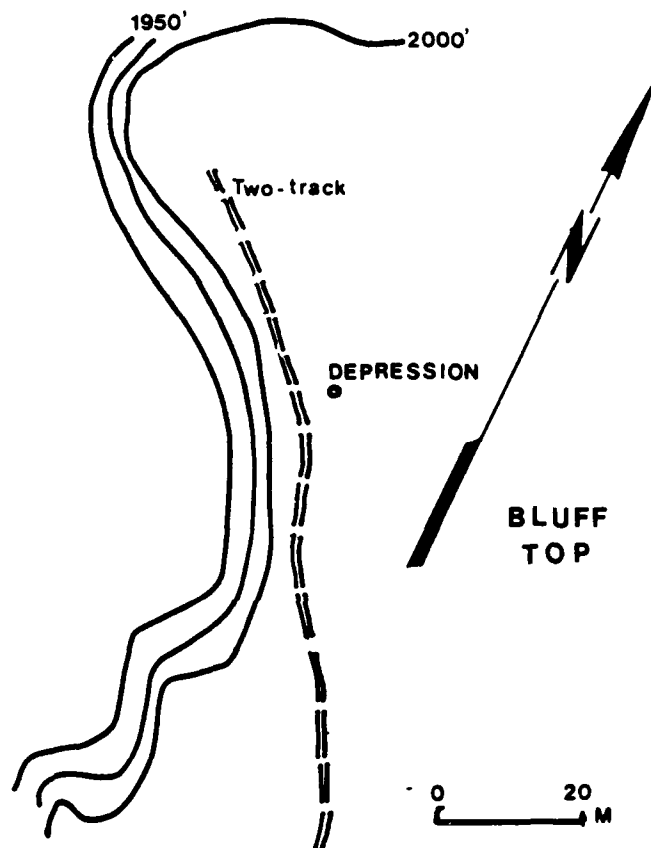


Figure 99. Plan of site 32DU682.

Site number: 32DU683 Site name:
County: Dunn. State: North Dakota. Site map: Figure 100
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the edge of an upland plain/terrace above the
former Skunk Creek drainage.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Bunch grass and native forbs.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: Some of the stones that probably made up the
cairn are strewn about, but it is otherwise undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 1m E-W by 0.75m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The nature of the cairn is unknown. If the site is to
be further impacted, excavate the cairn to determine its nature.
Remarks: The nature of the cairn is unknown. It could represent a
trail marker or be a burial marker?
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

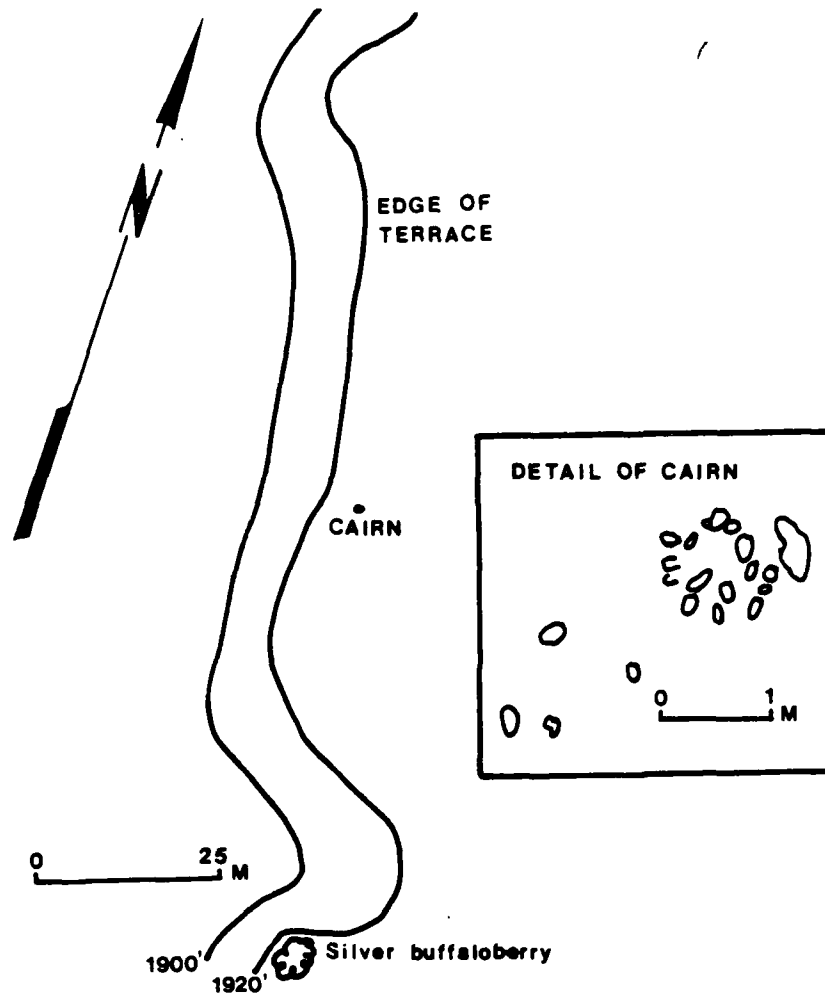


Figure 100. Plan of site 32DU683, with detail of cairn.

Site number: 32DU684 Site name:
County: Dunn. State: North Dakota. Site map: Figure 101
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 597.
Topographic position: Along the midline of a long, narrow ridge.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Tall grass and prickly pear cactus in the cairn; sparse
grasses around the cairn.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: The cairn appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, of ca. 40 rocks, 1.2m in diameter and
20cm high.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The nature of the cairn is unknown; it could be a trail or
burial marker, or have another function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

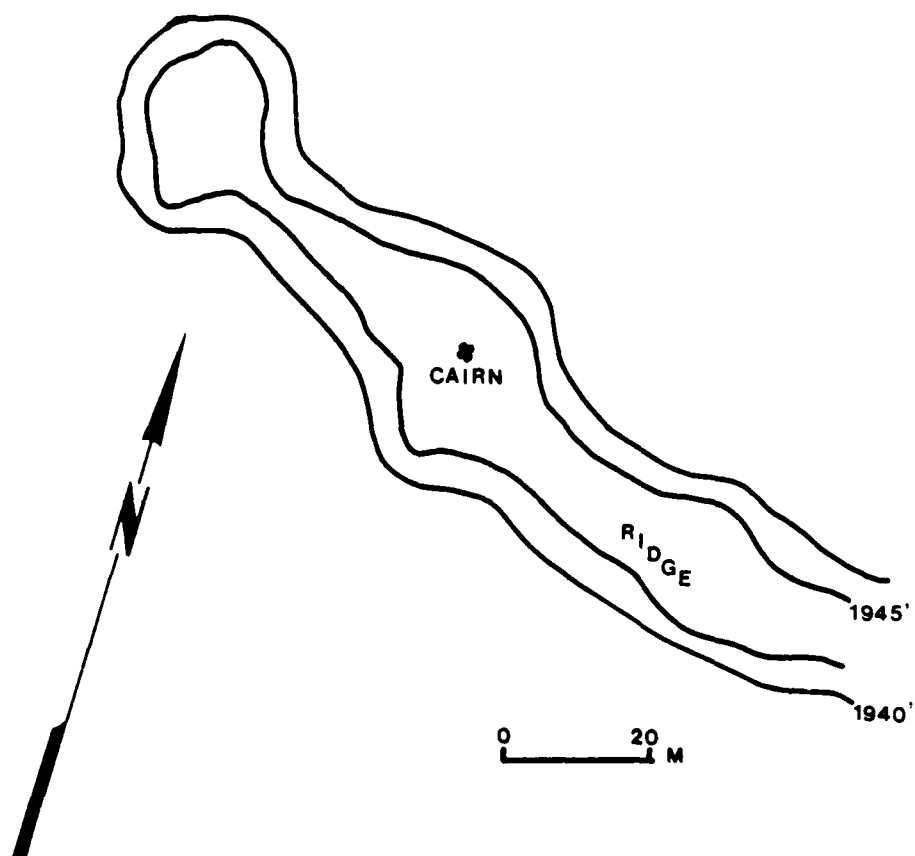


Figure 101. Plan of site 32DU684.

Site number: 32DU685 Site name:
County: Dunn. State: North Dakota. Site map: Figure 102
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: At the end of an upper terrace/upland plain
remnant overlooking the former valley of Skunk Creek.
Site size: 200m².
Strata and depth: Unknown.
Vegetation: Bunch grass.
Ground surface visibility (%): 30%.
Nearest water: Skunk Creek - 200m.
Site condition - impacts: The site is eroding on top of the knoll;
otherwise it is relatively undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: A and B=distinct loci. C=sparse scatter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Shallow burial of cultural material is indicated. If
further impacts threaten the site, test for National Register of
Historic Places eligibility.
Remarks: Twenty-two lithic items were noted; all except one
(chalcedony) were KRF. Locus A contained 7 items; Locus B had 15.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

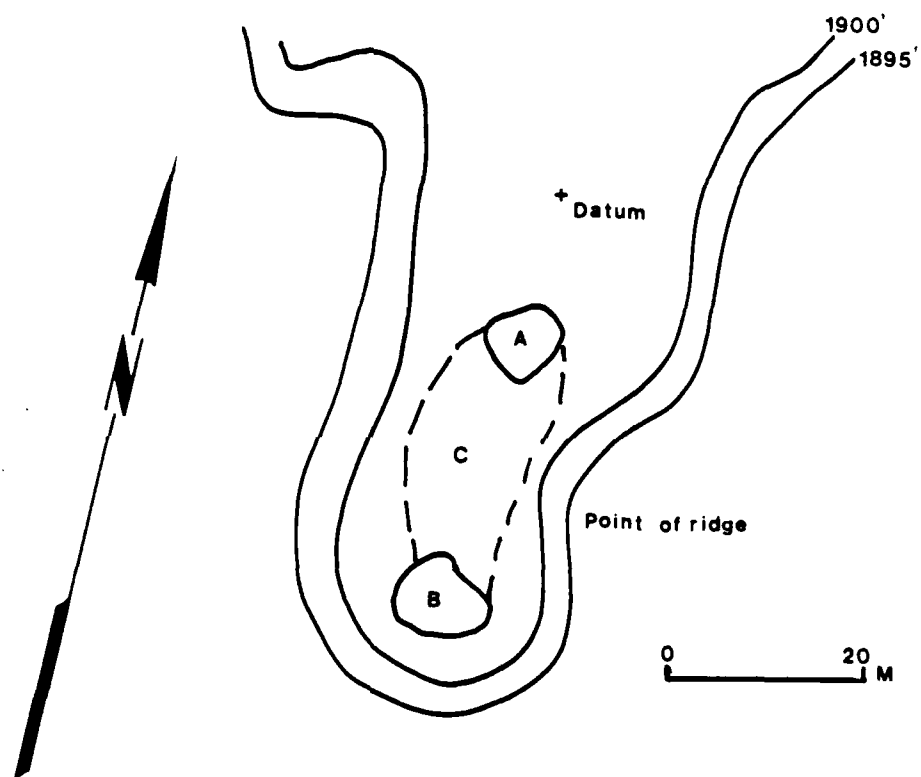


Figure 102. Plan of site 32DU685.

Site number: 32DU686 Site name:
County: Dunn. State: North Dakota. Site map: Figure 103
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cairn and artifact scatter.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: At the edge of an upland plain/terrace overlooking the former valley of Skunk Creek.
Site size: 200m².
Strata and depth: Unknown.
Vegetation: Short and tall grasses.
Ground surface visibility (%): 30%.
Nearest water: Skunk Creek - 300m.
Site condition - impacts: The cairn is overgrown and the area is subject to some erosion, but otherwise it is in fair condition.
Surface collections (by whom and when): None.
Data plotted on site map: 1=KRF secondary flake and unidentifiable tooth enamel. 2=Two KRF secondary flakes and one KRF tertiary flake.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be further impacted, test for National Register eligibility.
Remarks: The site appears to have limited research potential, but the cairn may be prehistoric and associated with the artifact scatter. It may also have marked a burial?
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity of the site; relationship of the artifact scatter to the cairn; and the nature of the cairn.

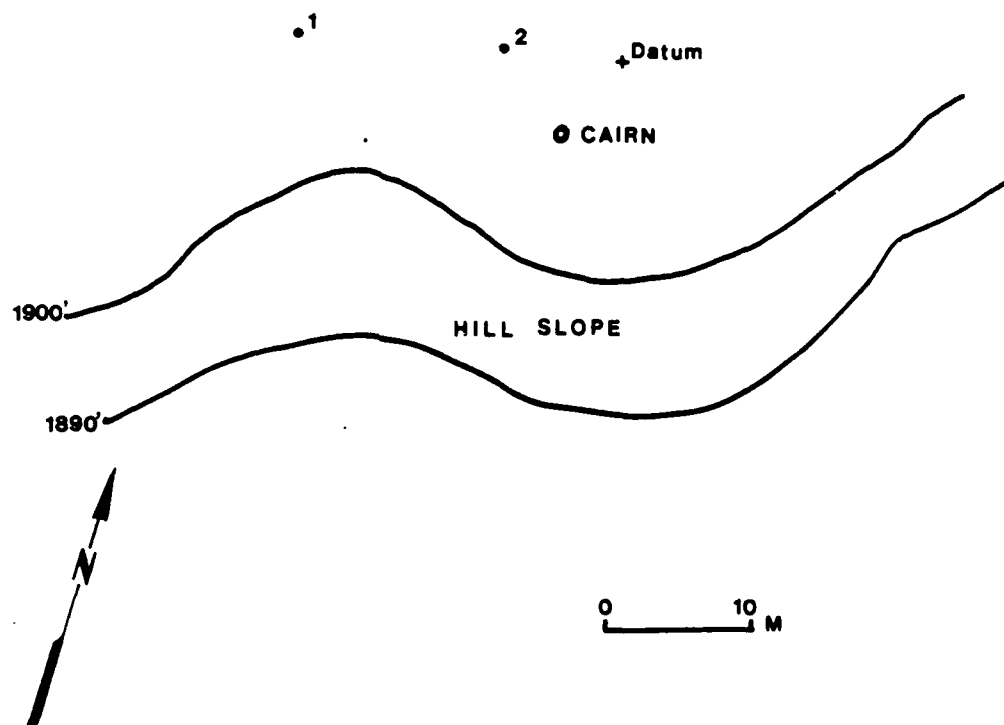


Figure 103. Plan of site 32DU686.

Site number: 32DU687 Site name:
County: Dunn. State: North Dakota. Site map: Figure 104
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: At the edge of an upland plain, elevated terrace
or bluff.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Short bunch grass, white penstemon.
Ground surface visibility (%): 50%.
Nearest water: Skunk Creek - 300m.
Site condition - impacts: Erosion is occurring around the cairn, but
otherwise the site is relatively undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 15 stones visible, 65cm in diameter
and 5cm high.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of
the cairn.
Remarks: The nature of the cairn is unknown; it may relate to a trail
marker or burial, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

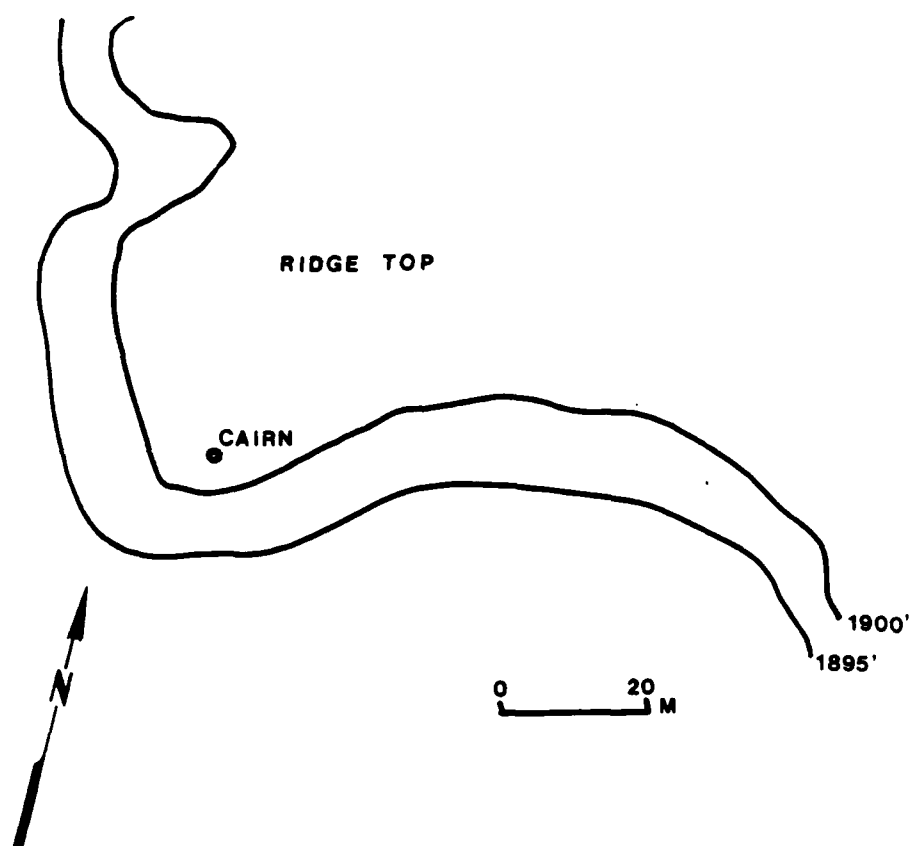


Figure 104. Plan of site 32DU687.

Site number: 32DU688 Site name:
County: Dunn. State: North Dakota. Site map: Figure 105
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a point along the south terrace of an
ephemeral drainage.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: There are trees and heavy brush cover in the drainage;
medium-tall grass and little bluestem near the cairn; skunkbrush in the
cairn; and dwarf juniper on the terrace edge.
Ground surface visibility (%): 40%.
Nearest water: Missouri River - 500m.
Site condition - impacts: The cairn is overgrown, but otherwise
undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn 2.5m E-W by 1.25m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The nature of the cairn is unknown. It may mark a burial or
a trail, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

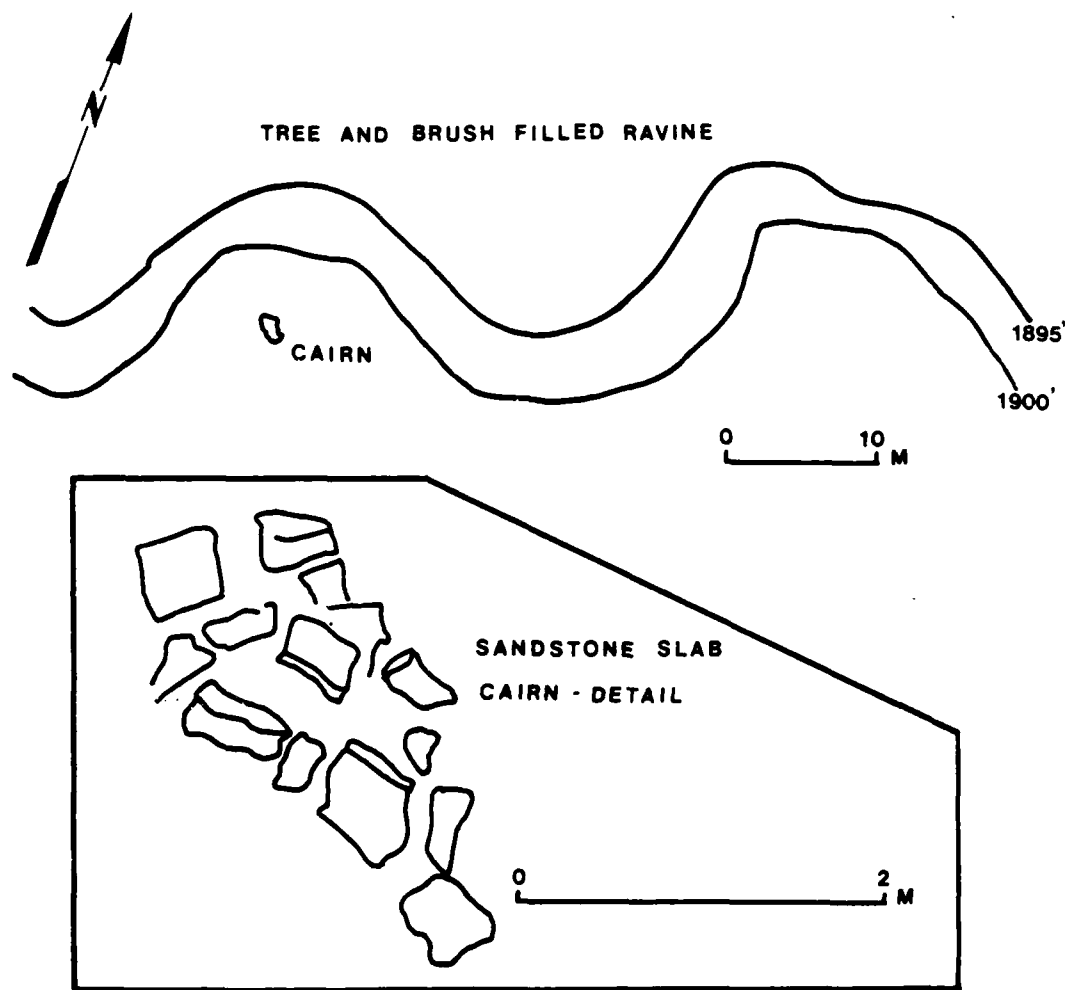


Figure 105. Plan of site 32DU688, with detail of cairn.

Site number: 32DU689 Site name:
County: Dunn. State: North Dakota. Site map: Figure 106
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 616.
Topographic position: On a very slight protrusion along the edge of an
upland plain/elevated terrace.
Site size: 5m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, silver sage and buckbrush in pit.
Ground surface visibility (%): 30%.
Nearest water: Missouri River - 500m.
Site condition - impacts: The pit is overgrown but otherwise
undisturbed. There is a cultivated field nearby.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression, 2.31m NE-SW by 2.21m NW-SE and
55cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the depression.
Remarks: The nature of the depression is unknown, but based on its size
and location, it is considered to be an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

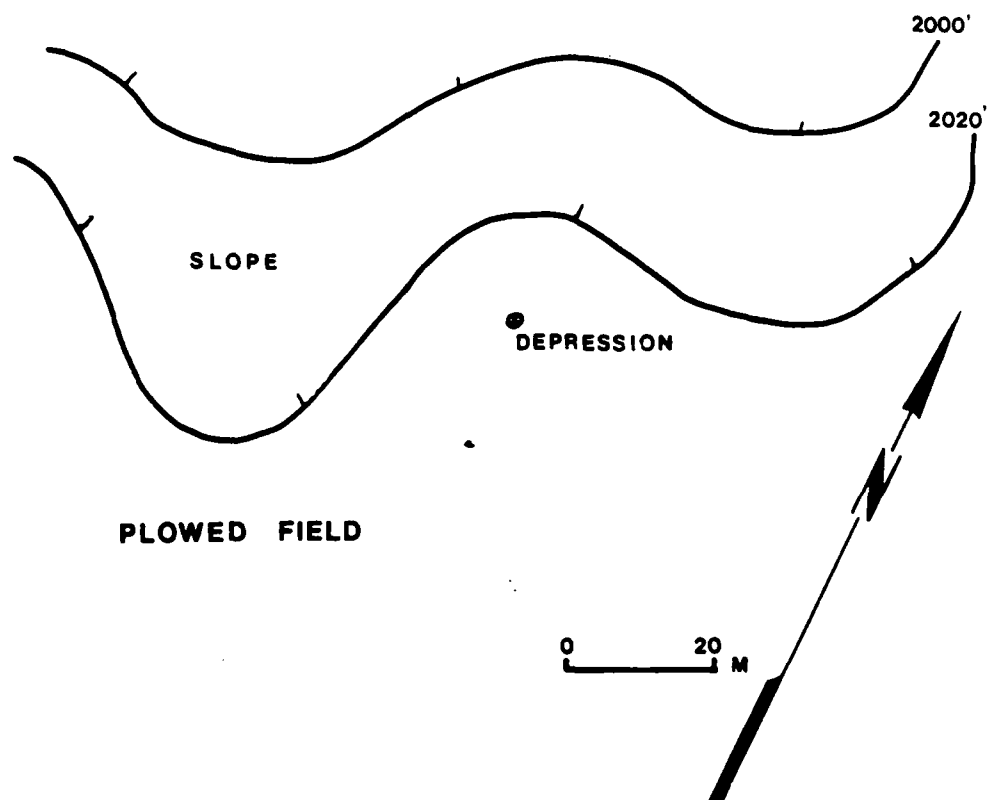


Figure 106. Plan of site 32DU689.

Site number: 32DU690 Site name:
County: Dunn. State: North Dakota. Site map: Figure 107
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: At the edge of a small knob that projects out of the upper terrace/upland plain in this vicinity.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Skunkbrush in the depression; bunch grass around the depression.
Ground surface visibility (%): 40%.
Nearest water: Missouri River - 600m.
Site condition - impacts: The pit is overgrown but otherwise appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Depression, 2.57m NE-SW by 1.65m NW-SE and 56cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the nature of the depression.
Remarks: The nature of the depression is unknown, but based on size and location, it is considered to be an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine the nature of the depression.

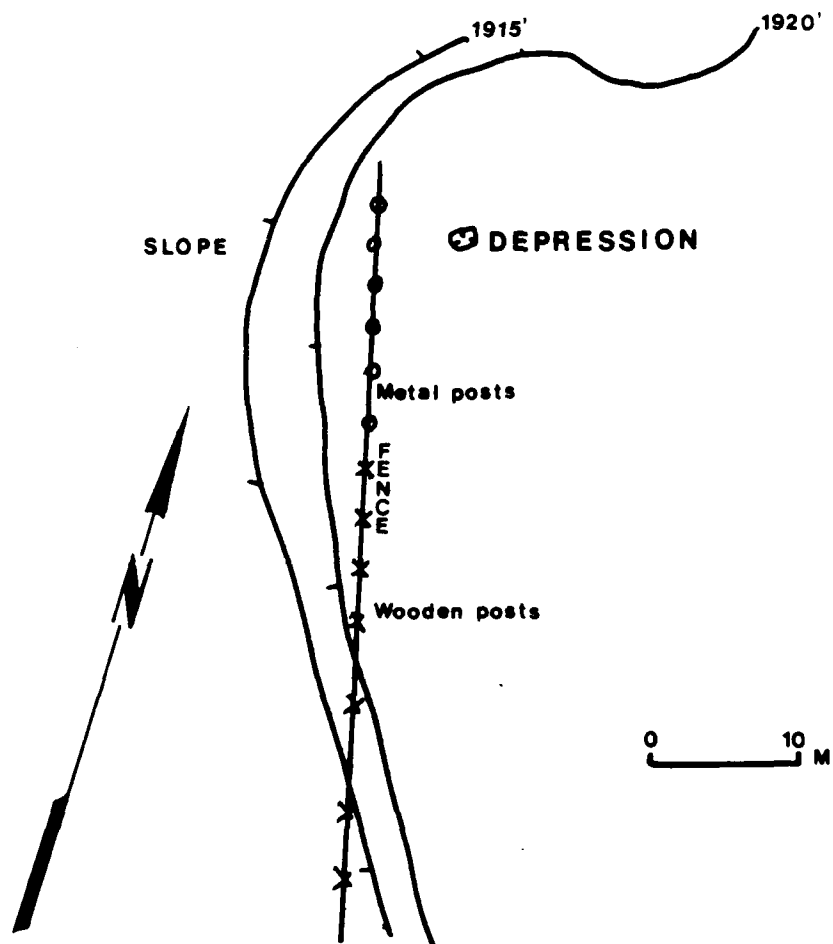


Figure 107. Plan of site 32DU690.

Site number: 32DU691 Site name:
County: Dunn. State: North Dakota. Site map: Figure 108
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Burials.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 604.
Topographic position: On a hilltop on a ridge system.
Site size: 150m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, white penstemon, western wallflower,
buckbrush and bare rock.
Ground surface visibility (%): 30%.
Nearest water: Spring - 200m.
Site condition - impacts: The features/graves appear to be collapsed
and the burials have probably been removed. Otherwise the site is
relatively undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: F1=metal round-topped wooden trunk in an area
of piled up sandstone slabs, 4.65m E-W by 1.45m N-S. It is probably a
burial and possibly two adjacent burials. F2=possible burial location
in an area measuring 2.25m E-W by 1.85m N-S. A substantial branch along
the length of the feature may have once served as a support for more
sandstone slabs, but has now collapsed. F3=possible burial location,
roughly rectangular, measuring 2.25m N-S by 1.55m E-W. F4=sandstone
slab rock cairn made up of seven slabs, 1.2m E-W by 0.85m N-S. There is
a 1x2" stake driven into the soil adjacent to it.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because this is a burial/sacred site, impacts to the
area should be avoided. If the site is to be impacted, detailed
research and testing should be undertaken to determine whether the site
can be related to any living person(s) and whether any actual burials
remain extant.
Remarks: Several of these "trunk burial" sites are known in the area.
Given further research, they may be eligible for nomination to the
National Register of Historic Places under a thematic classification.
Testing for National Register Eligibility (purpose of): No testing
should be carried out unless the site is to be impacted. In that case,
testing to determine areal extent, depth, components present, research
potential and integrity should be conducted, especially to locate any
extant human remains.

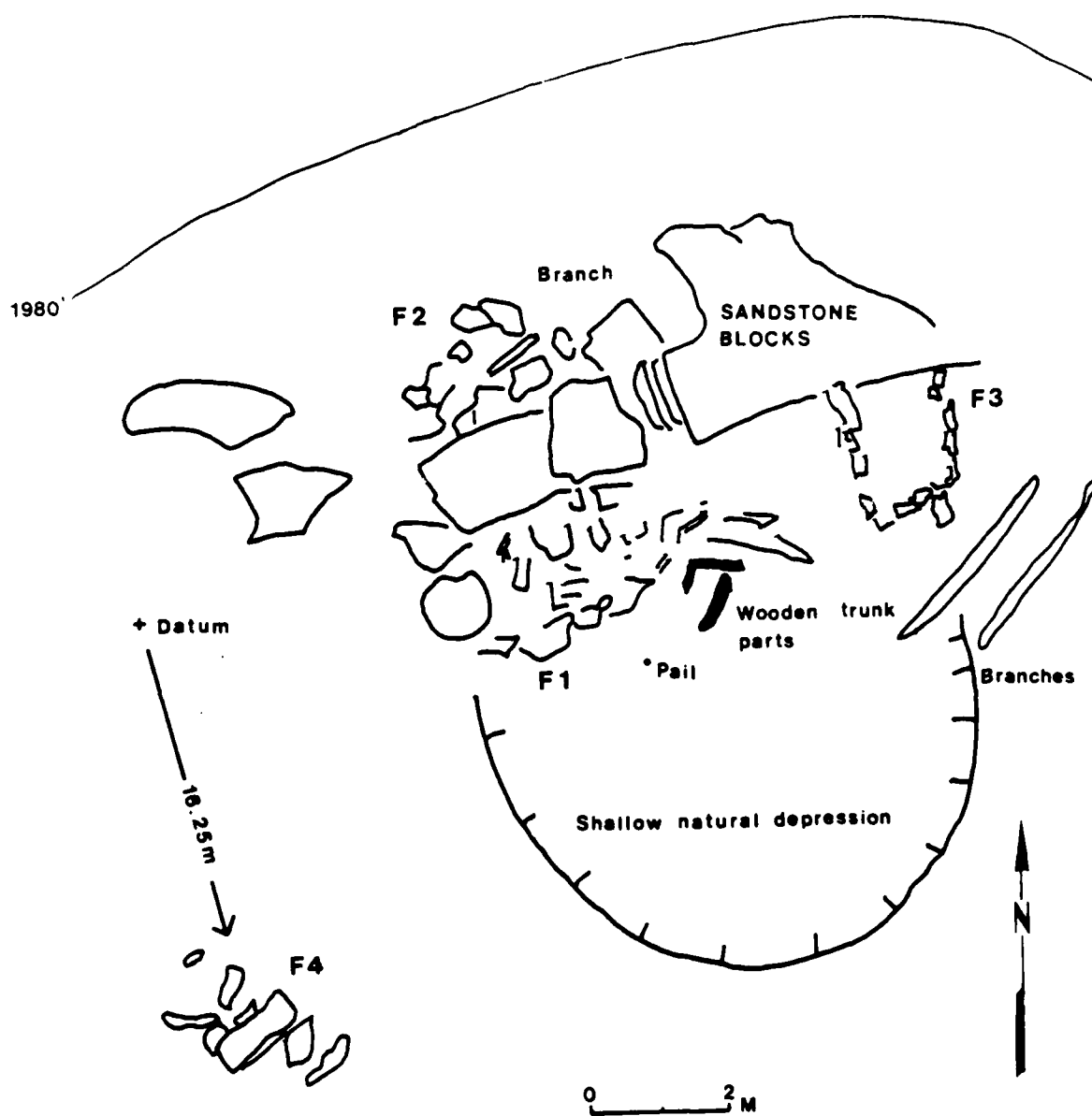


Figure 108. Plan of site 32DU691.

Site number: 32DU692 Site name:
County: Dunn. State: North Dakota. Site map: Figure 109
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Stone circle and partial stone circle.
Component(s): Unknown.
Elevation (m): 591.
Topographic position: On a dogleg ridge that descends in an easterly
direction from a prominent sandstone-capped ridge.
Site size: 650m².
Strata and depth: Unknown - 0-20cm based on feature type.
Vegetation: Prairie grasses.
Ground surface visibility (%): 40%.
Nearest water: Spring - 200m.
Site condition - impacts: No apparent disturbances have occurred.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: 1=partial stone circle, 6.47m E-W diameter,
with attached rock patterns. 2=stone circle, 8.18m N-S diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test for National
Register of Historic Places eligibility.
Remarks: This site appears to have good integrity and if cultural
material is present it might provide significant research data.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

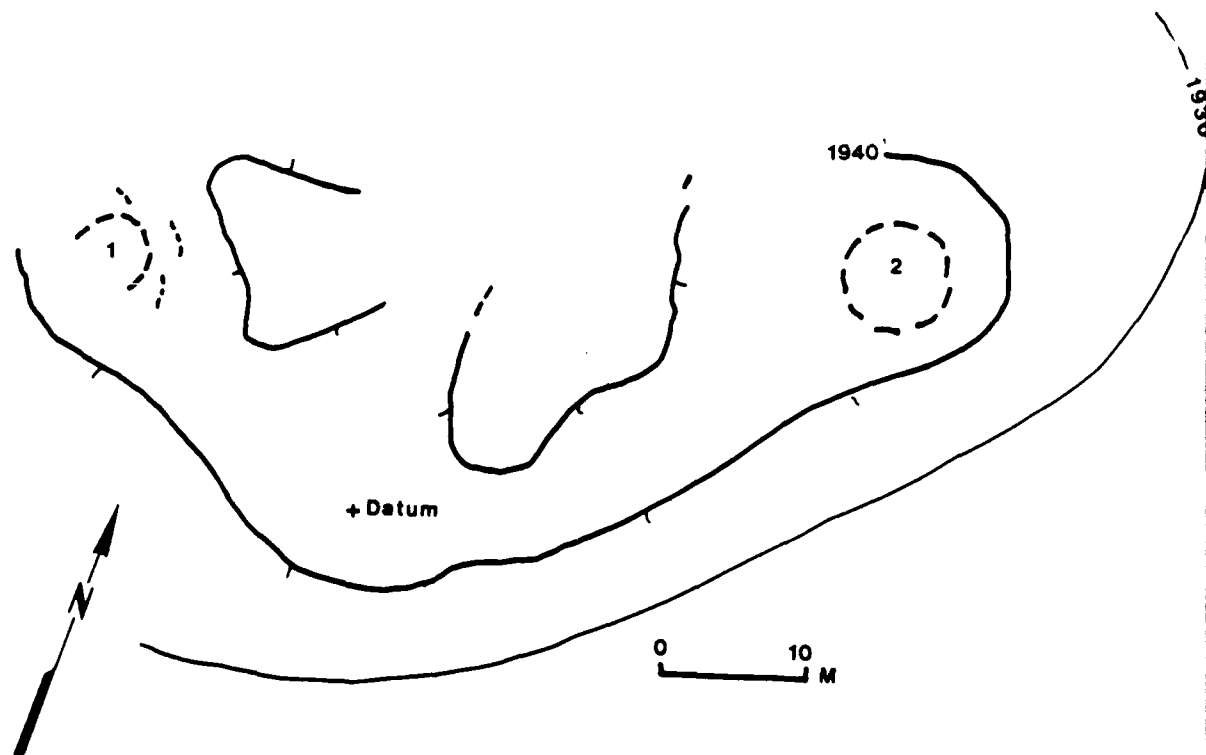


Figure 109. Plan of site 32DU692.

Site number: 32DU693 Site name:
County: Dunn. State: North Dakota. Site map: Figure 110
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Stone circle.
Component(s): Unknown.
Elevation (m): 576.
Topographic position: On a saddle along a ridge system.
Site size: 22m².
Strata and depth: Unknown - 0-20cm based on feature type.
Vegetation: Prairie grasses, white penstemon.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 50m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Stone circle, 7.13m diameter, made up of 75+
cobble.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted it should be tested for
National Register of Historic Places eligibility.
Remarks: The site has good integrity; if cultural materials are pre-
sent, it could provide significant research data on a variety of
questions (age, activities undertaken, function).
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

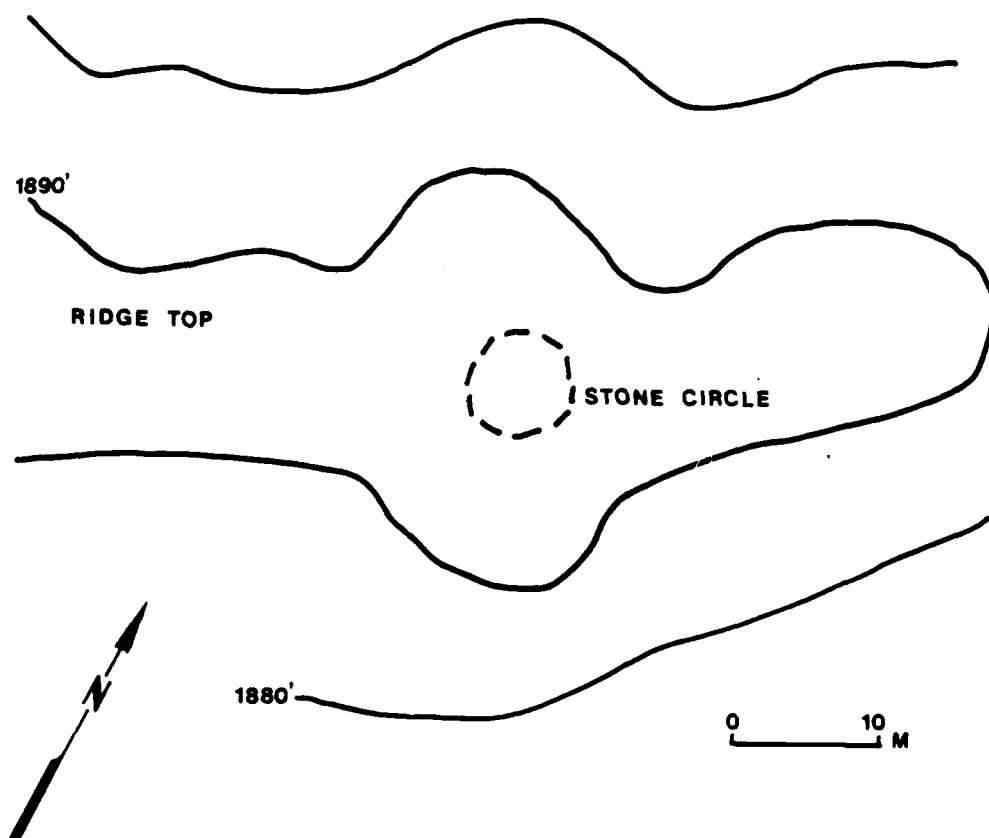


Figure 110. Plan of site 32DU693.

Site number: 32DU694 Site name:
County: Dunn. State: North Dakota. Site map: Figure 111
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the side of a hill/elevated edge of a gently
rolling prairie.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, buckbrush.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn of nine stones, 1m N-S x 0.7m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The nature of the cairn is unknown. It might have been a
marker for a trail or burial?
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

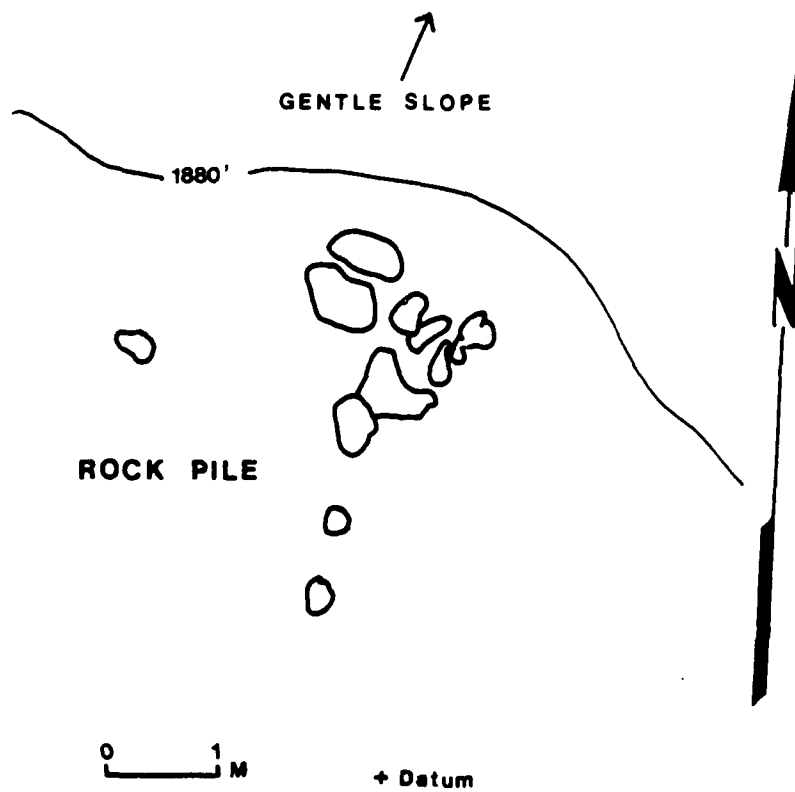


Figure 111. Plan of site 32DU694.

Site number: 32DU695 Site name:
County: Dunn. State: North Dakota. Site map: Figure 112
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Foundation.
Component(s): Unknown historic.
Elevation (m): 579.
Topographic position: At the end of a ridge.
Site size: 50m².
Strata and depth: Unknown.
Vegetation: Native short prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: Whatever structure was on the foundation has
been removed, but what is left has probably not changed much since that
removal.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: A rectangular excavation, 9.0m x 5.2m, with
two squared wooden logs that may have been sills along the west side.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Given the lack of erosion of the vertical cuts, the
site has been recently abandoned and is not considered eligible for
nomination to the National Register of Historic Places. No further work
is recommended in that regard.
Remarks: This site retains no significance since the structure has been
removed.

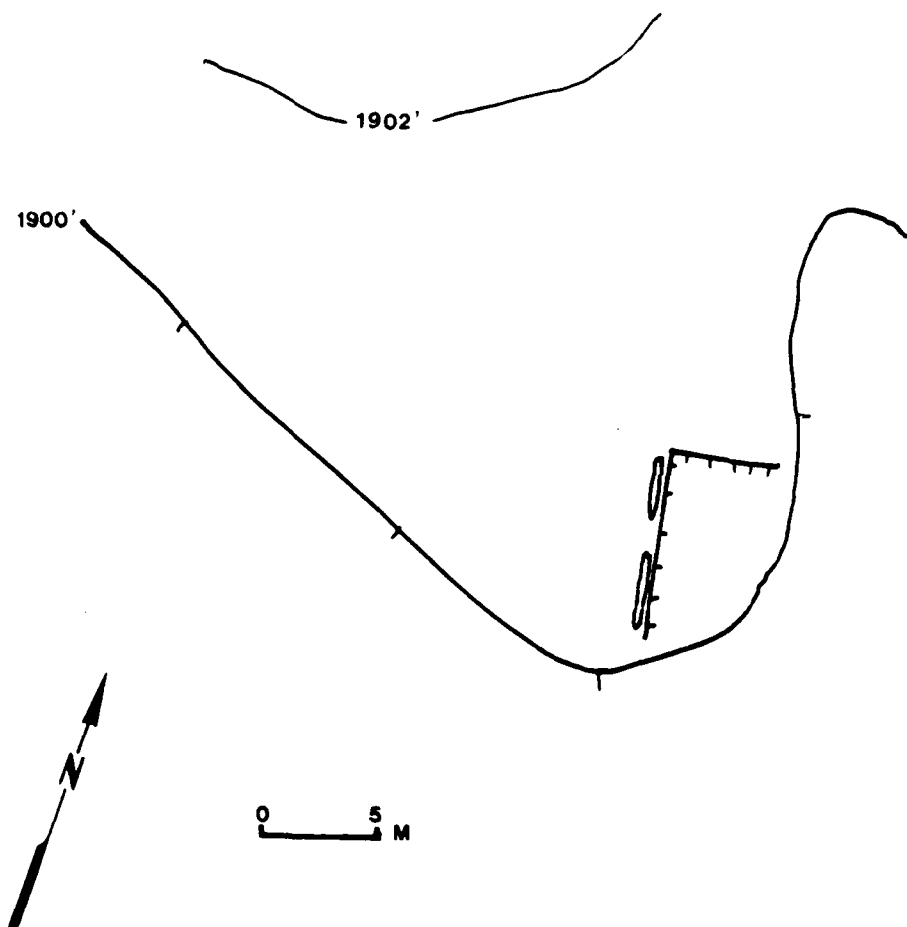


Figure 112. Plan of site 32DU695.

Site number: 32DU696 Site name:
County: Dunn. State: North Dakota. Site map: Figure 113
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On a small isolated knob at the end of a NE
trending ridge.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Sparse bunch grass, white penstemon.
Ground surface visibility (%): 50%.
Nearest water: Intermittent stream - 75m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 0.6m in diameter, comprised of five
stones.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The nature of the cairn is uncertain. It might mark a trail
or a burial or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

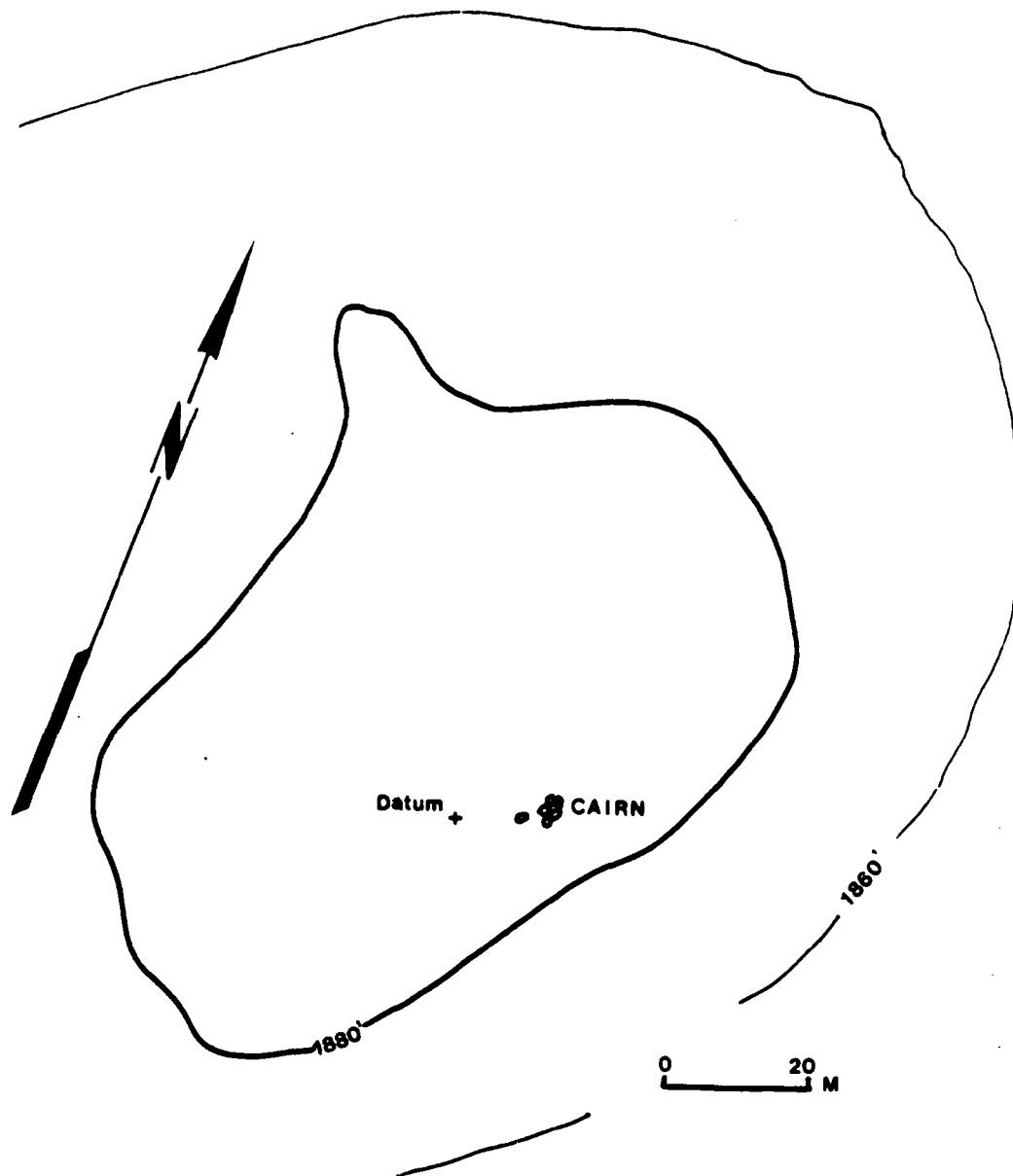


Figure 113. Plan of site 32DU696.

Site number: 32DU697 Site name:
County: Dunn. State: North Dakota. Site map: Figure 114
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Stone circle.
Component(s): Unknown.
Elevation (m): 583.
Topographic position: On top of a low knoll at the mid-level step
between the upper surface of a ridge and a lower drainage channel.
Site size: 13m².
Strata and depth: Unknown - 0-20cm based on feature type.
Vegetation: Prairie grasses, white penstemon.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: Some surface erosion has occurred; otherwise
the site is undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Partial stone circle, 4.35m E-W diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test for National
Register of Historic Places eligibility.
Remarks: This site appears to have good integrity and if cultural
materials are present, it could inform on prehistoric use of the area.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

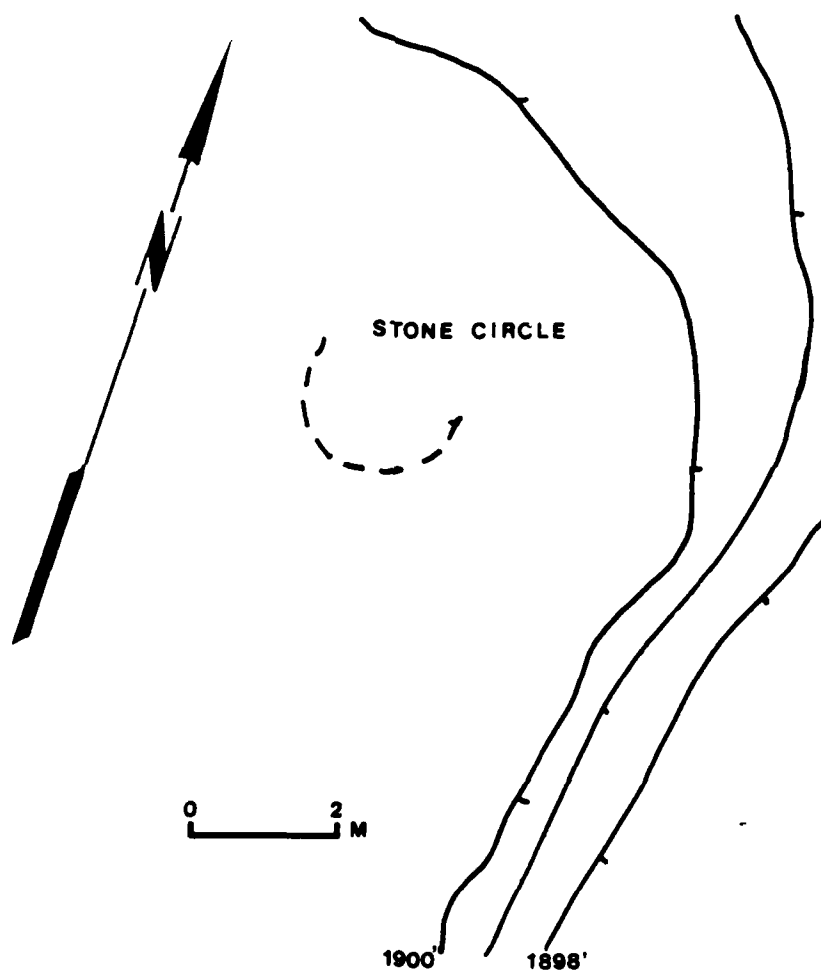


Figure 114. Plan of site 32DU697.

Site number: 32DU698 Site name:
County: Dunn. State: North Dakota. Site map: Figure 115
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Quarry (historic)/depressions.
Component(s): Unknown historic.
Elevation (m): 567.
Topographic position: On a broad, flat, elevated terrace/upland plain.
Site size: 700m².
Strata and depth: Unknown.
Vegetation: Two cottonwood trees in the pits; silver buffaloberry, skunkbrush and colonizing prairie grasses and forbs.
Ground surface visibility (%): 10-60%.
Nearest water: Intermittent stream - 100m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: The site is probably little changed since it was abandoned, but the reservoir is encroaching onto the site area.
Surface collections (by whom and when): None.
Data plotted on site map: Two gravel pits, spoil piles and a smaller depression.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of the smaller depression.
Remarks: The quarry site has little research potential, but the nature of the smaller depression is unknown; and it may or may not relate to the quarry activity.
Testing for National Register Eligibility (purpose of): To determine the nature of the smaller depression.

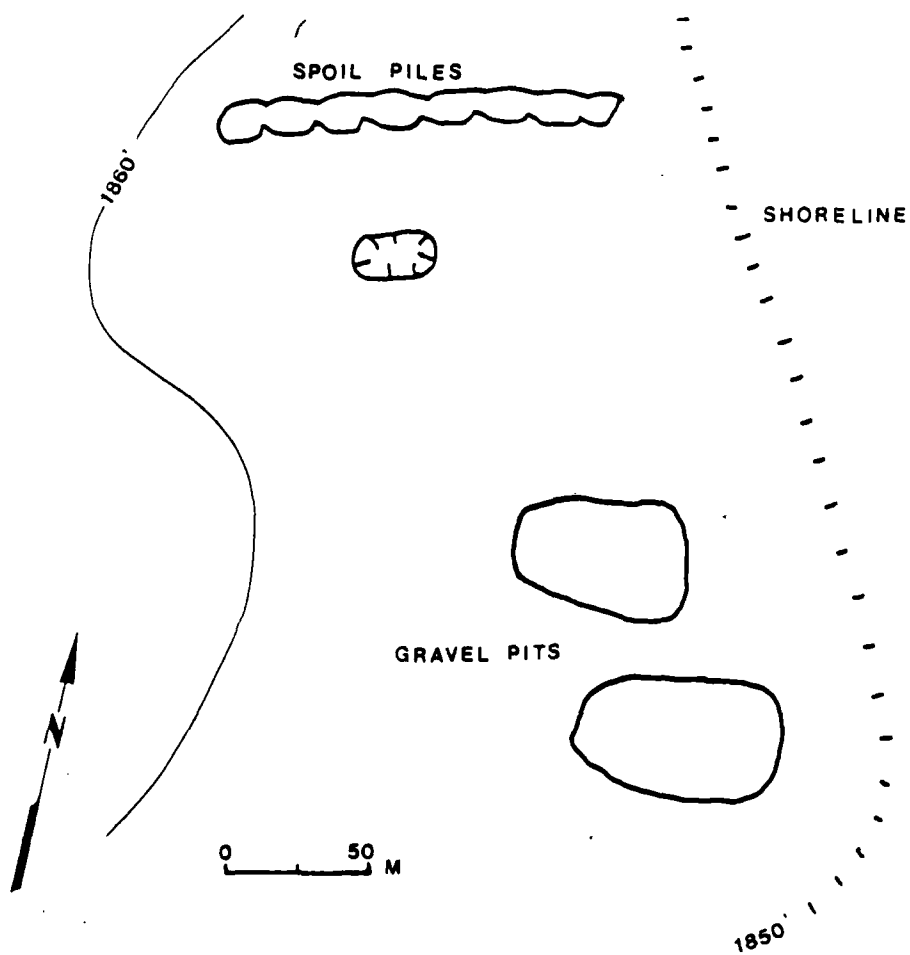


Figure 115. Plan of site 32DU698.

Site number: 32DU699 Site name:
County: Dunn. State: North Dakota. Site map: Figure 116
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Depression (historic).
Component(s): Unknown historic.
Elevation (m): 567.
Topographic position: Near the edge of the reservoir cutbank on a
generally broad, flat upland plain/terrace.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Prairie grasses and buckbrush.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: The site is overgrown, but otherwise
undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: Depression, 2.58m N-S x 1.0m E-W and 0.75m
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The significance of the site is unknown. A multitude
of possible explanations for pits exist and the site should be examined
if it is to be impacted in order to determine its origin/use.
Remarks: The visible backdirt from the depression suggests that erosion
has not been active for too long.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

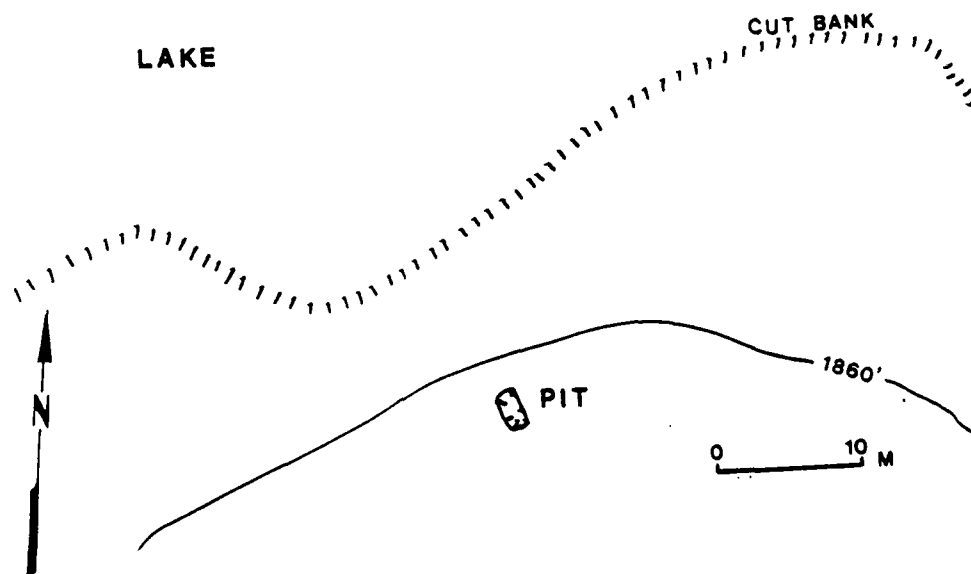


Figure 116. Plan of site 32DU699.

Site number: 32DU700 Site name:
County: Dunn. State: North Dakota. Site map: Figure 117
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 567.
Topographic position: On the edge of an erosional remnant, upland plain
or terrace of an intermittent stream.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Native prairie grass, forbs, chokecherry and silverberry.
Ground surface visibility (%): 50%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.08m NW-SE by 0.7m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a burial or a trail, or result from some
other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

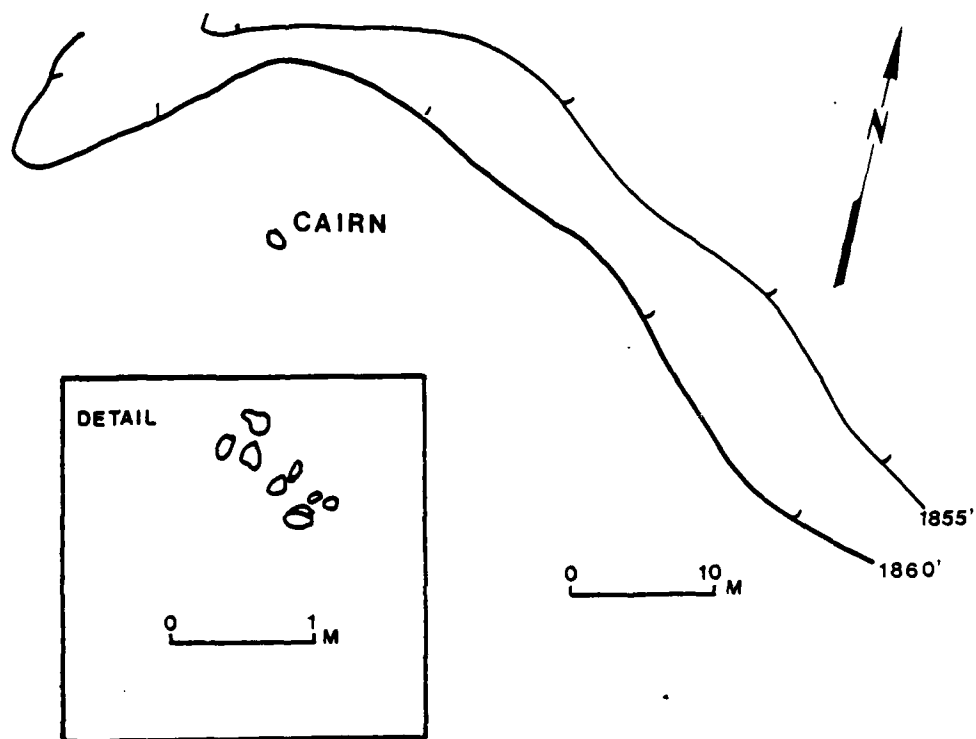


Figure 117. Plan of site 32DU700, with detail of cairn.

Site number: 32DU701 Site name:
County: Dunn. State: North Dakota. Site map: Figure 118
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 576.
Topographic position: On the crest of a sharp-backed ridge.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Native prairie grasses with western wallflower.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The cairn appears to be undisturbed. It has
not been affected by vehicular traffic through the gate.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 0.5m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, determine the nature of
the cairn.
Remarks: The cairn is 2m from a gate in a barbed wire fence and may
relate to that somehow, or it may have had another function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

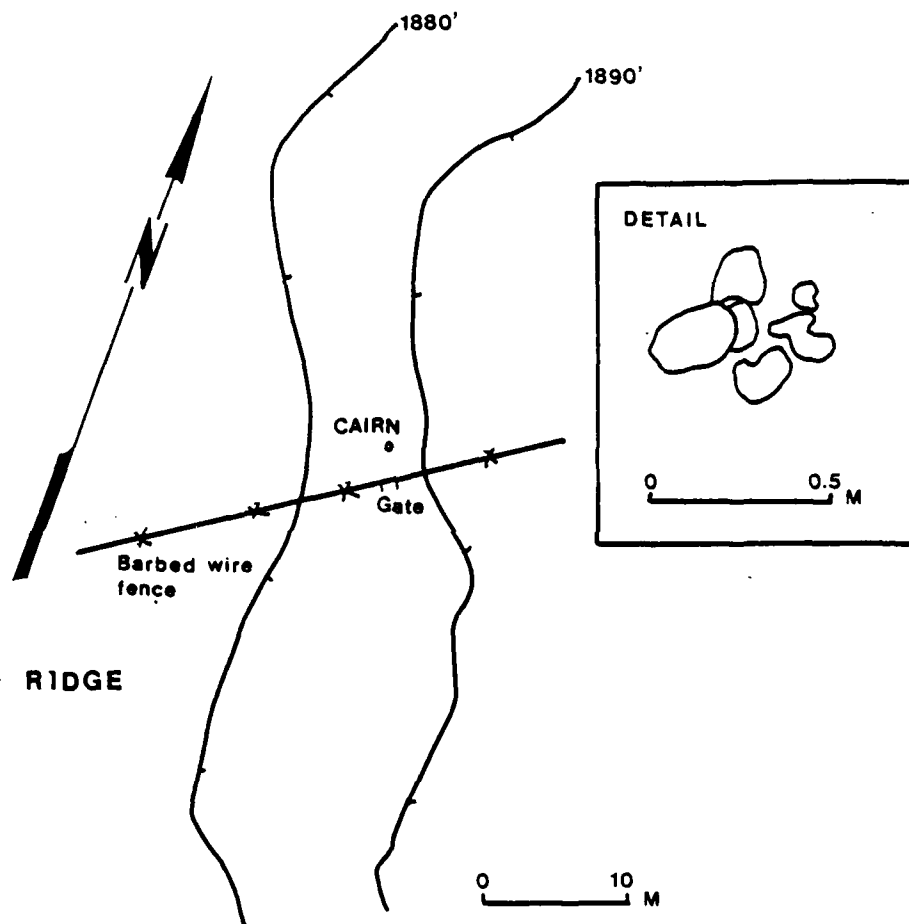


Figure 118. Plan of site 32DU701, with detail of cairn.

Site number: 32DU702 Site name:
County: Dunn. State: North Dakota. Site map: Figure 119
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burial and cairn.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 597.
Topographic position: On a very prominent hilltop overlooking the former valley of the Missouri River.
Site size: 5m².
Strata and depth: Unknown.
Vegetation: Sparse prairie grasses and forbs.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The trunk has been disturbed and the presumed burial removed; otherwise the location of the site has fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: 1=wooden trunk with curved lid, 0.73m x 0.39m. 2=rock cairn, 0.75m diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because this is a burial/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials remain extant.
Remarks: Several "trunk burial" sites are known in the area. The apparent association of a rock cairn with the burial trunk is an interesting aspect of this site. Given further research, trunk burials may be eligible for nomination to the National Register of Historic Places under a thematic classification.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. In that circumstance, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

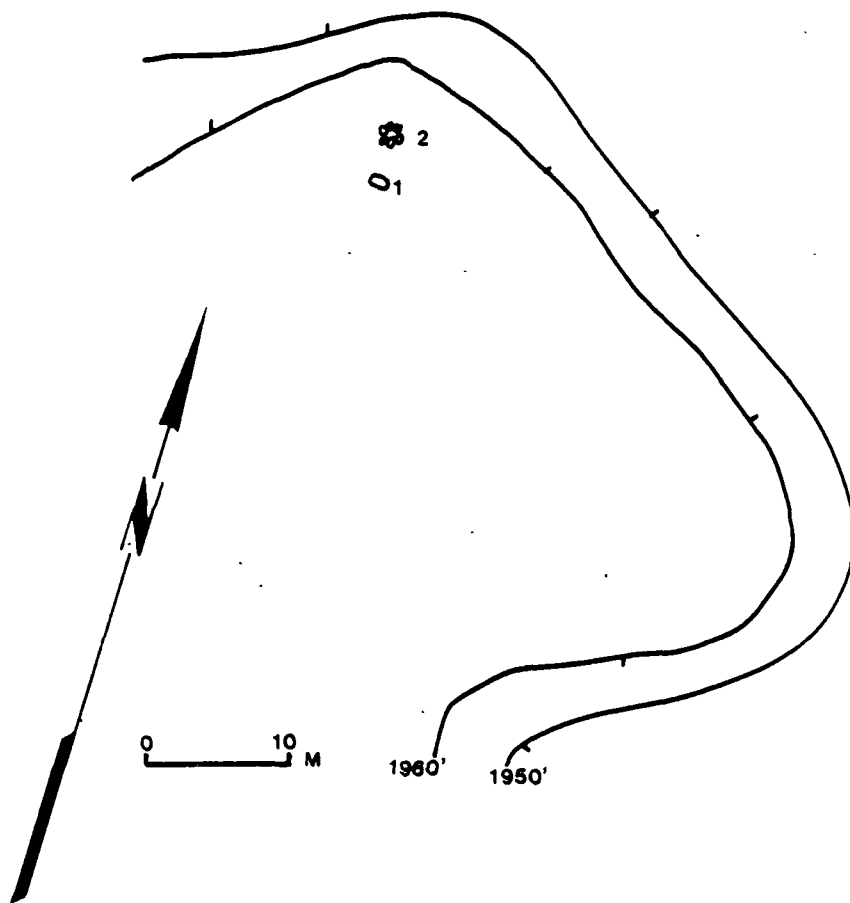


Figure 119. Plan of site 32DU702.

Site number: 32DU703 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 120
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burials.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 640.
Topographic position: Along the crest of a high, narrow ridge with an outcrop of large sandstone slabs and blocks.
Site size: 40m².
Strata and depth: Unknown.
Vegetation: Short prairie grass, dwarf juniper, yellow sweet clover.
Ground surface visibility (%): 70%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The site has been disturbed and the burials have probably been removed, although some skeletal material may remain. Otherwise, the site has good integrity.
Surface collections (by whom and when): None.
Data plotted on site map: Locus 1: A=wooden trunk, 72cm long and 40cm wide. B=wooden box parts. C=large green glass bead and purple glass bottle neck. D=infant bones. E=sandstone slabs. Locus 2: Large sandstone block with area of sandstone slabs protected by overhang. The name Tom Bolman is engraved in this rock.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Since this is a burial/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site relates to any living person(s) and whether burials remain extant.
Remarks: A number of "trunk burial" sites are known in the area. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. In that circumstance, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

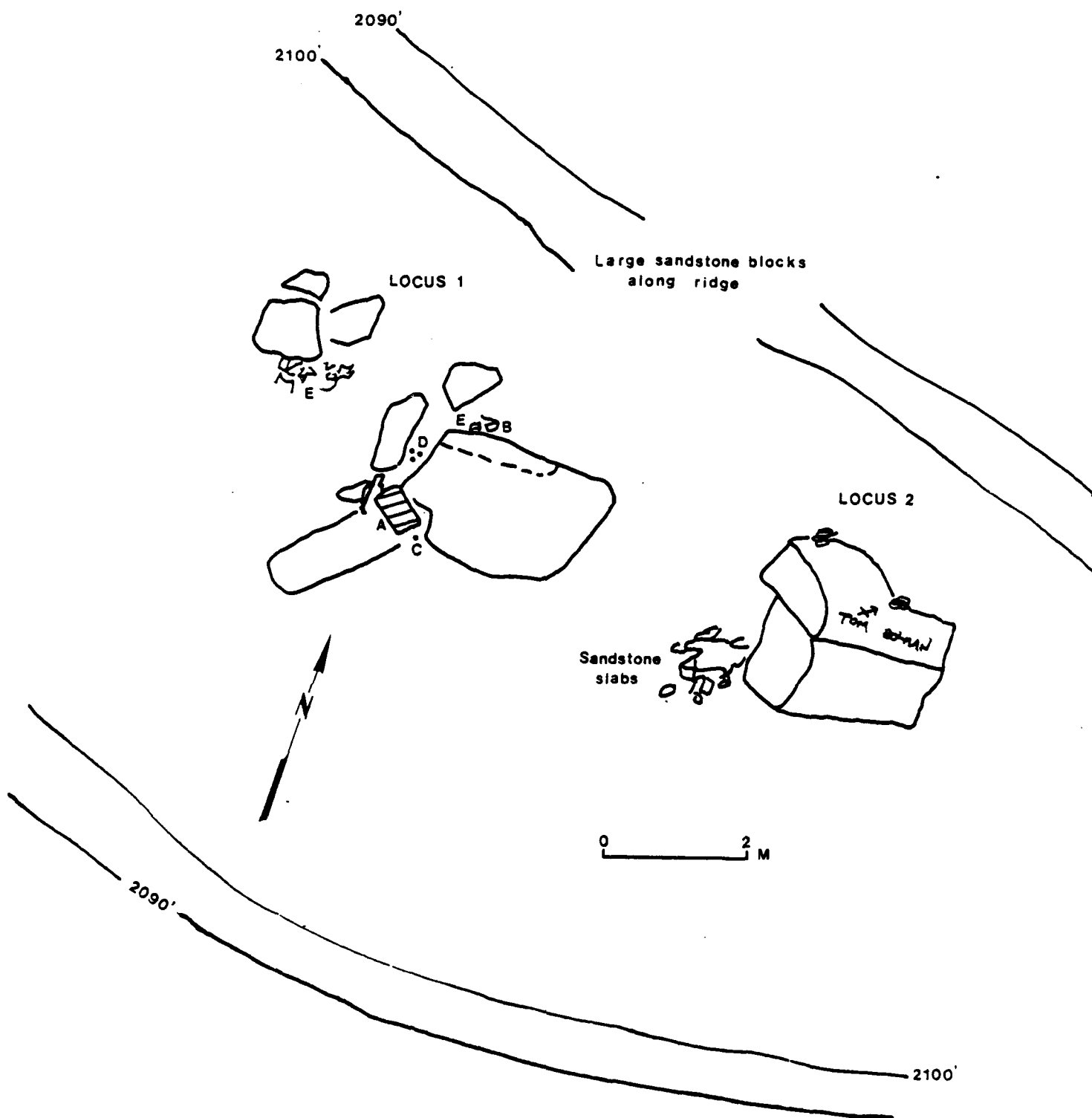


Figure 120. Plan of site 32DU703.

Site number: 32DU704 Site name:
County: Dunn. State: North Dakota. Site map: Figure 121
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Stone circle.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: At a slightly elevated rise/ridge along a
steep-banked upper terrace/upland plain of the former Missouri River.
Site size: 25m².
Strata and depth: Unknown - likely 0-20cm based on feature type.
Vegetation: Prairie bunch grass and native forbs.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Stone circle, with outer ring 8.31m N-S and
inner ring 3.45m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test for National
Register of Historic Places eligibility.
Remarks: The stones are well sodded-in and the site has the potential
to provide significant information in understanding prehistoric
utilization of this area.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

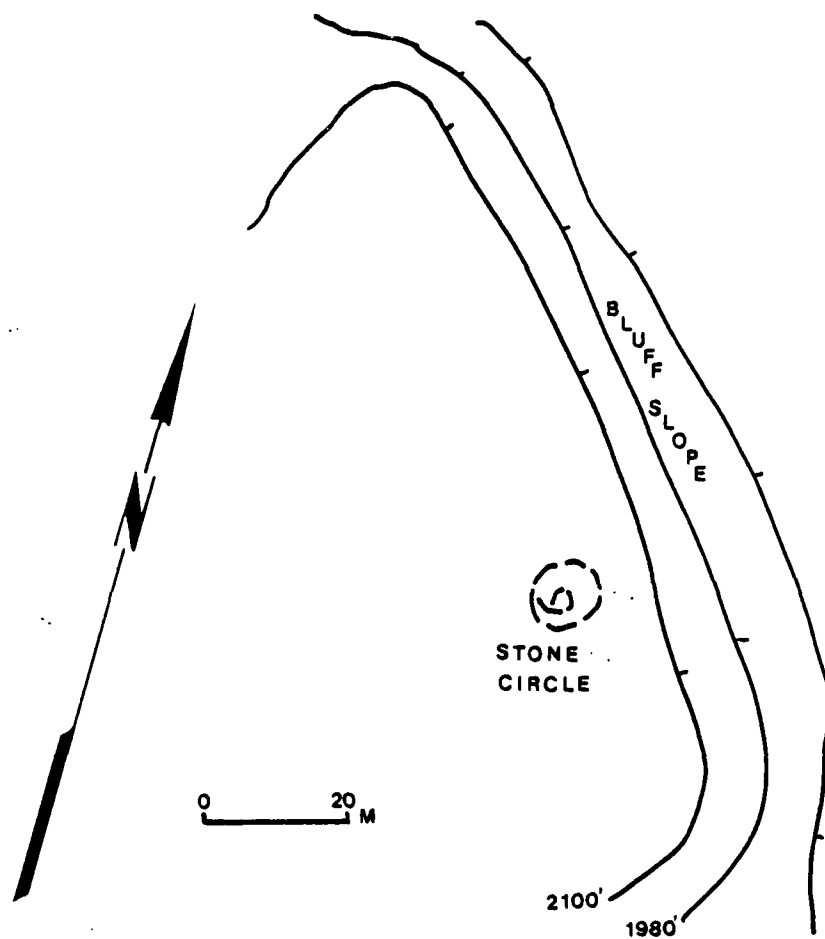


Figure 121. Plan of site 32DU704.

Site number: 32DU705 Site name:
County: Dunn. State: North Dakota. Site map: Figure 122
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 616.
Topographic position: On an elevated rise or hilltop west of the upper
terrace or bluff of the Missouri River.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Little bluestem, poison ivy.
Ground surface visibility (%): 10%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural material.
Data plotted on site map: Cairn, 1.45m N-S by 0.94m E-W, with 13
visible rocks.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

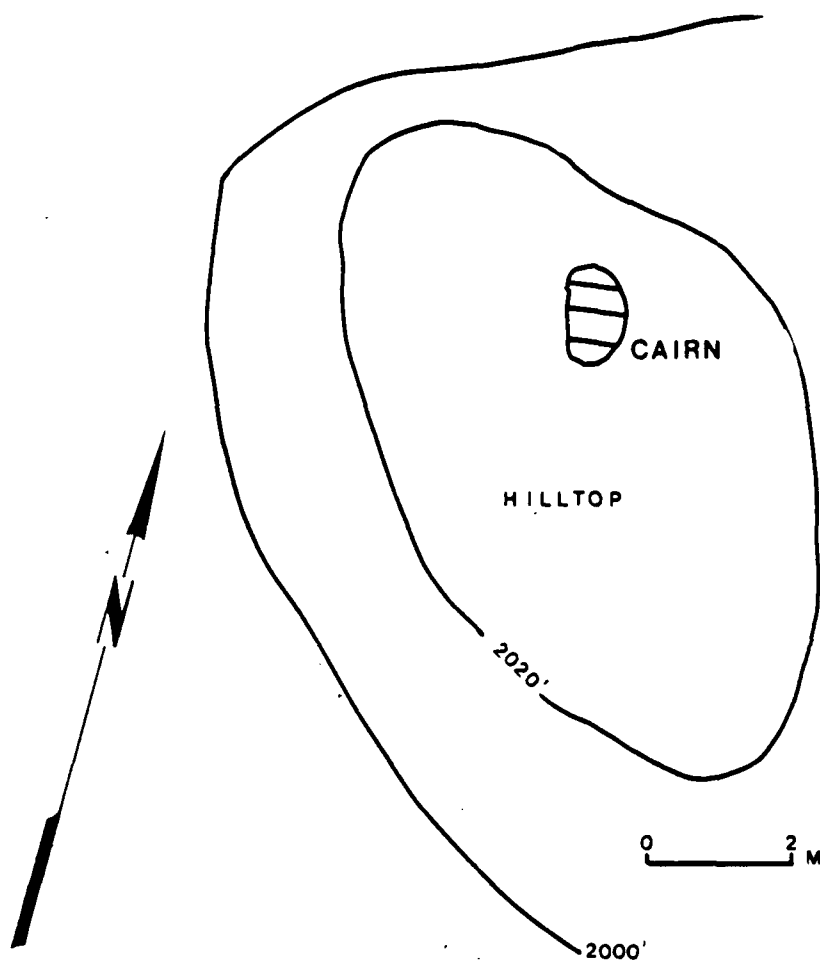


Figure 122. Plan of site 32DU705.

Site number: 32DU706 Site name:
County: Dunn. State: North Dakota. Site map: Figure 123
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On the crest of a small hill or ridge.
Site size: im^2 .
Strata and depth: Unknown.
Vegetation: Little bluestem, silver buffaloberry, buckbrush and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.15m N-S by 0.84m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the nature of the cairn.
Remarks: The cairn may mark a burial or a trail, reflect field clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine the nature of the cairn.

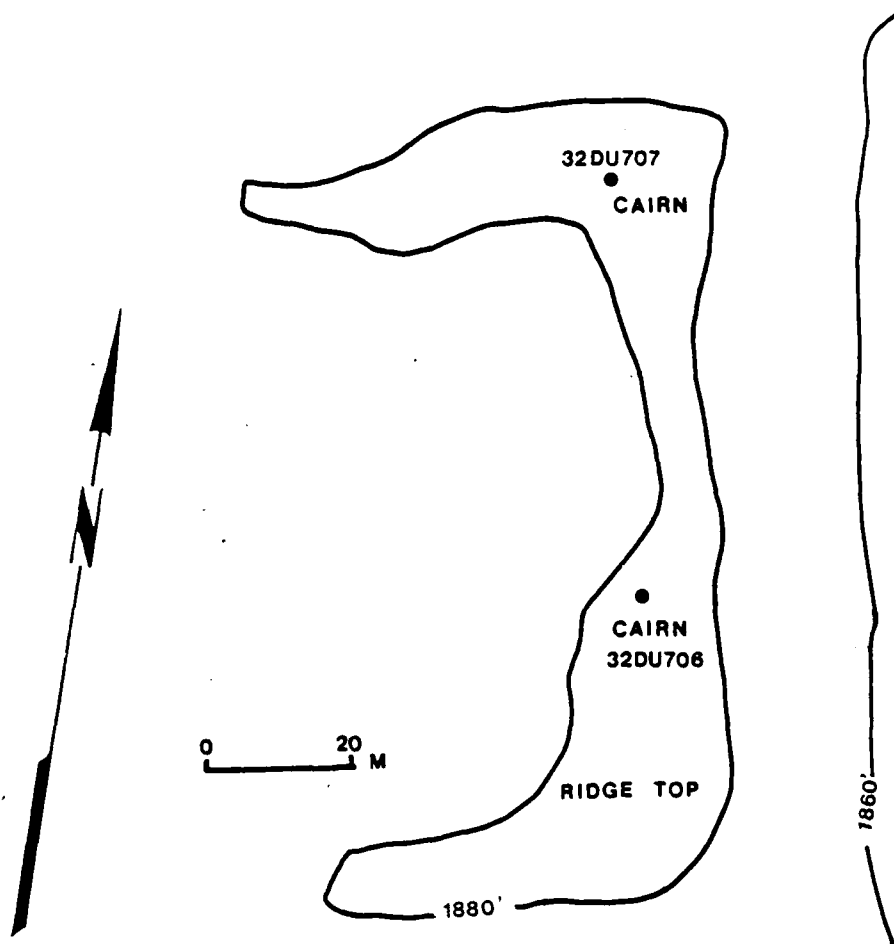


Figure 123. Plan of site 32DU706.

Site number: 32DU707 Site name:
County: Dunn. State: North Dakota. Site map: Figure 124
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of a ridge, where the ridge crest makes a
right angle.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Silver buffaloberry, grasses.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The site is overgrown, but relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.54m N-S by 1.05m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

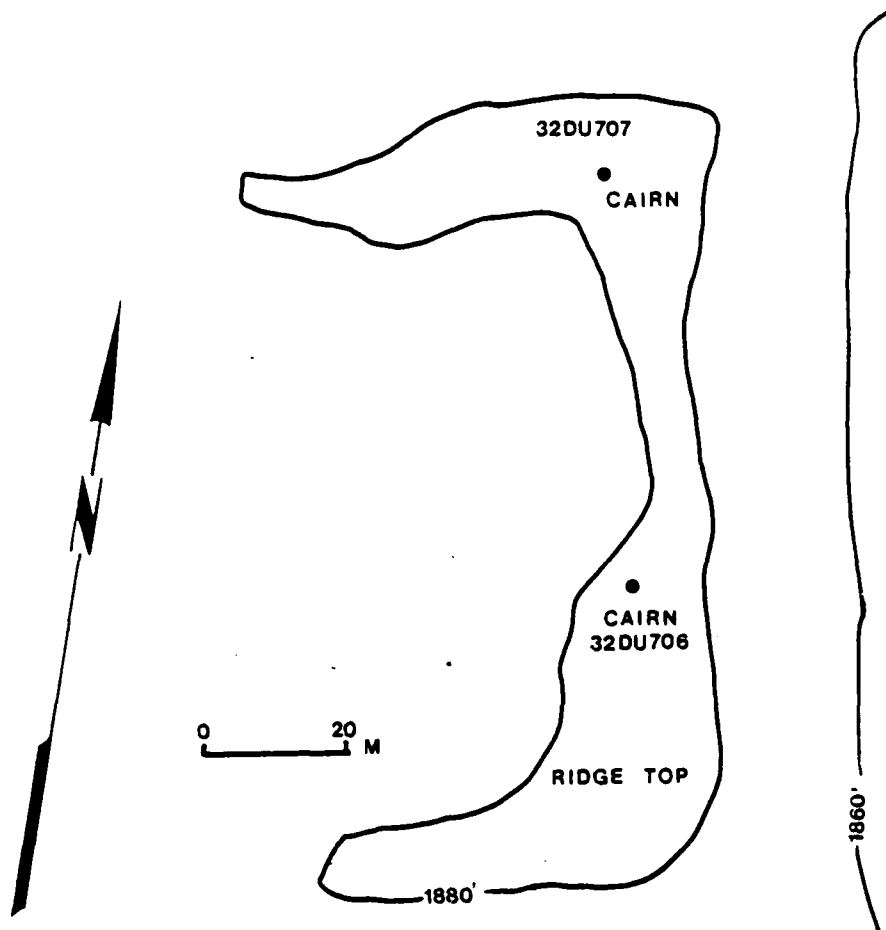


Figure 124. Plan of site 32DU707.

Site number: 32DU708 Site name:
County: Dunn. State: North Dakota. Site map: Figure 125
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of a small hill.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Little bluestem, native forbs.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.58m N-S by 0.49m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance. or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

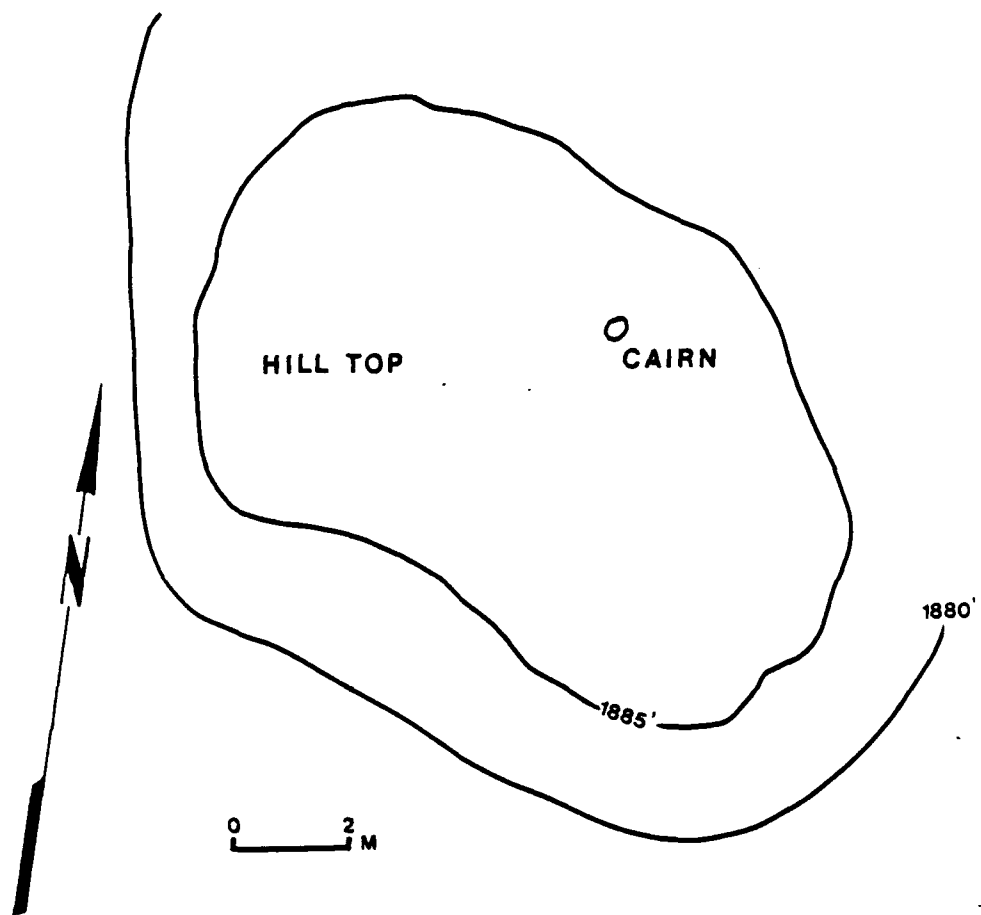


Figure 125. Plan of site 32DU708.

Site number: 32DU709 Site name:
County: Dunn. State: North Dakota. Site map: Figure 126
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573
Topographic position: Near the edge of a wedge-shaped projection of the
upland plain which protrudes into the valley of a former intermittent
stream.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Little bluestem, poison ivy, silver buffaloberry, yucca.
Ground surface visibility (%): 10%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.6m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

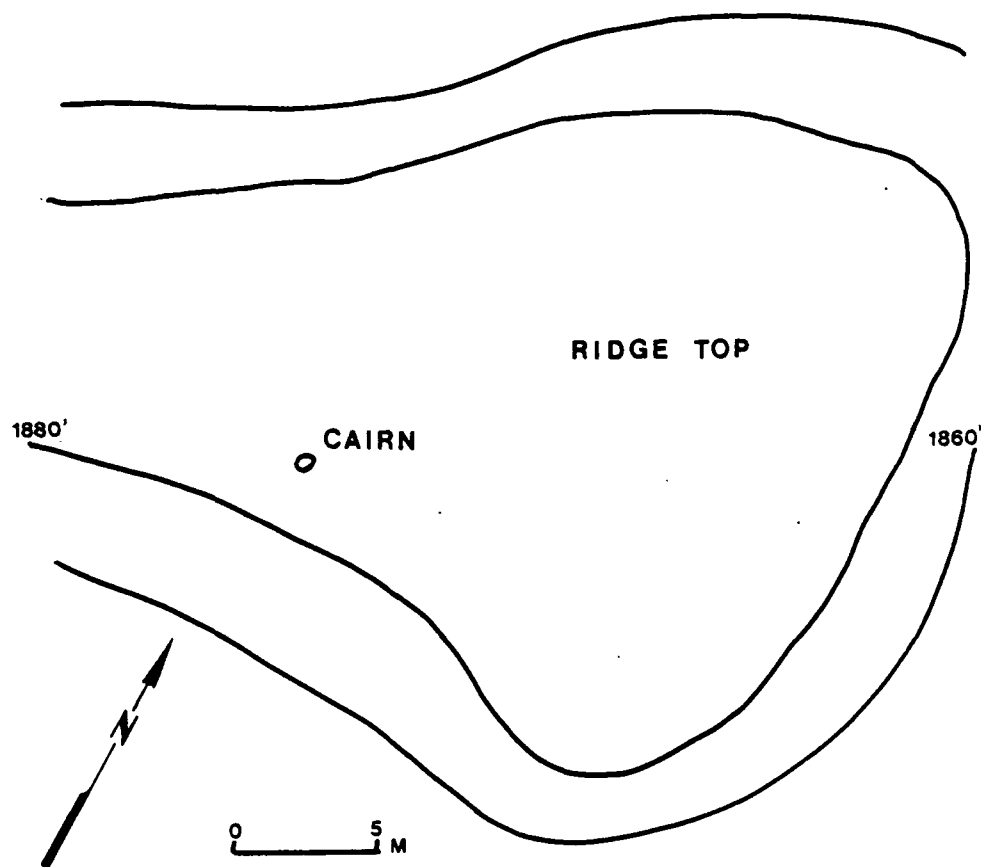


Figure 126. Plan of site 32DU709.

Site number: 32DU710 Site name:
County: Dunn. State: North Dakota. Site map: Figure 127
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cairn and artifact scatter.
Component(s): Unknown.
Elevation (m): 591.
Topographic position: On top of a prominent hill or butte.
Site size: 75m².
Strata and depth: Unknown.
Vegetation: Native prairie grass and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: Some slope erosion has taken place, but otherwise the site is undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn, 1.0m N-S by 1.17m E-W. 1=opaque chalcedony tertiary flake; 2=KRF tertiary flake; 3=KRF tertiary flake.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test for National Register of Historic Places eligibility.
Remarks: The cairn appears to be recently added to, but the presence of lithic material suggests its origins may be prehistoric.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - in particular the nature of the cairn.

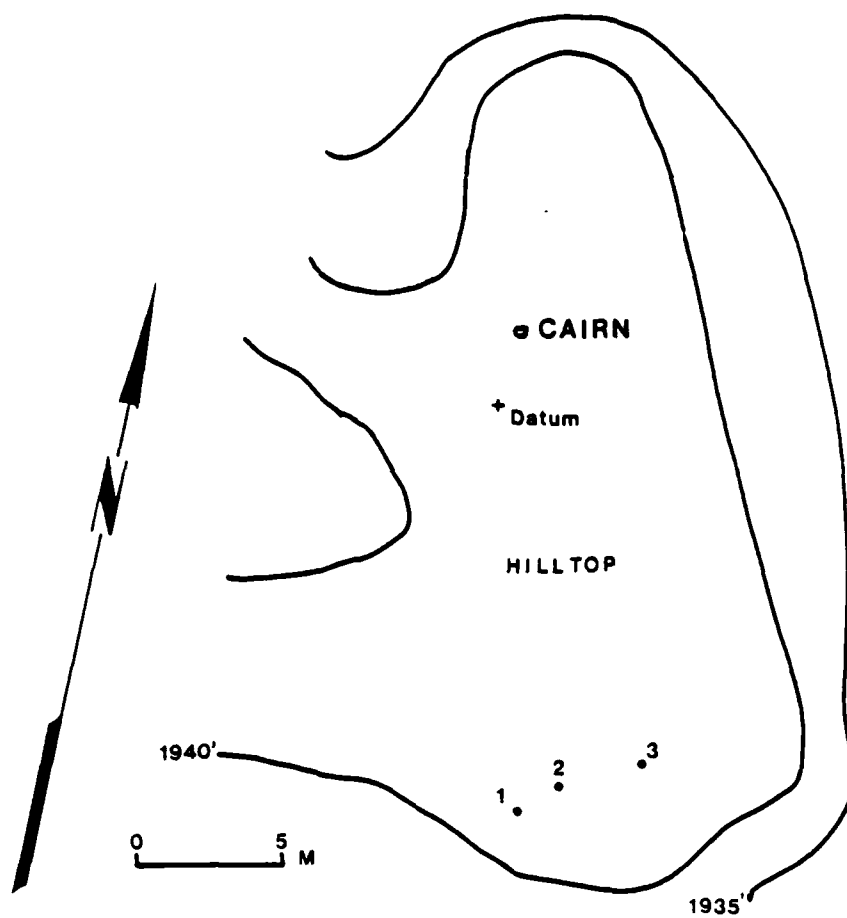


Figure 127. Plan of site 32DU710.

Site number: 32DU711 Site name:
County: Dunn. State: North Dakota. Site map: Figure 128
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: Along the edge of an upland plain/upland terrace.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Native prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 600m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.6m E-W by 0.47m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

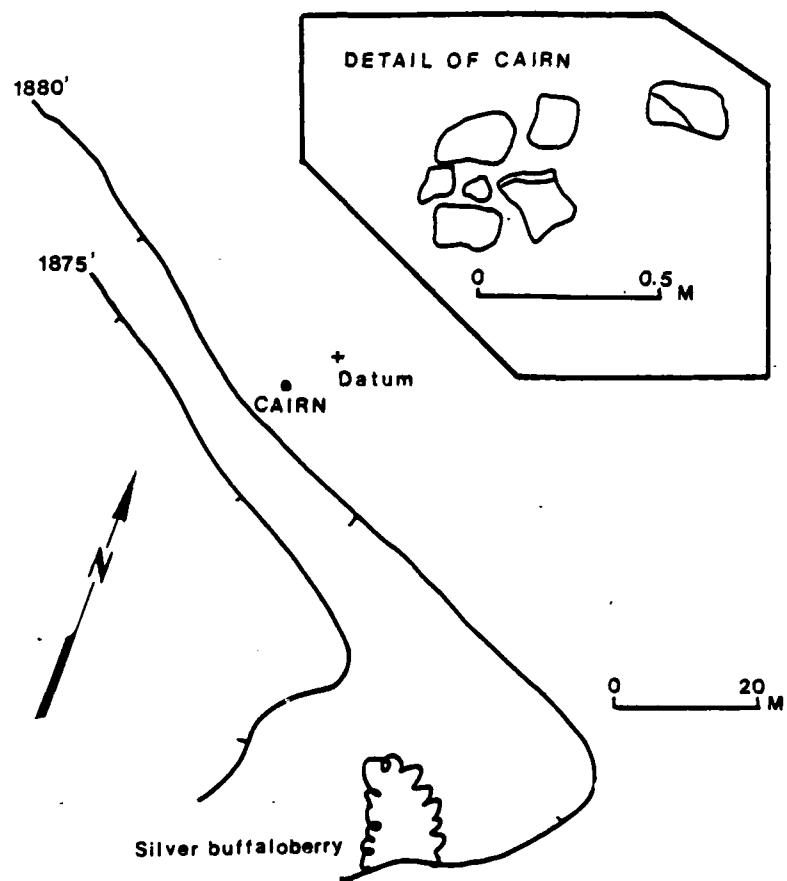


Figure 128. Plan of site 32DU711, with detail of cairn.

Site number: 32DU712 Site name:
County: Dunn. State: North Dakota. Site map: Figure 129
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: At the extreme end of a point/ridge overlooking
the confluence of two intermittent streams.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Little bluestem.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.29m NW-SE by 0.95m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

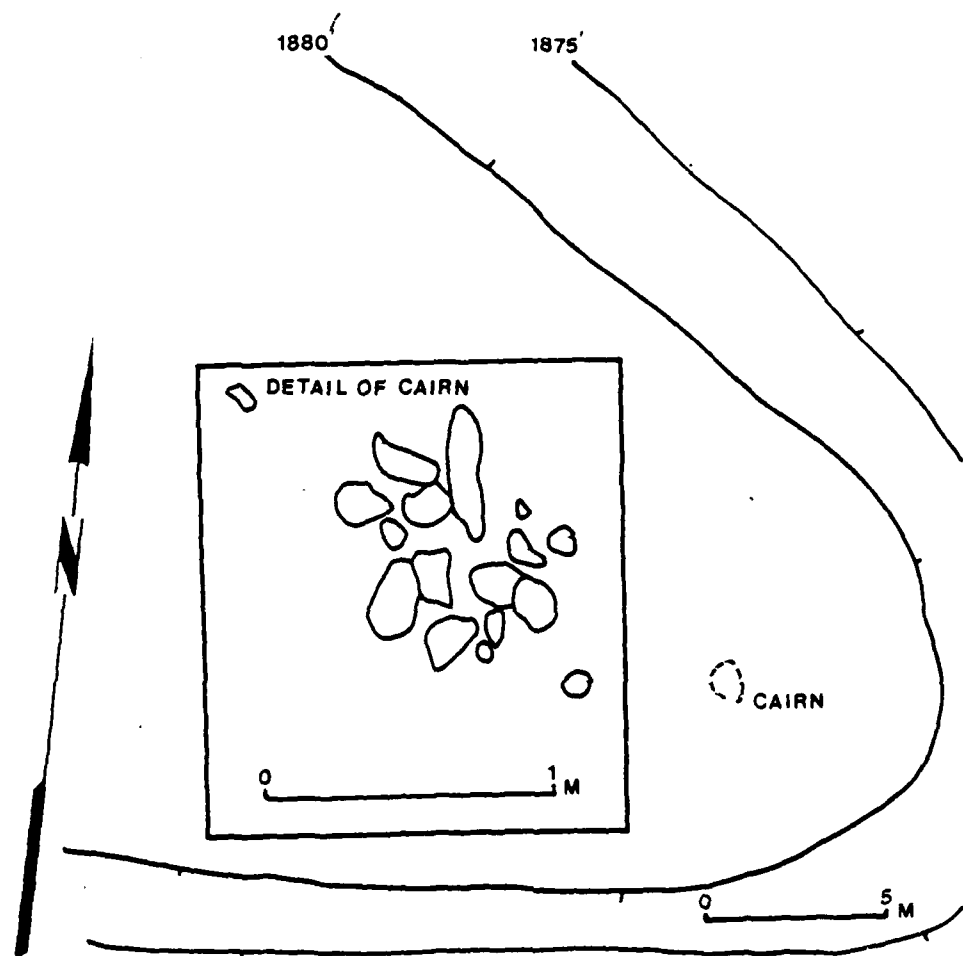


Figure 129. Plan of site 32DU712, with detail of cairn.

Site number: 32DU713 Site name:
County: Dunn. State: North Dakota. Site map: Figure 130
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn,
Component(s): Unknown.
Elevation (m): 567.
Topographic position: At the edge of a small rise at the end of a ridge
that juts into an ephemeral stream valley.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Sparse prairie grass, silver buffaloberry.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.14m NW-SE x 0.84m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

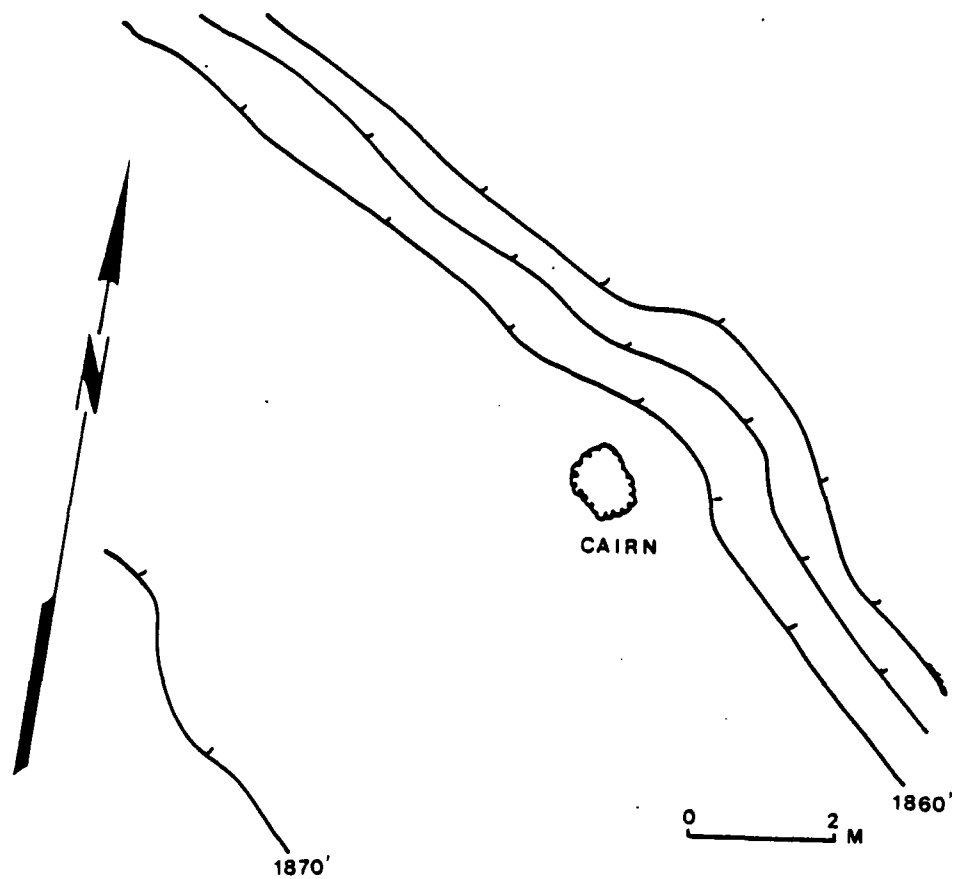


Figure 130. Plan of site 32DU713.

Site number: 32DU714 Site name:
County: Dunn. State: North Dakota. Site map: Figure 131
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Stone circle.
Component(s): Unknown.
Elevation (m): 563.
Topographic position: Currently on the beach line of Lake Sakakawea
which would formerly have been on the side of a draw.
Site size: 20m².
Strata and depth: Unknown - now largely surficial.
Vegetation: Bare ground, bunch grass.
Ground surface visibility (%): 80%.
Nearest water: Intermittent stream - 200m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: The site is inundated at high water. It is
extensively/completely eroded out.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Stone circle, 6.12m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Test to determine if the site has any research
potential.
Remarks: Erosion and the lack of cultural material suggest the site has
little research potential, but formal testing is required to confirm or
refute this assessment.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

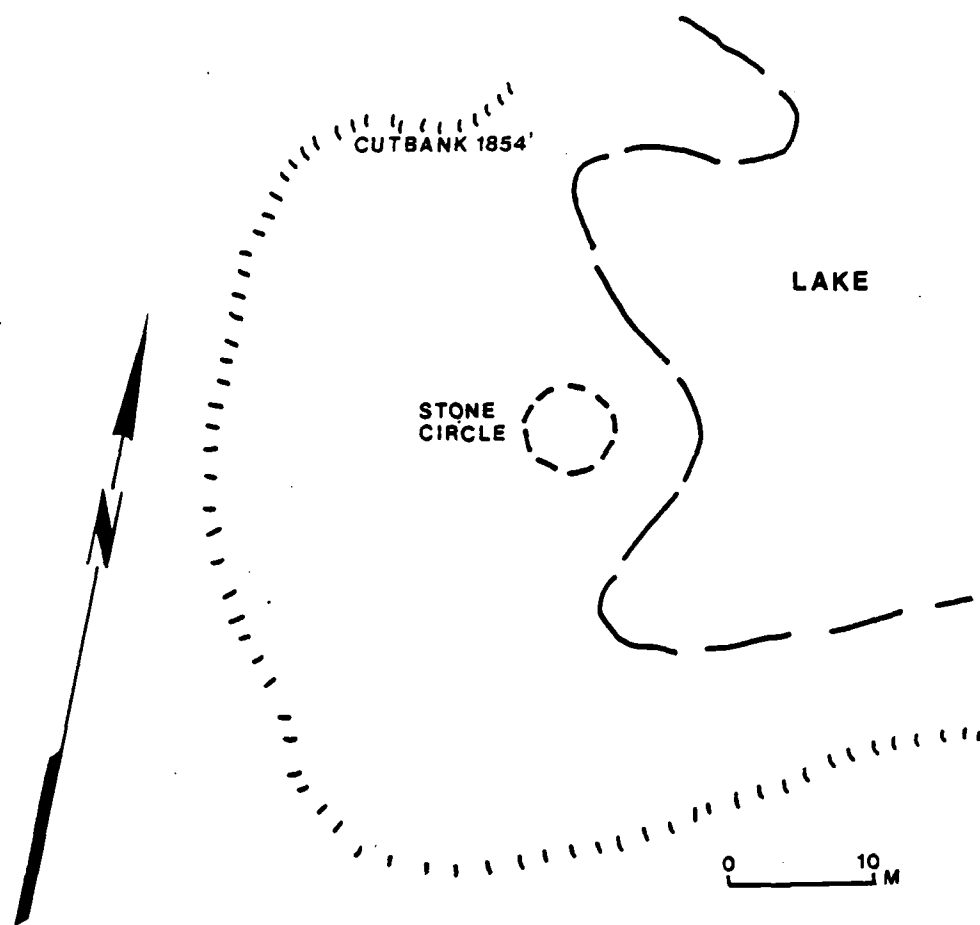


Figure 131. Plan of site 32DU714.

Site number: 32DU715 Site name:
County: Dunn. State: North Dakota. Site map: Figure 132
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: Located midway between the crest and base of a
ridge.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Native grasses, western wallflower, white penstemon.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.35m diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

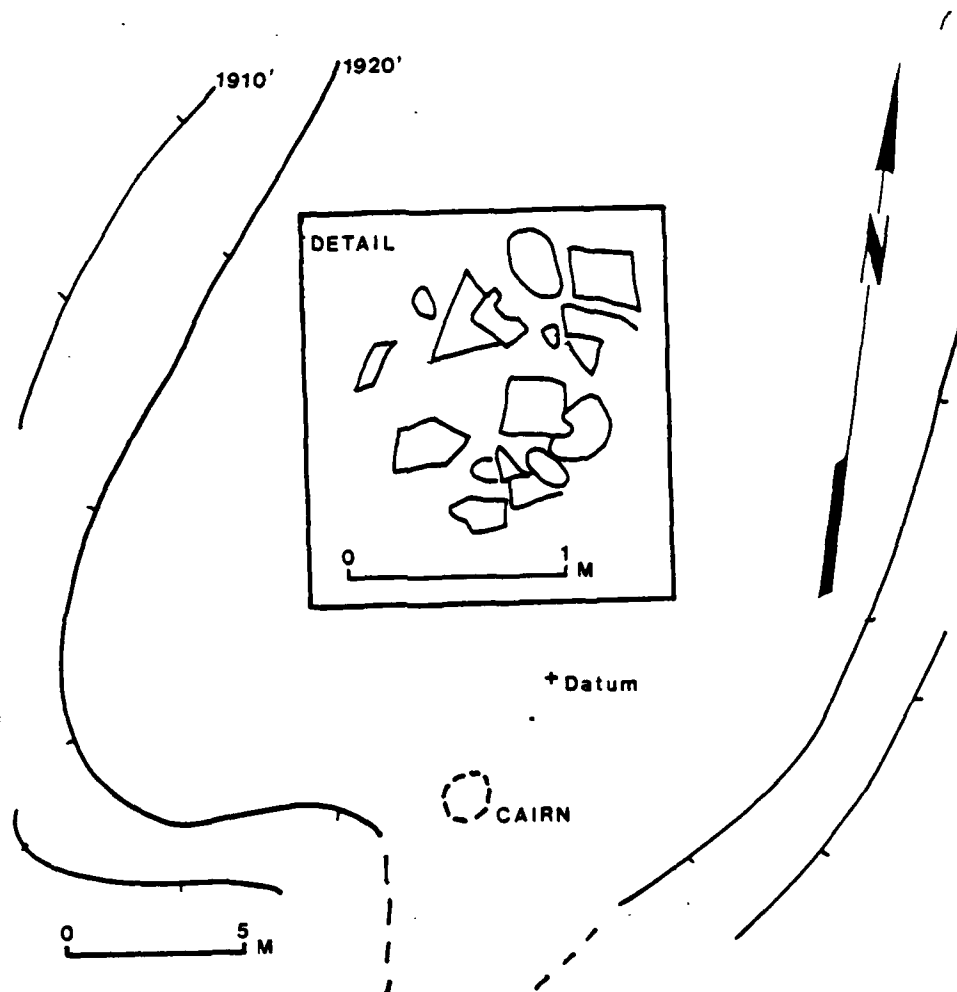


Figure 132. Plan of site 32DU715, with detail of cairn.

Site number: 32DU716 Site name:
County: Dunn. State: North Dakota. Site map: Figure 133
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn and depression.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On the side of a ridge.
Site size: 40m².
Strata and depth: Unknown.
Vegetation: Little bluestem.
Ground surface visibility (%): 10%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.1m E-W x 0.9m N-S; depression, 3.0m
N-S x 3.75m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted test to determine the
nature of the cairn and depression.
Remarks: The cairn may be an insignificant pile of rocks and the
depression may be natural, but testing is needed to determine the
features' significance, or lack thereof.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn and depression.

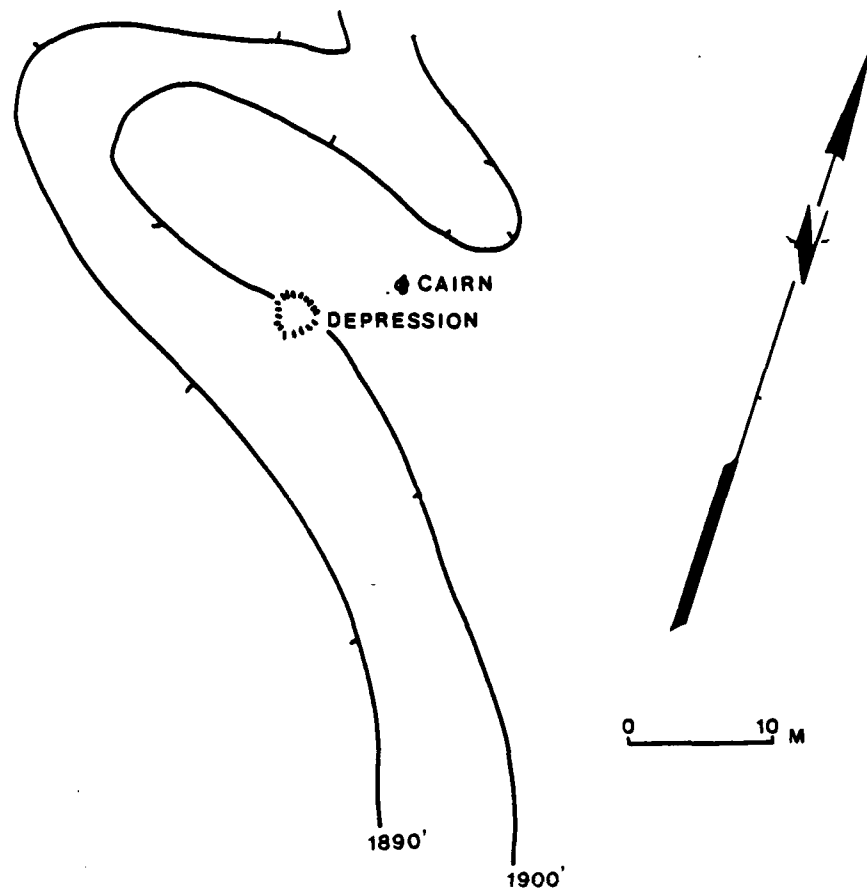


Figure 133. Plan of site 32DU716.

Site number: 32DU717 Site name:
County: Dunn. State: North Dakota. Site map: Figure 134
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn. /
Component(s): Unknown.
Elevation (m): 585.
Topographic position: At the high point along the crest of a ridge.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Native grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.08m NE-SW x 0.63m NW-SE.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

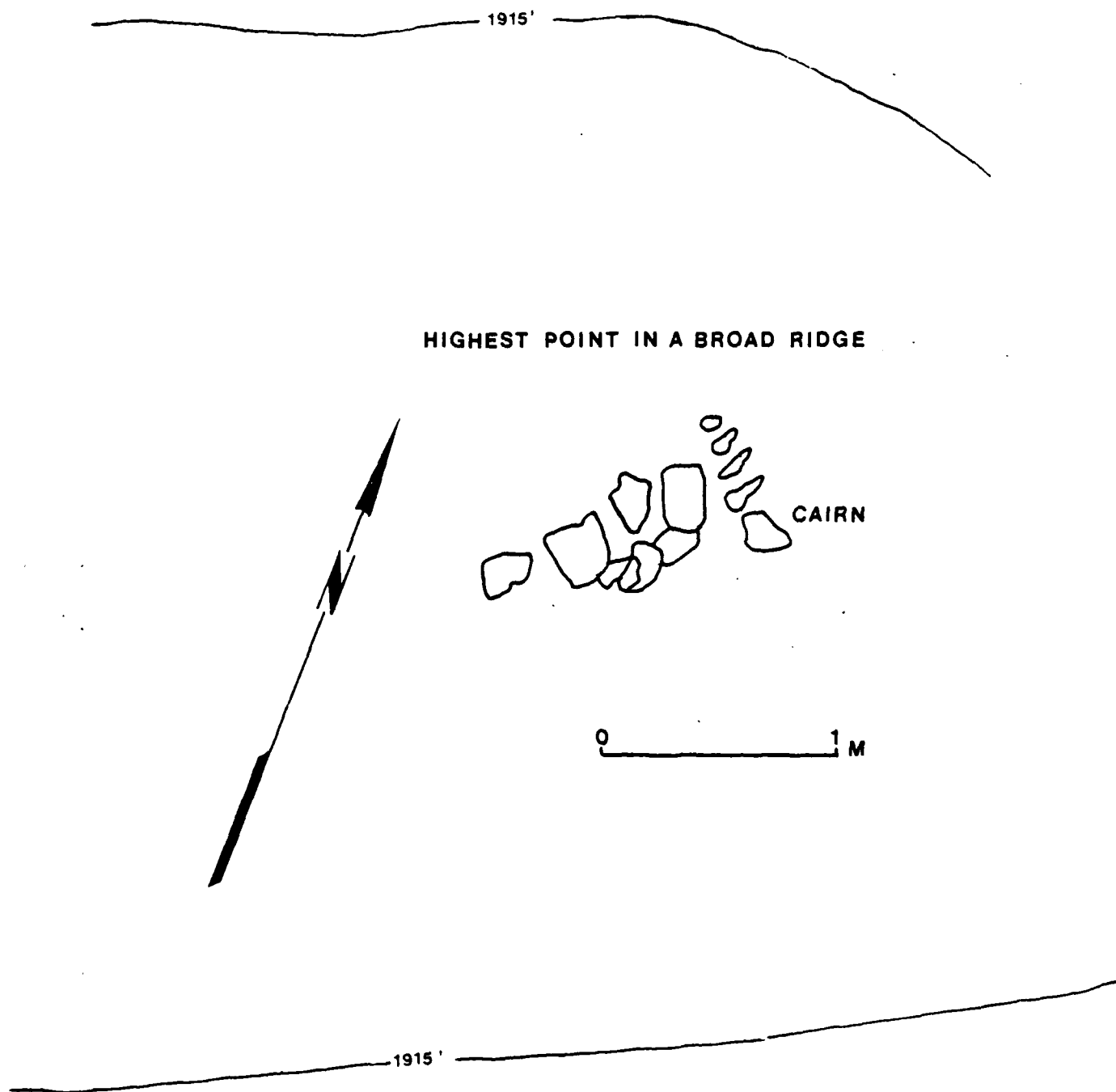


Figure 134. Plan of site 32DU717.

Site number: 32DU718 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 135
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: Near the edge of a wedge-shaped erosional remnant
that juts from a ridge.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Native grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

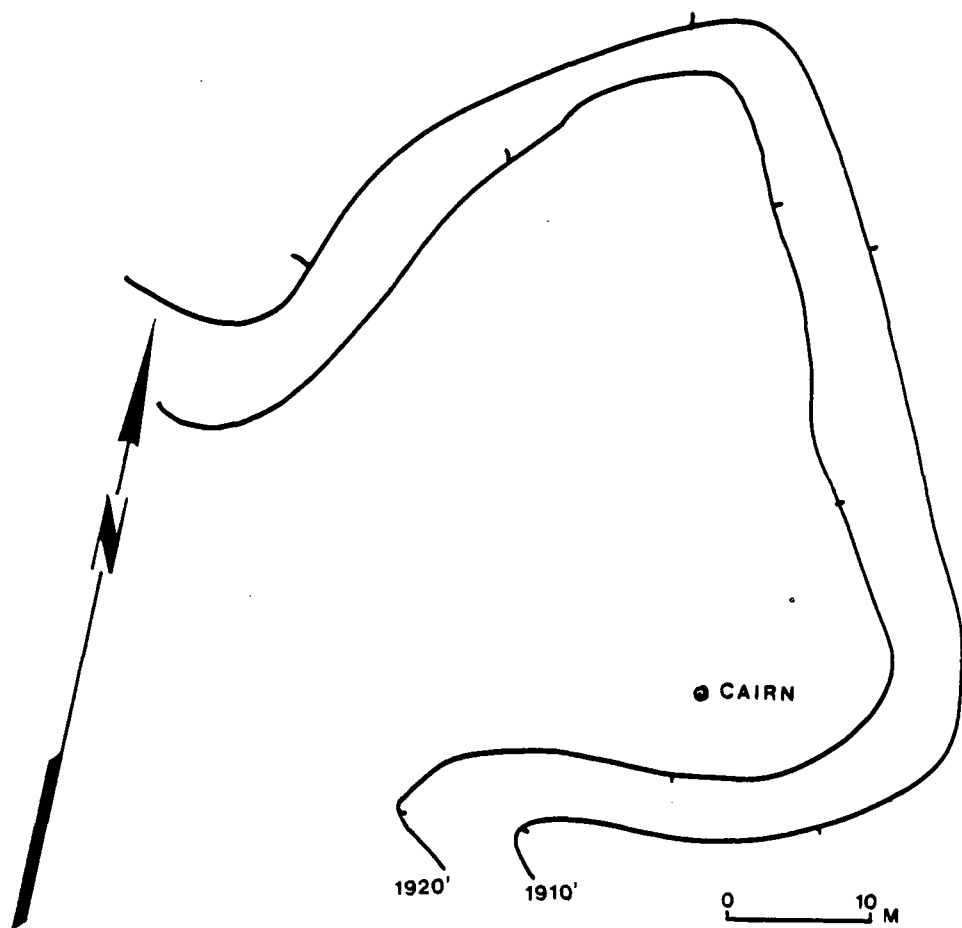


Figure 135. Plan of site 32DU718.

Site number: 32DU719 Site name:
County: Dunn. State: North Dakota. Site map: Figure 136
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burials and rock cairn.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 579.
Topographic position: On top of a ridge along the edge of an exposed sandstone outcrop.
Site size: 100m². Strata and depth: Unknown.
Vegetation: Skunkbrush, rock outcrop.
Ground surface visibility (%): 80%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: Apart from the obvious disturbances (collapse and disintegration of trunks and removal of contents) to the trunk burials, the site location has fair to good integrity.
Surface collections (by whom and when): None.
Data plotted on site map: 1=burial box, 0.92m NW-SE x 0.49m NE-SW. 2=burial box, 0.75m NW-SE x 0.65m NE-SW. 3=rock cairn, 0.75m N-S x 0.65m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Since this is a burial/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials remain extant.
Remarks: Numerous "trunk burial" sites are known in the area. The presence of an apparently associated rock cairn at this site is an interesting feature. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification .
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

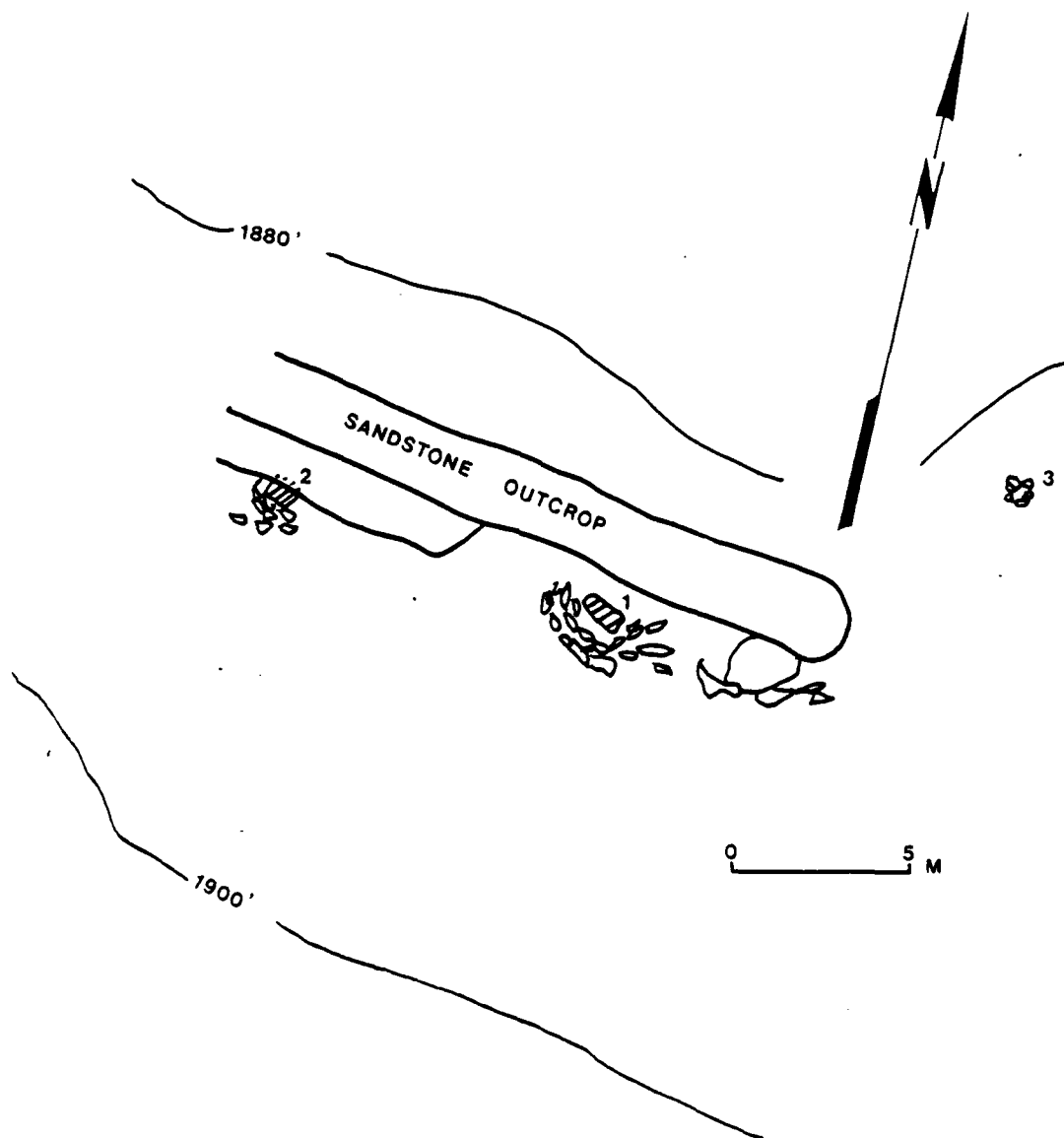


Figure 136. Plan of site 32DU719.

Site number: 32DU720 Site name:
County: Dunn. State: North Dakota. Site map: Figure 137
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burial.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 585.
Topographic position: On top and along the south slope of a ridge that forms the southern margin of Saddle Butte Bay.
Site size: 10m².
Strata and depth: Unknown.
Vegetation: Little bluestem, skunkbrush, poison ivy.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site features have been disturbed and presumably the contents have been removed. Otherwise, the area is in fair condition.
Surface collections (by whom and when): None.
Data plotted on site map: 1=coffin-like box surrounded by sandstone slabs, 1.68m long x 0.6m wide. 2=shallow depression with sandstone rocks and boards, 1.25m N-S x 0.81m E-W. 3=shallow depression, 1.52m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because of the presence of a burial/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials remain extant.
Remarks: Numerous "trunk burial" sites are known in the area. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

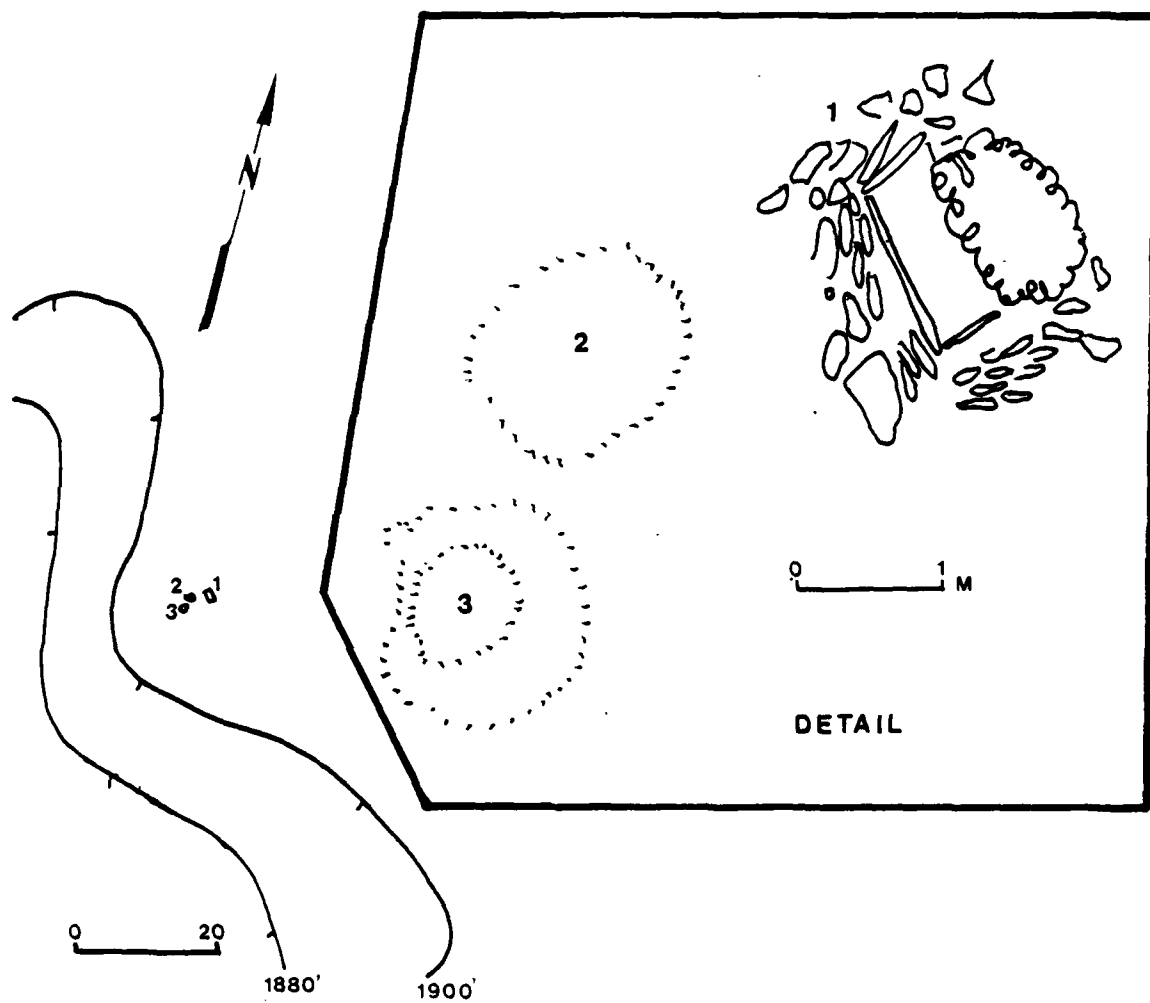


Figure 137. Plan of site 32DU720.

Site number: 32DU721 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 138
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On top of a ridge at the beginning of a triangular erosional remnant.
Site size: 7m².
Strata and depth: Unknown.
Vegetation: Native prairie grasses and forbs.
Ground surface visibility (%): 10%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 2.4m diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the nature of the cairn.
Remarks: Cairn may mark a trail, a burial, reflect field clearance or some other activity.
Testing for National Register Eligibility (purpose of): To determine nature of cairn.

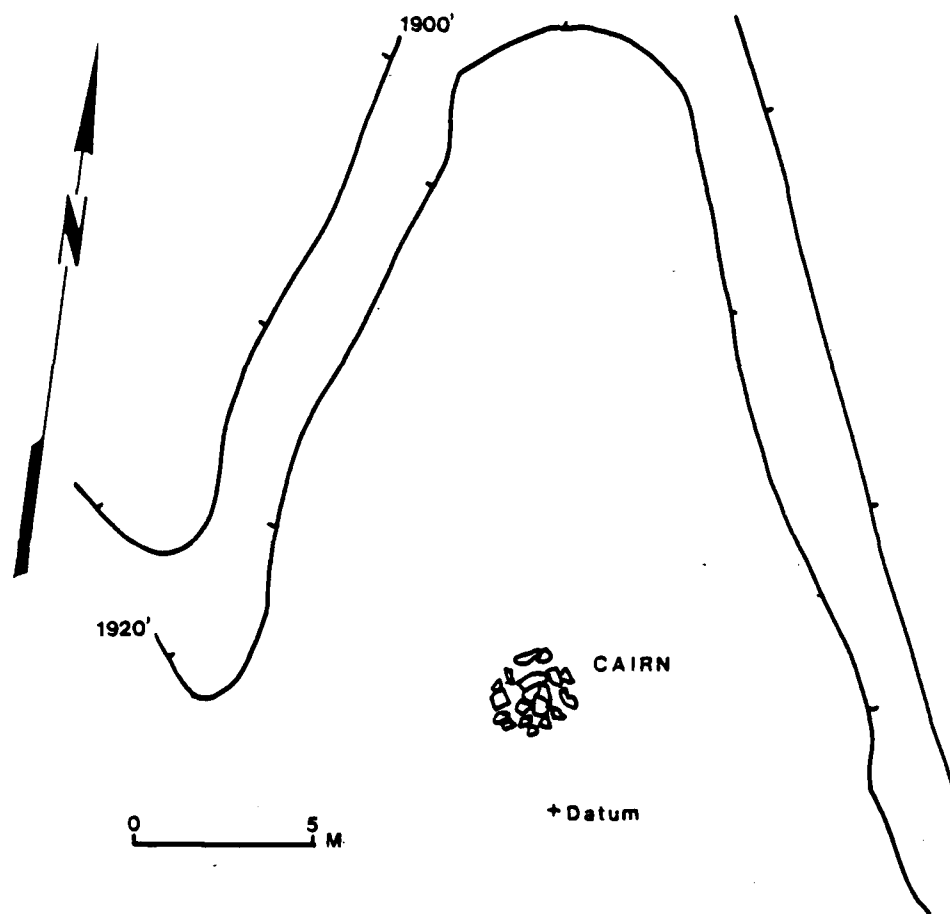


Figure 138. Plan of site 32DU721.

Site number: 32DU722 Site name: White Calf Burial Ground.
County: Dunn. State: North Dakota. Site map: Figure 139
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cemetery.
Component(s): Historic Native American.
Elevation (m): 567.
Topographic position: At the end of a long, wide ridge/upland plain
finger descending into Lake Sakakawea.
Site size: 100m².
Strata and depth: Unknown.
Vegetation: Prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Pool elevation (feet), when applicable: 1844' amsl.
Site condition - impacts: The cemetery is being encroached upon by the
reservoir cutbank; it is possibly already impacted.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1-18=sunken grave outlines.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because this is a burial/sacred site, impacts to the
area should be avoided. If the site is to be impacted, detailed
research and testing should be undertaken to determine whether the site
can be related to any living person(s) and whether any actual burials
remain extant.
Remarks: A Bureau of Indian Affairs report (1950) records the
condition of this burial ground as run down, with only one or two graves
(of 16) marked. Only Frank White Calf is recorded as being buried here;
the other 15 burials are all unidentified.
Testing for National Register Eligibility (purpose of): No testing
should be carried out unless the site is to be impacted. In that
circumstance, testing to determine areal extent, depth, components
present, research potential and integrity should be conducted,
especially to locate any extant human remains.

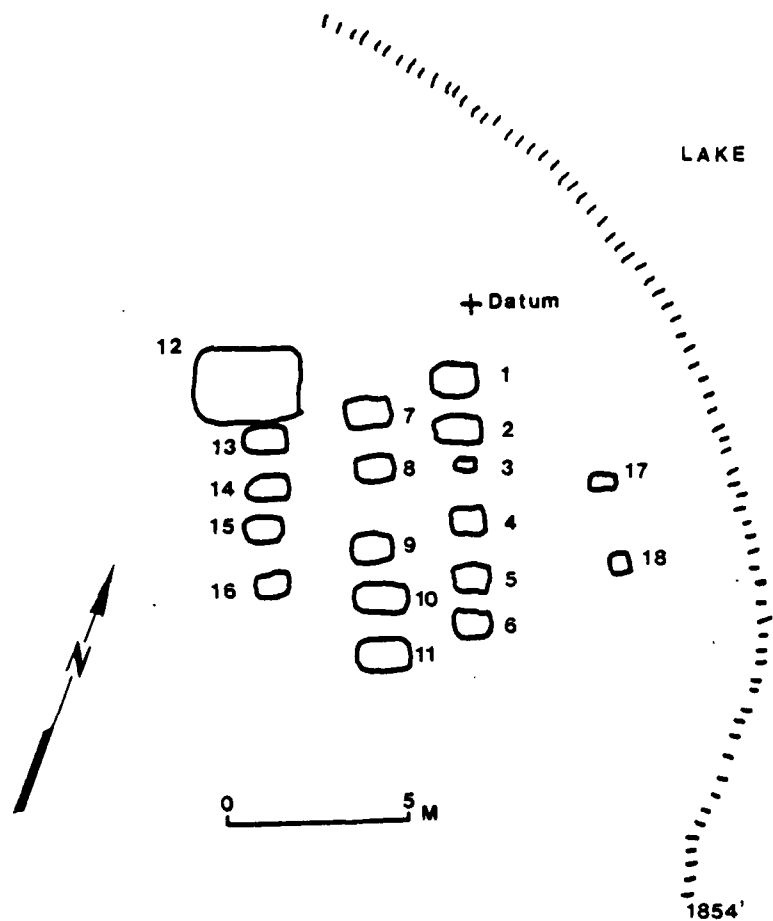


Figure 139. Plan of site 32DU722.

Site number: 32DU723 Site name:
County: Dunn. State: North Dakota. Site map: Figure 140
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the upper middle slope of a minor hill or ridge
in an area of gently rolling or undulating prairie.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Short prairie grass.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: The site is overgrown but otherwise
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn 1.2m NE-SW by 0.9m NW-SE.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site to be impacted, test to determine the
nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

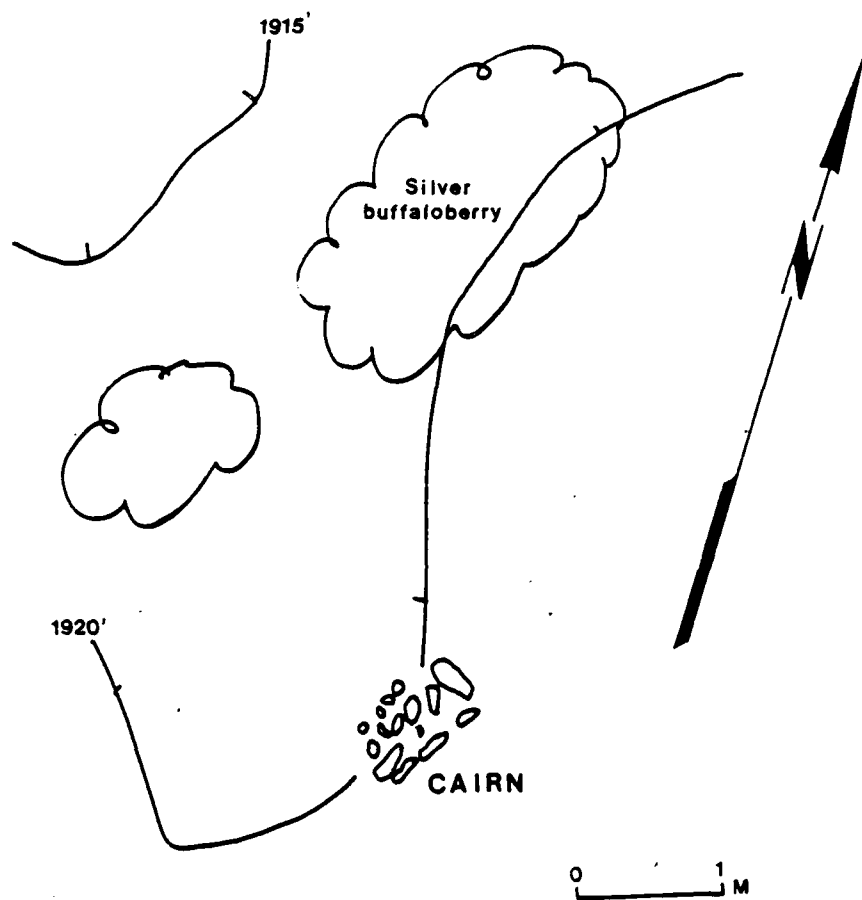


Figure 140. Plan of site 32DU723.

Site number: 32DU724 Site name:
County: Dunn. State: North Dakota. Site map: Figure 141
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Archaic - McKean complex.
Elevation (m): 567.
Topographic position: Along the shoreline of Lake Sakakawea in an area that in pre-reservoir conditions could have been an upper terrace of an unnamed intermittent stream.
Site size: 300m².
Strata and depth: Unknown - now surficial.
Vegetation: Sparse grass clumps.
Ground surface visibility (%): 80%.
Nearest water: Intermittent stream - 100m.
Pool elevation (feet), when applicable: 1845' amsl.
Site condition - impacts: No material noted in exposed cutbanks, all apparently surficial, but the potential exists for deposits with fair to good integrity.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: McKean Complex projectile point base of KRF; a KRF scraper, tip of a KRF biface (knife?), and KRF biface midsection.
Data plotted on site map: 1=stage II biface; 2=projectile point base; 3=biface midsection; 4=biface tip; 5=scraper.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site's research potential appears limited with only surficial deposits, but formal testing is recommended to fully evaluate this artifact scatter.
Remarks: Of the 54 items of KRF noted, 50 were debitage.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

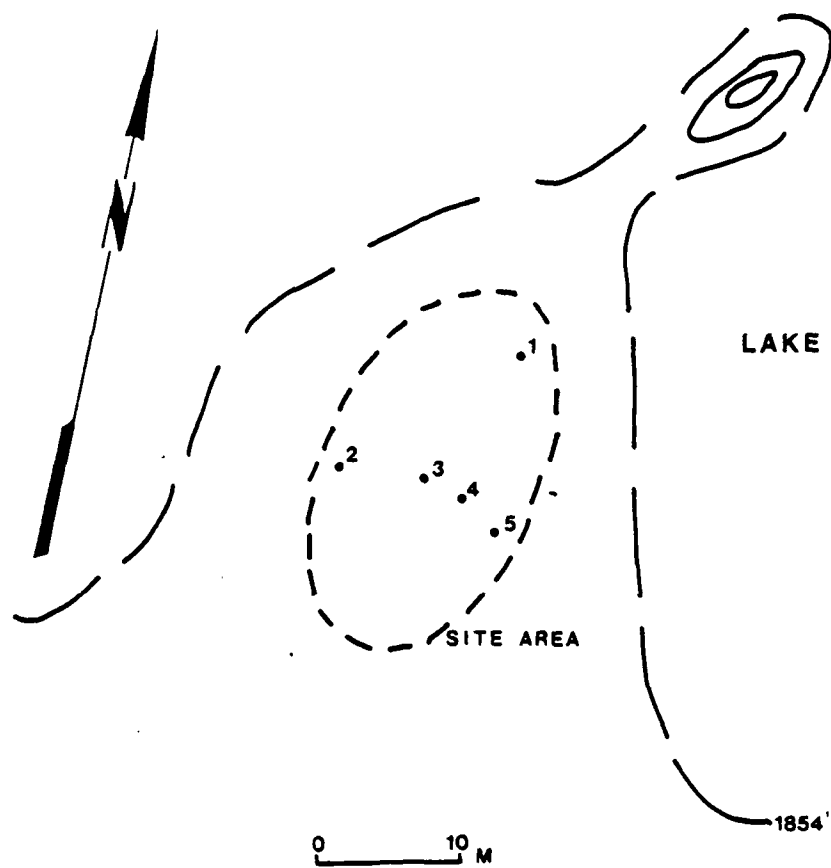


Figure 141. Plan of site 32DU724.

Site number: 32DU725 Site name:
County: Dunn. State: North Dakota. Site map: Figure 142
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 574.
Topographic position: At the side of an area of rolling prairie/upland
plain.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.75m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

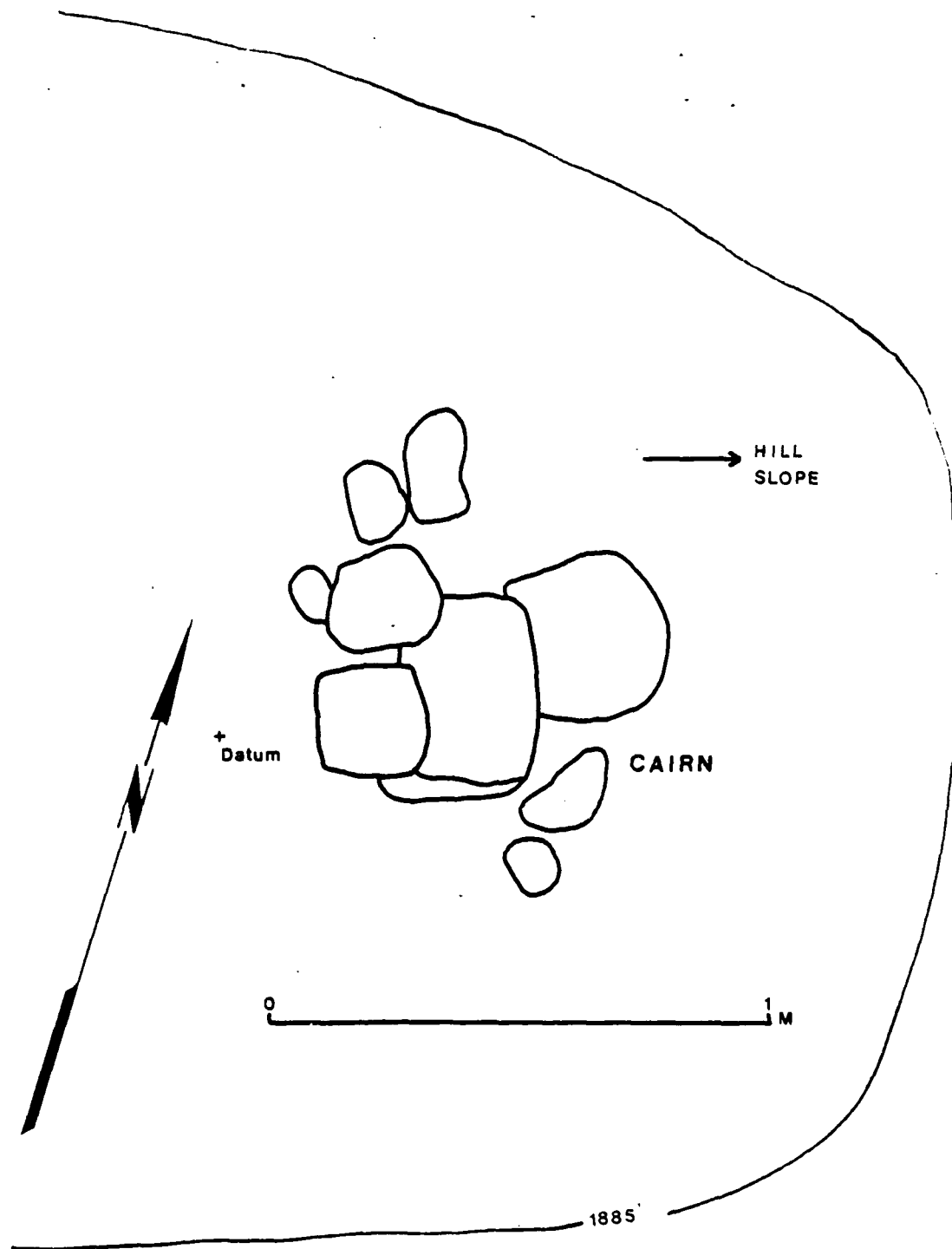


Figure 142. Plan of site 32DU725.

Site number: 32DU726 Site name:
County: Dunn. State: North Dakota. Site map: Figure 143
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 576.
Topographic position: Close to the top of a gentle hill in an area of
undulating prairie/upland plain.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Little bluestem.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.55m N-S by 0.87m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

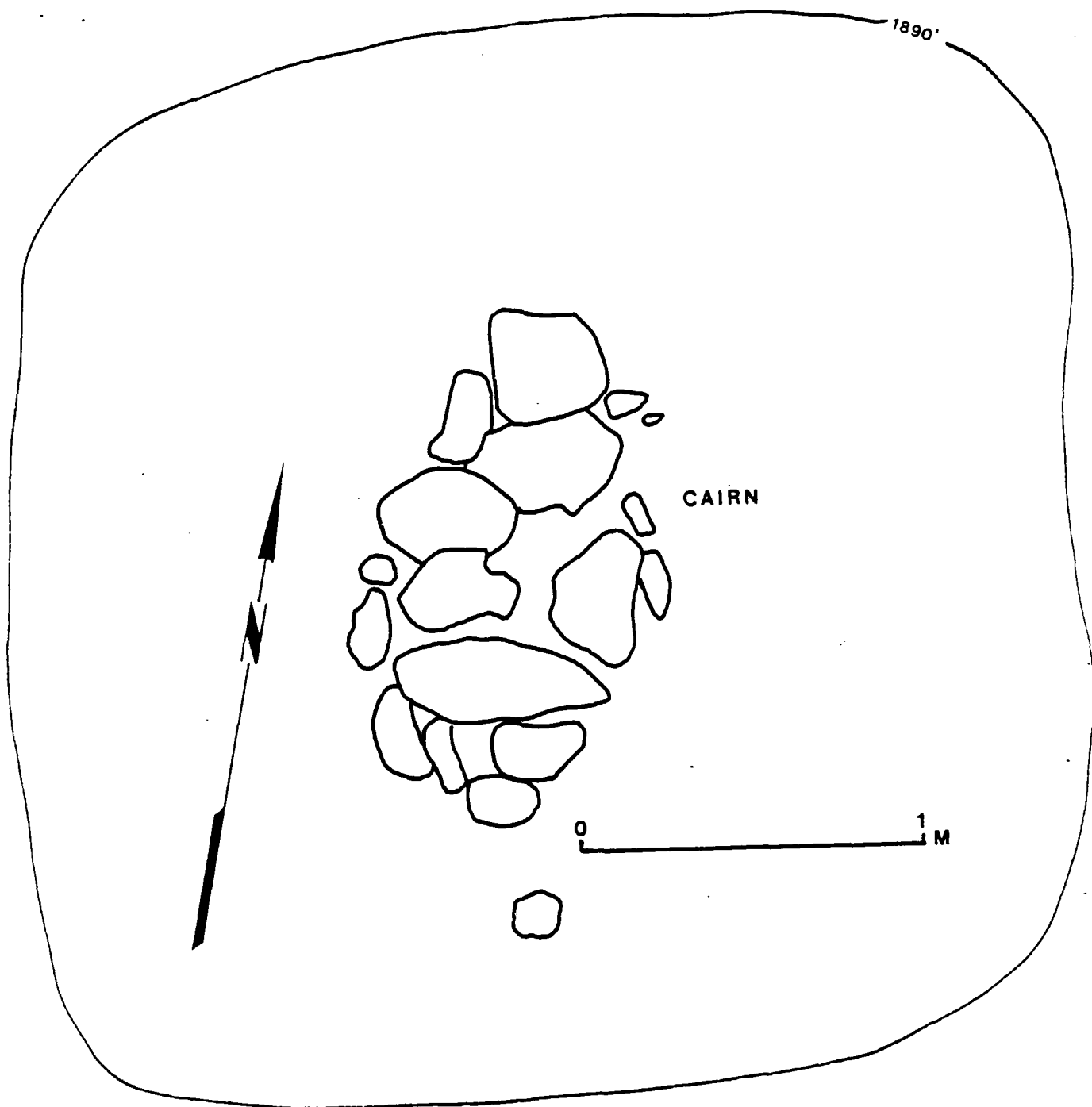


Figure 143. Plan of site 32DU726.

Site number: 32DU727 Site name:
County: Dunn. State: North Dakota. Site map: Figure 144
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 574.
Topographic position: On the side of a rolling hill on an undulating
upland plain.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Prairie grasses and forbs, buckbrush.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 250m.
Site condition - impacts: The cairn appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.34m N-S by 0.95m E-W, made up of ca.
30 medium to large rocks.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.



Figure 144. Plan of site 32DU727.

Site number: 32DU728 Site name:
County: Dunn. State: North Dakota. Site map: Figure 145
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cattle feeder.
Component(s): Historic Euro-American.
Elevation (m): 567.
Topographic position: At the base of a hill slope near an intermittent
stream.
Site size: 7m².
Strata and depth: Surficial.
Vegetation: Short grass.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 10m.
Site condition - impacts: There are no obvious impacts other than
those caused by use.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Calf feeder shed, 3.65m long, 1.89m wide and
1.95m high.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is recent and not eligible for nomination to
the National Register of Historic Places. No further work is
recommended.
Remarks: The site is still in use and has no architectural
significance.

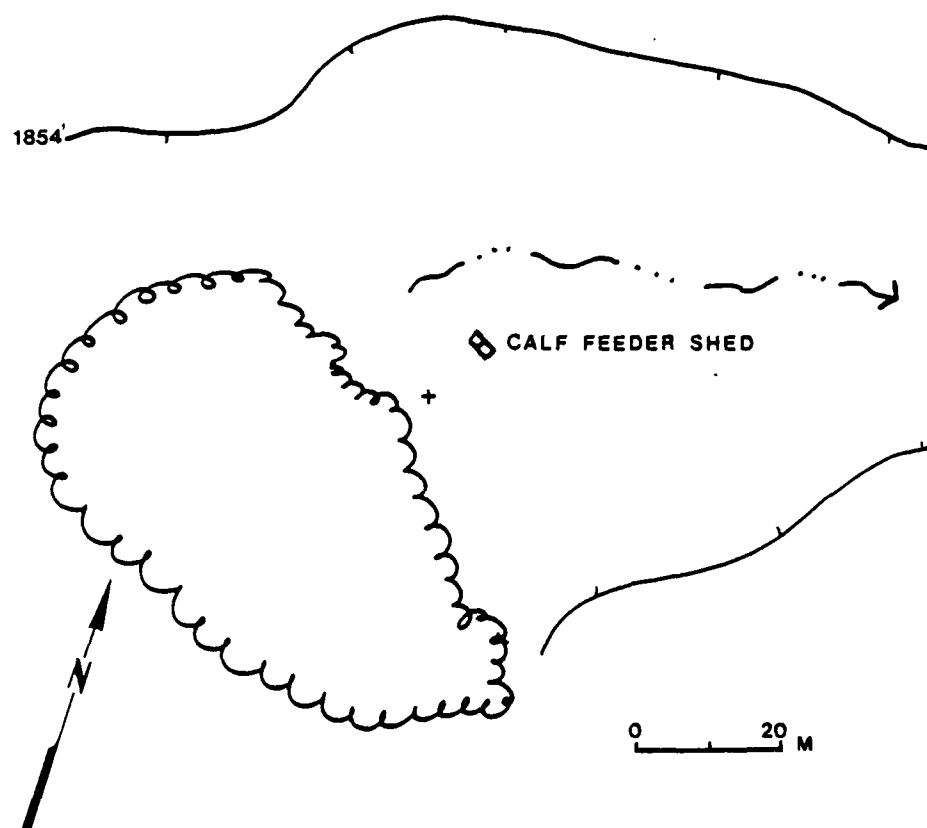


Figure 145. Plan of site 32DU728.

Site number: 32DU729 Site name:
County: Dunn. State: North Dakota. Site map: Figure 146
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 576.
Topographic position: On top of a ridge, down the ridge point and down
the slope to mid-level on a point at the confluence of the Little
Missouri and Missouri rivers.
Site size: 11,250m².
Strata and depth: Unknown.
Vegetation: Bunch grass, poison ivy.
Ground surface visibility (%): 40%.
Nearest water: Little Missouri River - 700m.
Site condition - impacts: Material has been exposed by erosion/slope
wash, but otherwise the site has fair integrity.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site appears to be surficial, but features may be
present; in this case, the site would have additional research
potential. If the site is to be impacted, test for National Register
of Historic Places eligibility.
Remarks: Over 30 items of KRF debitage, a retouched cobble flake of
KRF, and a piece of petrified wood were recorded at this site.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

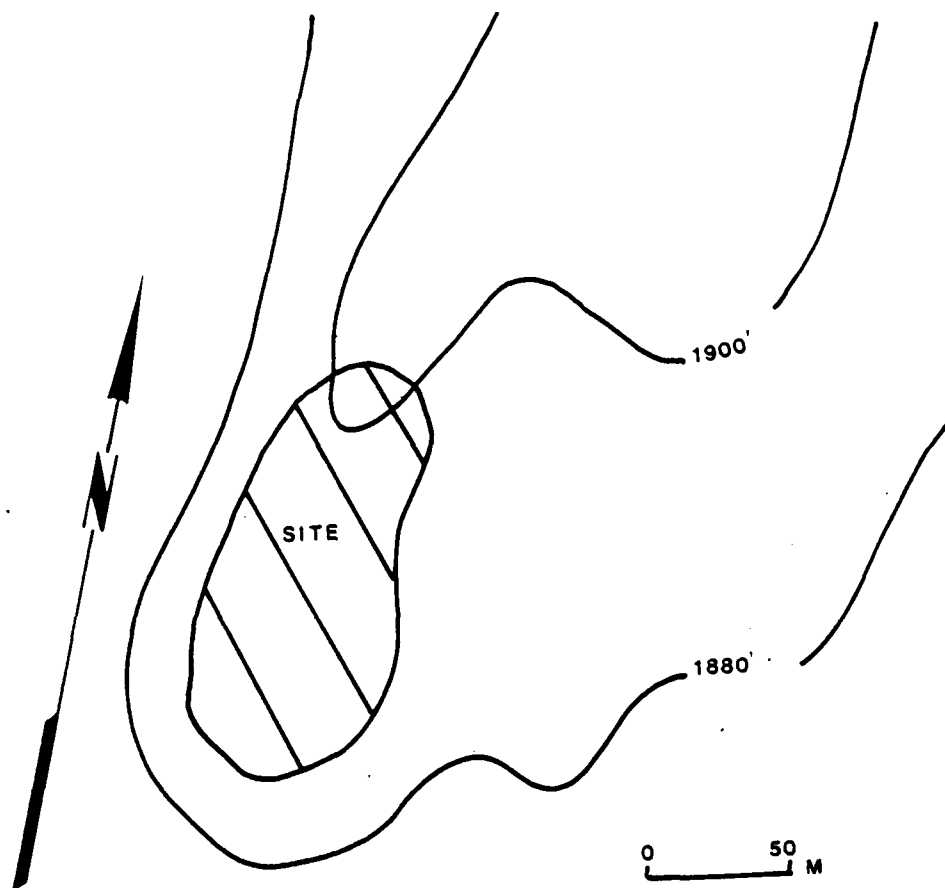


Figure 146. Plan of site 32DU729.

Site number: 32DU730 Site name:
County: Dunn. State: North Dakota. Site map: Figure 147
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burials.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 591.
Topographic position: On top of a hill with a view up and down McKenzie Bay and out into the Little Missouri Valley.
Site size: 15m².
Strata and depth: Unknown.
Vegetation: Bunch and foxtail grasses.
Ground surface visibility (%): 60%.
Nearest water: Little Missouri River - 1100m.
Site condition - impacts: The site area has fair to good integrity, but the burials have been disturbed/removed.
Surface collections (by whom and when): None.
Data plotted on site map: 1=sandstone block outlined burial vault, 2.86m by 2.74m. 2=trunk burial with sandstone slab buttress. The round-topped trunk measures 0.55m by 0.47m.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: This is a burial/sacred site; impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether it can be related to any living person(s) and whether any actual burials remain extant.
Remarks: A number of "trunk burial" sites are known in the area. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification. In the immediate vicinity of the trunk, the following items were recorded: many blue-faceted beads, two corroded brass or copper beads, 10 cowrie shell beads and five tooth or dentalium shell beads.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

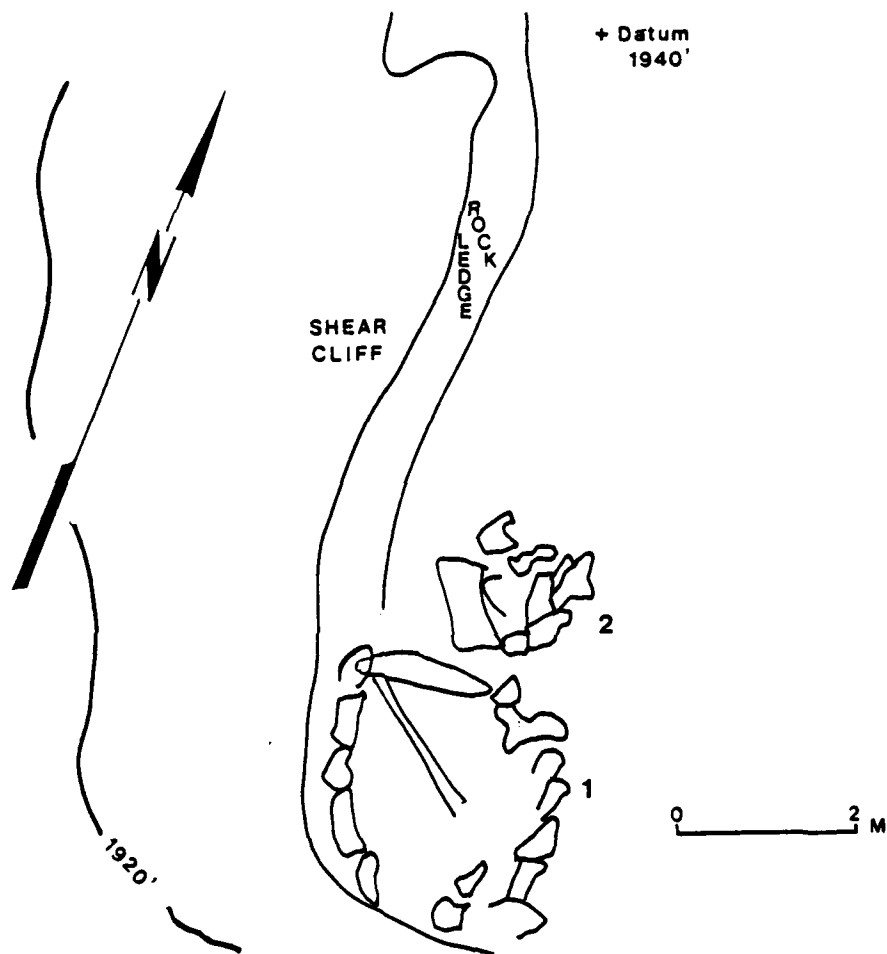


Figure 147. Plan of site 32DU730.

Site number: 32DU731 Site name:
County: Dunn. State: North Dakota. Site map: Figure 148
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Trunk burials.
Component(s): Historic Native American - Mandan/Hidatsa.
Elevation (m): 592.
Topographic position: A small rocky outcrop on top of a hill.
Site size: 150m².
Strata and depth: Unknown.
Vegetation: Bare ground, skunkbrush, poison ivy.
Ground surface visibility (%): 70%.
Nearest water: Little Missouri River - 1000m.
Site condition - impacts: The site has fair to good integrity of location, but the contents/burials have been disturbed/removed.
Surface collections (by whom and when): None.
Data plotted on site map: 1=small sandstone slab cairn, 1.67m N-S by 2.00m E-W. 2=U.S. Army Corps of Engineers green metal fence post. 3=pieces of a wooden trunk. 4=natural openings. 5=drywall sandstone slab construction closing off natural openings in bluff edge, 1.92m NE-SW by 1.28m NW-SE; 1.15m deep. It contains a complete human humerus.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: This is a burial/sacred site; impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether it can be related to any living person(s) and whether any actual burials remain extant.
Remarks: Numerous "trunk burial" sites are known in the area. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification. Two brass-headed nail caps, a shell, a four-hole button and a square piece of bone with a drilled hole were also recorded at the site.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

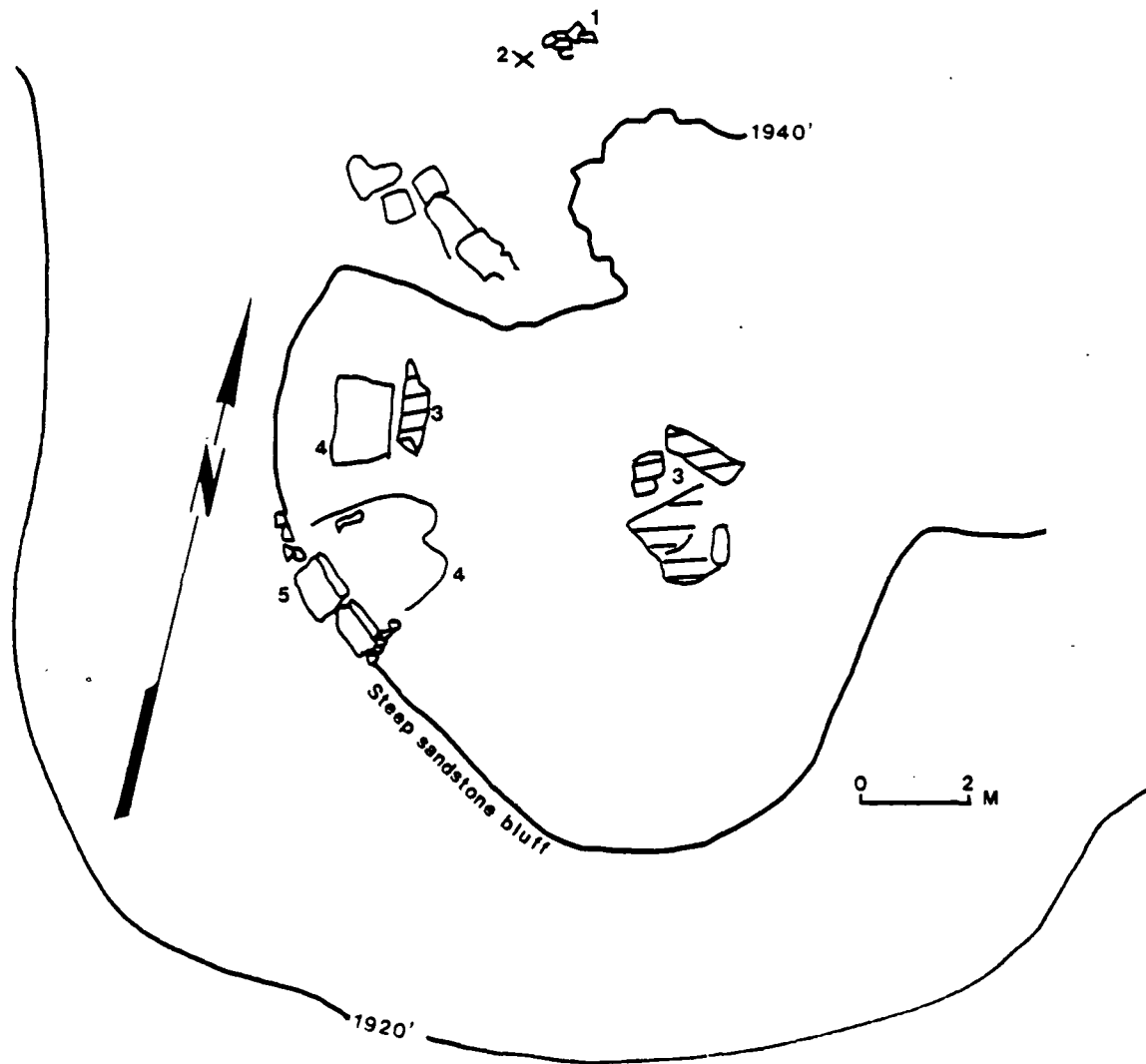


Figure 148. Plan of site 32DU731.

Site number: 32DU732 Site name:
County: Dunn. State: North Dakota. Site map: Figure 149
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 588.
Topographic position: On a hilltop at the edge of a small, rhomboidal,
vertical-sided sandstone outcrop.
Site size: 1m².
Strata and depth: Unknown (surficial).
Vegetation: Bunch grass.
Ground surface visibility (%): 60%.
Nearest water: Little Missouri River - 1150m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn (pyramidal), 0.85m E-W by 0.94m NE-SW.
Height above surface ca. 45cm.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

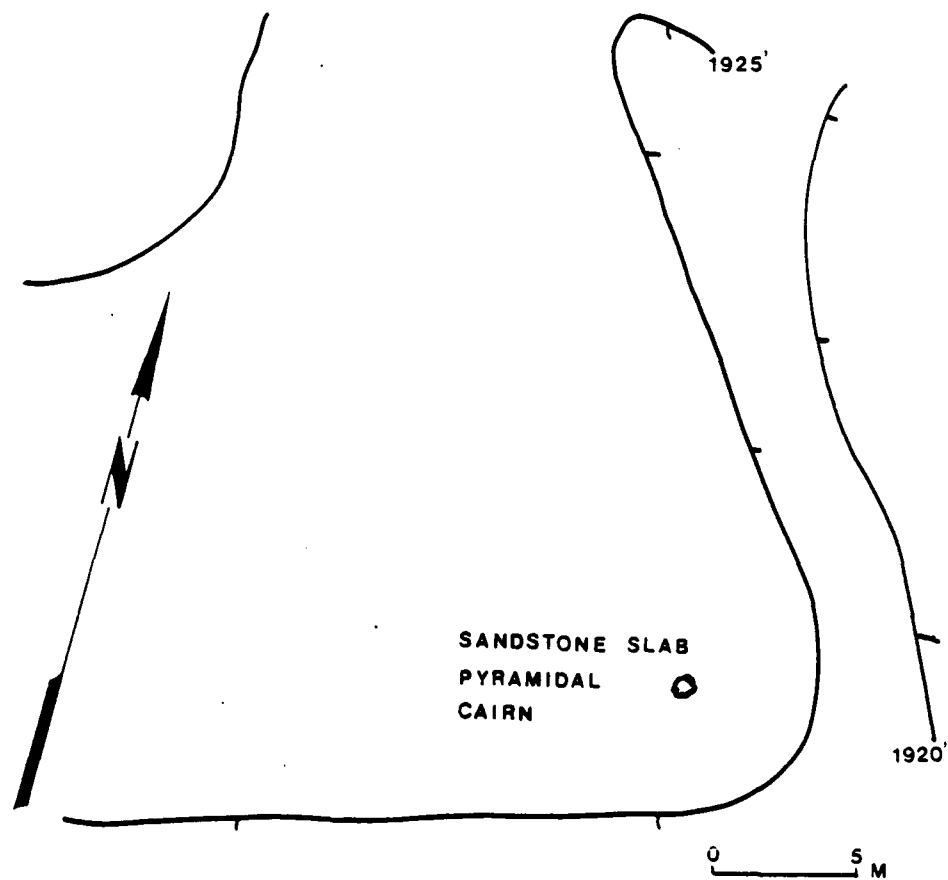


Figure 149. Plan of site 32DU732.

Site number: 32DU733 Site name:
County: Dunn. State: North Dakota. Site map: Figure 150
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pits and isolated historic artifacts.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On a flat ridge or terrace remnant at the end of
a steep clay bank.
Site size: 10m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, silver sagebrush.
Ground surface visibility (%): 20%.
Nearest water: Little Missouri River - 650m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: Depression 1=2m N-S by 1.6m E-W; Depression 2
=1.66m N-S by 1.65m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depressions.
Remarks: The nature of the depressions is unknown, but based on size
and location, they are considered to be eagle trapping pits. A metal
knife handle with the tang rivet still in place and a metal washer with
cloth or canvas impressions on its corroded reverse side were located in
the area.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depressions.

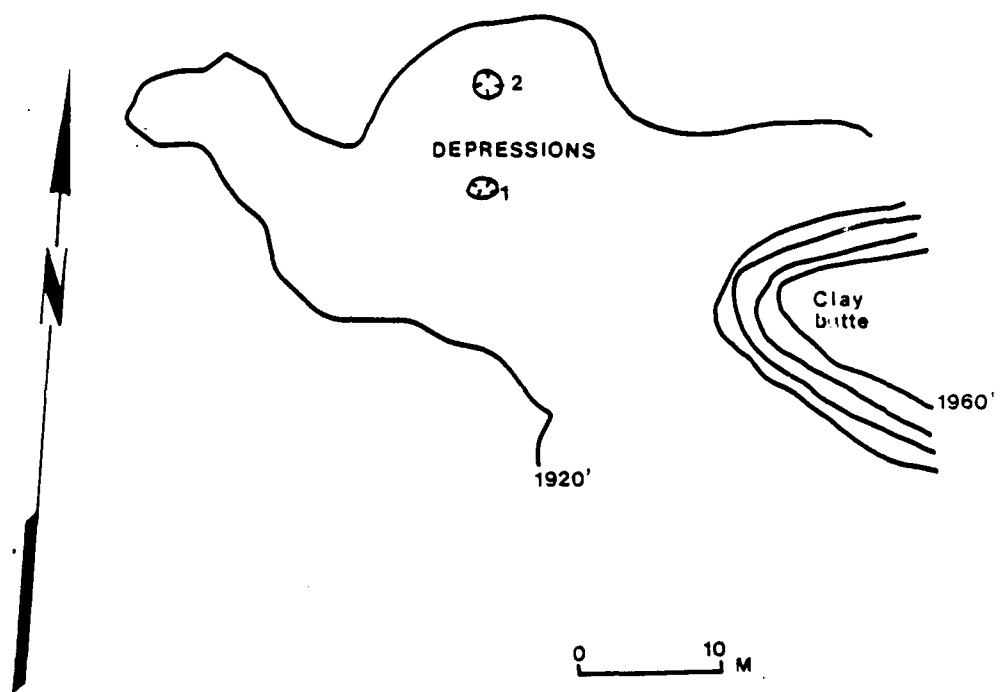


Figure 150. Plan of site 32DU733.

Site number: 32DU734 Site name:
County: Dunn. State: North Dakota. Site map: Figure 151
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: At the south end of a high point on an isolated
hill or butte remnant.
Site size: 5m².
Strata and depth: Unknown.
Vegetation: Native grasses and forbs, prickly pear cactus and yucca.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 600m.
Site condition - impacts: The site is close to an eroding shelf, but
the cairn appears relatively undisturbed, with some minor erosion
occurring around the rocks.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 2.38m NW-SE by 1.8m NE-SW, composed of
13 visible rocks.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

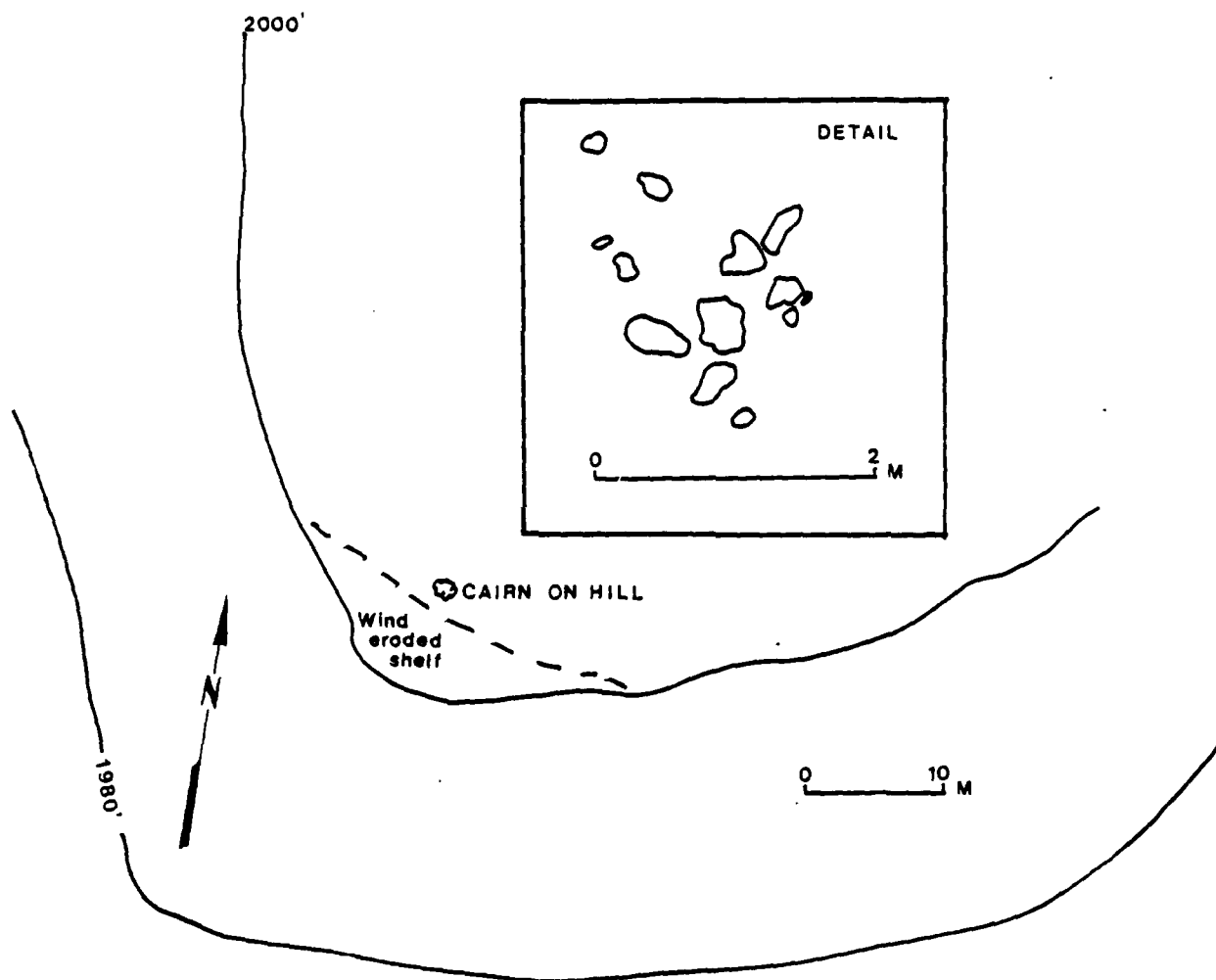


Figure 151. Plan of site 32DU734.

Site number: 32DU735 Site name:
County: Dunn. State: North Dakota. Site map: Figure 152
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter,
Component(s): Unknown.
Elevation (m): 594.
Topographic position: At the base of a hill on the upper slopes and flat surface of a slump block.
Site size: 1000m².
Strata and depth: Appears totally outwashed/surficial.
Vegetation: Bunch grass, silver buffaloberry and juniper.
Ground surface visibility (%): 40-80%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: Slope erosion has had a major impact on this site.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: While the site appears to be totally outwashed, formal testing is recommended to confirm or refute this assessment.
Remarks: Twenty-seven cobbles/cores/flakes and/or shatter of KRF and an opaque chalcedony core fragment were recorded at this site.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - if any.

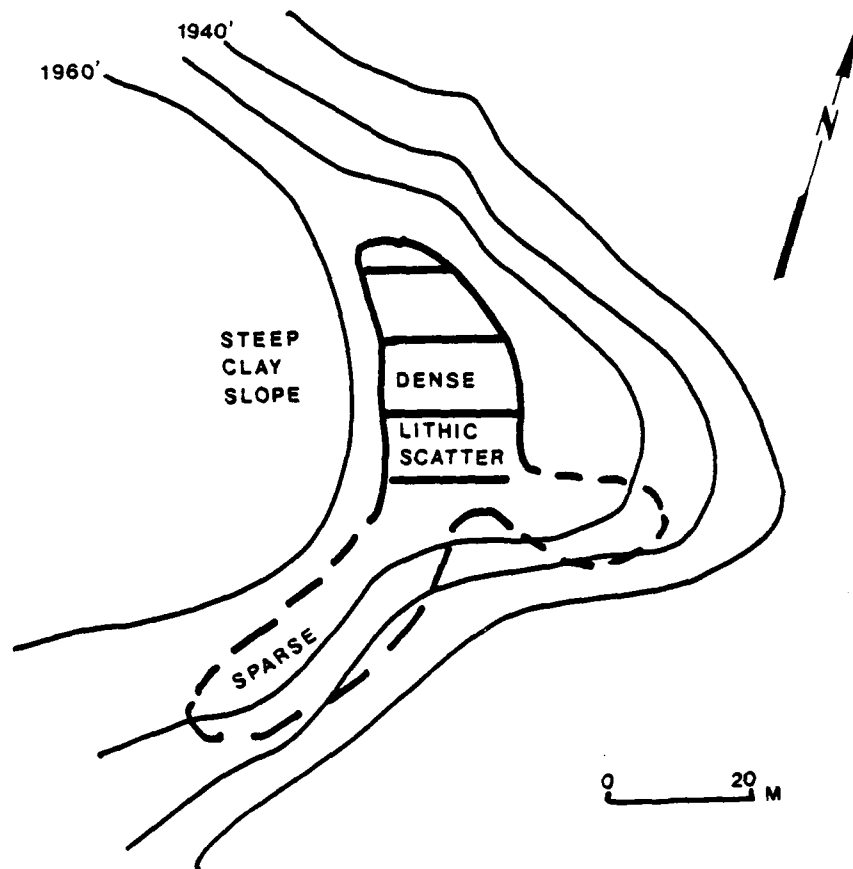


Figure 152. Plan of site 32DU735.

Site number: 32DU736 Site name:
County: Dunn. State: North Dakota. Site map: Figure 153
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 567.
Topographic position: On top of a spur of land jutting into what is
today Wolf Chief Bay.
Site size: 1250m².
Strata and depth: Unknown.
Vegetation: Ash trees, skunkbrush, silver buffaloberry, silver
sagebrush and native grasses.
Ground surface visibility (%): 30%.
Nearest water: Hans Creek - 300m.
Pool elevation (feet), when applicable: 1845' amsl.
Site condition - impacts: Lake bank erosion of the ridge apparently
impacts the site. The ridge itself only has a shallow soil.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: This site is of limited significance, but has some
potential for shallowly buried deposits. This aspect should be further
investigated if impacts threaten to destroy the site.
Remarks: Nineteen items of KRF were recorded. The material was mostly
debitage, but one biface fragment was noted.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

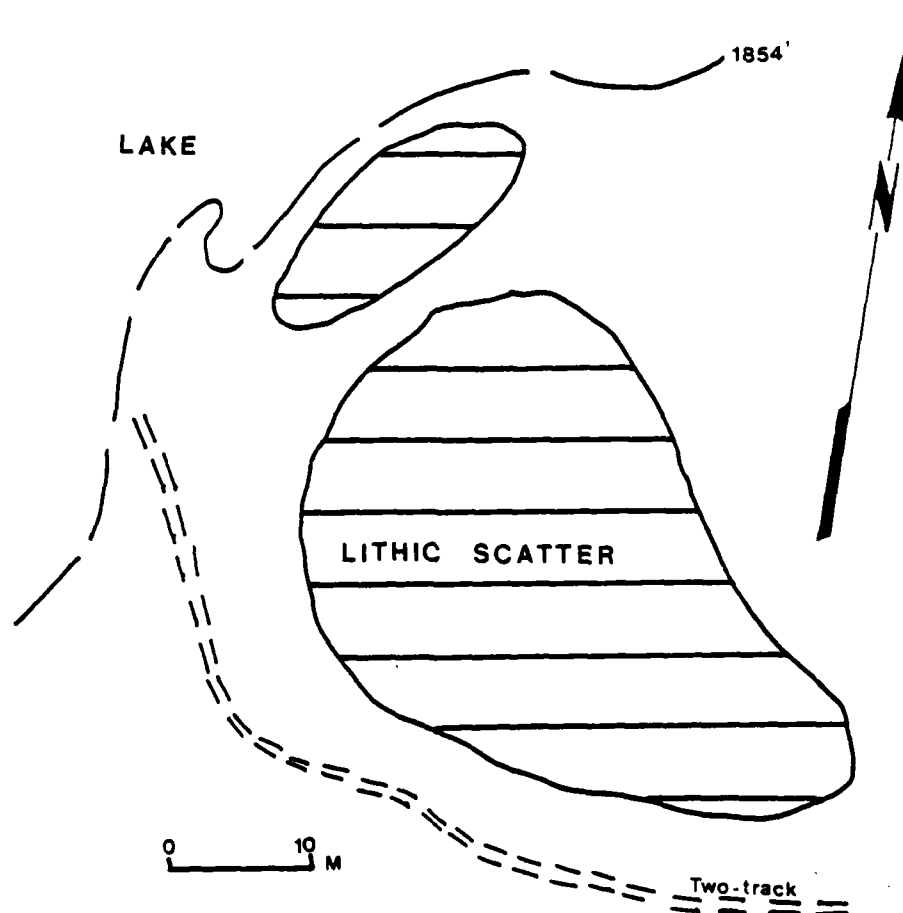


Figure 153. Plan of site 32DU736.

Site number: 32DU737 Site name:
County: Dunn. State: North Dakota. Site map: Figure 154
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter and depressions.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On a low hill and rise on the left terrace of Hans Creek.
Site size: 1200m².
Strata and depth: Unknown.
Vegetation: Native grasses, silver sagebrush.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 50m.
Pool elevation (feet), when applicable: 1845' amsl.
Site condition - impacts: The site appears relatively undisturbed apart from grazing and surface erosion.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: KRF preform reduction blank, reworked (?).
Data plotted on site map: 1=shallow depression, 1.5m in diameter and 5cm deep; 2=shallow depression, 2.0m in diameter and 10cm deep; 3=KRF preform reduction blank.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: If additional impacts threaten the site, test for National Register of Historic Places eligibility.
Remarks: One secondary flake, nine tertiary flakes and two shatter of KRF were recorded at the site, as well as the preform reduction blank. The depressions, of unknown origin, are 8m apart.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - especially to define the nature of the shallow depressions.

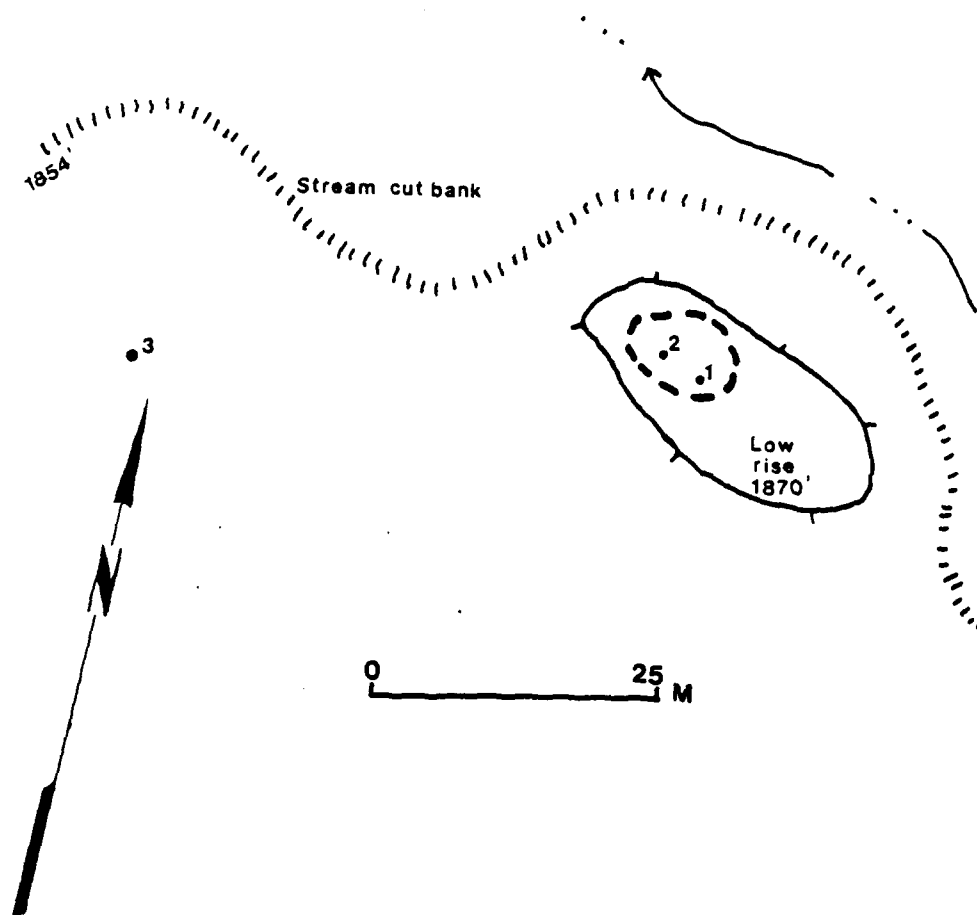


Figure 154. Plan of site 32DU737.

Site number: 32DU738 Site name:
County: Dunn. State: North Dakota. Site map: Figure 155
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of a rise on the right terrace of Hans
Creek.
Site size: 800m².
Strata and depth: Unknown.
Vegetation: Bunch grass, silver buffaloberry.
Ground surface visibility (%): 30%.
Nearest water: Hans Creek - 350m.
Site condition - impacts: Natural erosion has weathered out the site;
only a shallow soil depth remains.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: A slight potential for buried deposits/features is
present which should be investigated if additional impacts threaten the
site.
Remarks: One core, one shatter and thirteen flakes of KRF were recorded
at this site.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

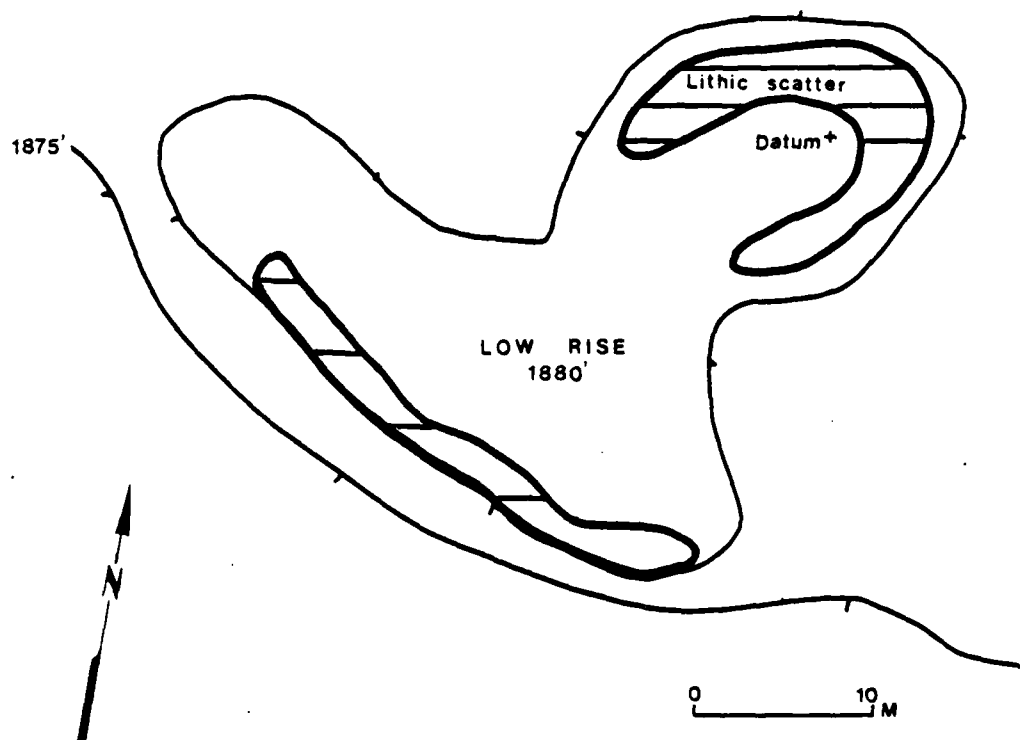


Figure 155. Plan of site 32DU738.

Site number: 32DU739 Site name:
County: Dunn. State: North Dakota. Site map: Figure 156
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: Near the spot where a prominent ridge begins to
bifurcate into separate ridges.
Site size: 8m².
Strata and depth: Unknown.
Vegetation: Wheatgrass, chokecherry, yucca and wild rose.
Ground surface visibility (%): 10% in the pit; up to 70% on eroded
edges.
Nearest water: Little Missouri River - 400m.
Site condition - impacts: Some erosion has occurred on the edges of the
pit, but it appears to have fair integrity.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 2.8m NW-SE by 2.55m NE-SW and
0.6m deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and
location are appropriate for an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

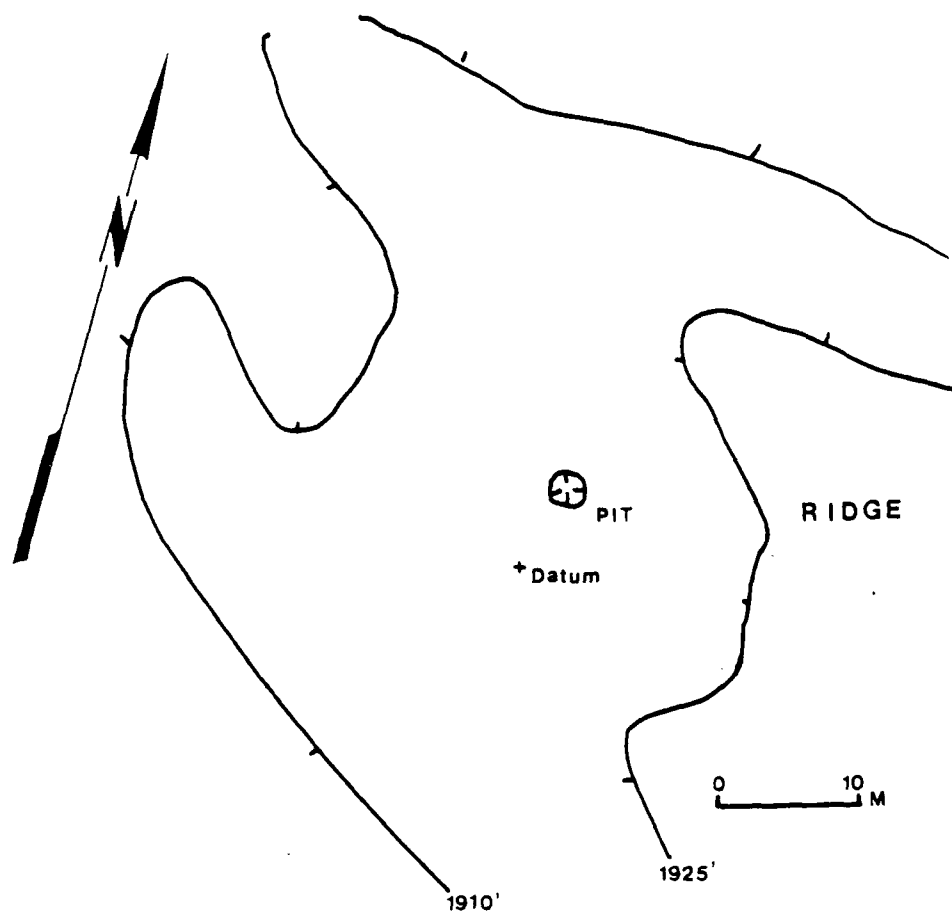


Figure 156. Plan of site 32DU739.

Site number: 32DU740 Site name:
County: Dunn. State: North Dakota. Site map: Figure 157
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Exposed human skeleton.
Component(s): Unknown.
Elevation (m): 597.
Topographic position: On a sandstone outcrop on the side of a knoll.
Site size: 5m².
Strata and depth: Surficial.
Vegetation: Dwarf juniper, shrub brush and yucca interspersed.
Ground surface visibility (%): 50% around sandstone outcrop.
Nearest water: Intermittent stream - 700m.
Site condition - impacts: The exposed skeletal remains had been disturbed/removed from a nearby crevice.
Surface collections (by whom and when): ALCWS 1986
Collected artifacts: Human skeletal remains. [The skeletal material had already been disturbed and laid out on the sandstone outcrop by a person from Watford City, ND].
Data plotted on site map: A=exposed human skeleton (missing cranium).
Previous investigations: None.
Location of artifacts: Remains turned over to the U.S. Army Corps of Engineers Archeologist at Riverdale, ND.
Other material reported by owner: The informant reported that the cranium was absent when he removed the bones from the crevice, but he did indicate that some beads or shells were present. [Note: No beads or shells were noted by ALCWS and their whereabouts are unknown].
Recommendations: In the vicinity of a burial/sacred site, impacts to the area should be avoided. If the site is to be further impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any additional skeletal remains are present.
Remarks: This site probably represents a variation on the "trunk burial" sites known in the area; but in this case a natural crevice was utilized as the burial chamber. Given further research, these burial sites may be eligible for nomination to the National Register of Historic Places under a thematic classification. It should be noted that the unauthorized disturbance of a human burial in North Dakota is a Class C felony.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. In that circumstance, testing to determine areal extent, depth, components present, research potential and integrity should be conducted - especially to locate any extant human remains.

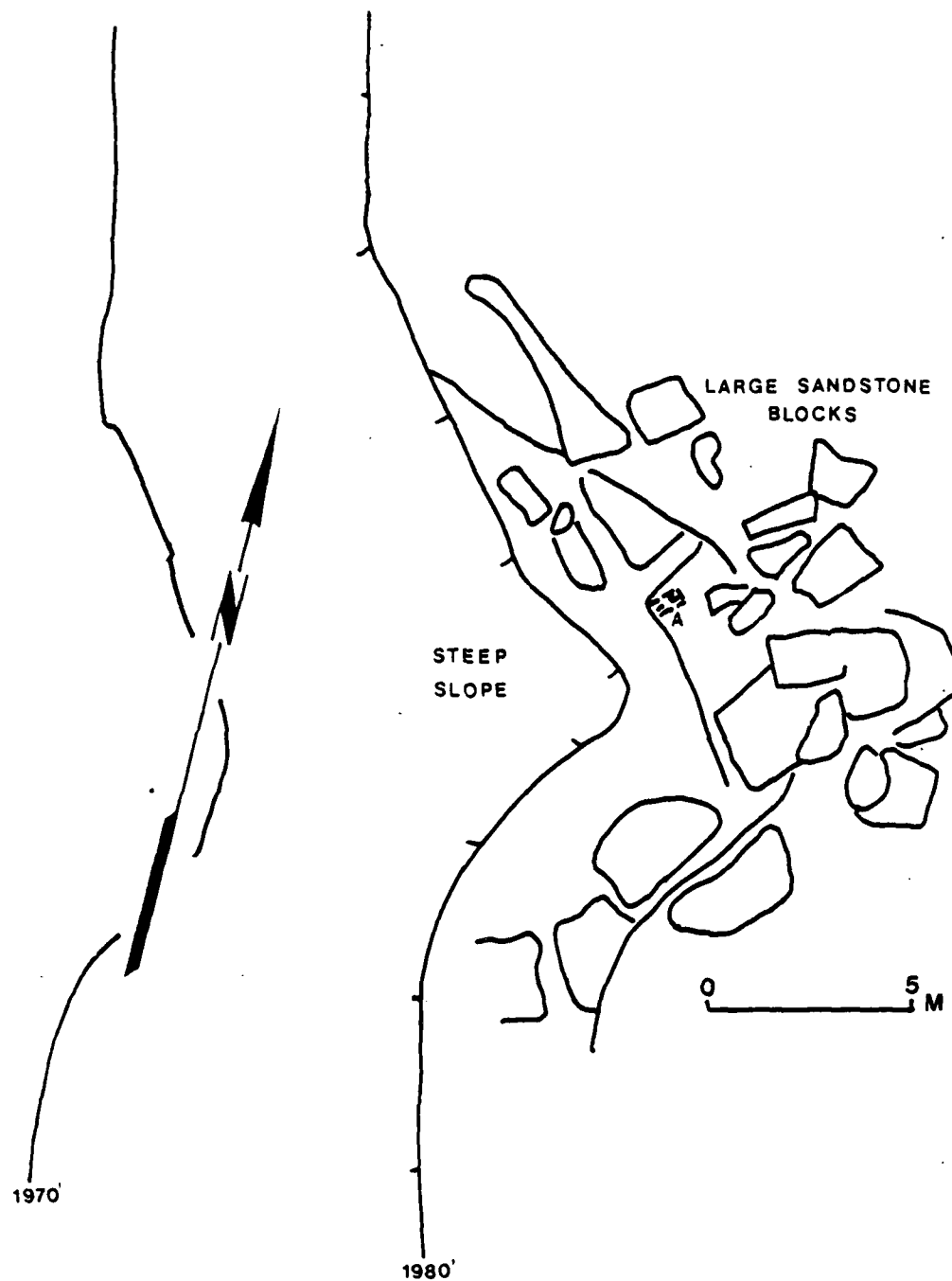


Figure 157. Plan of site 32DU740.

Site number: 32DU741 Site name:
County: Dunn. State: North Dakota. Site map: Figure 158
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 615.
Topographic position: On the NW edge of an isolated butte top.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Needle-and-thread grass, wood lilies, salsify.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 1.75m in diameter and 0.2m deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and
location indicate that it is an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

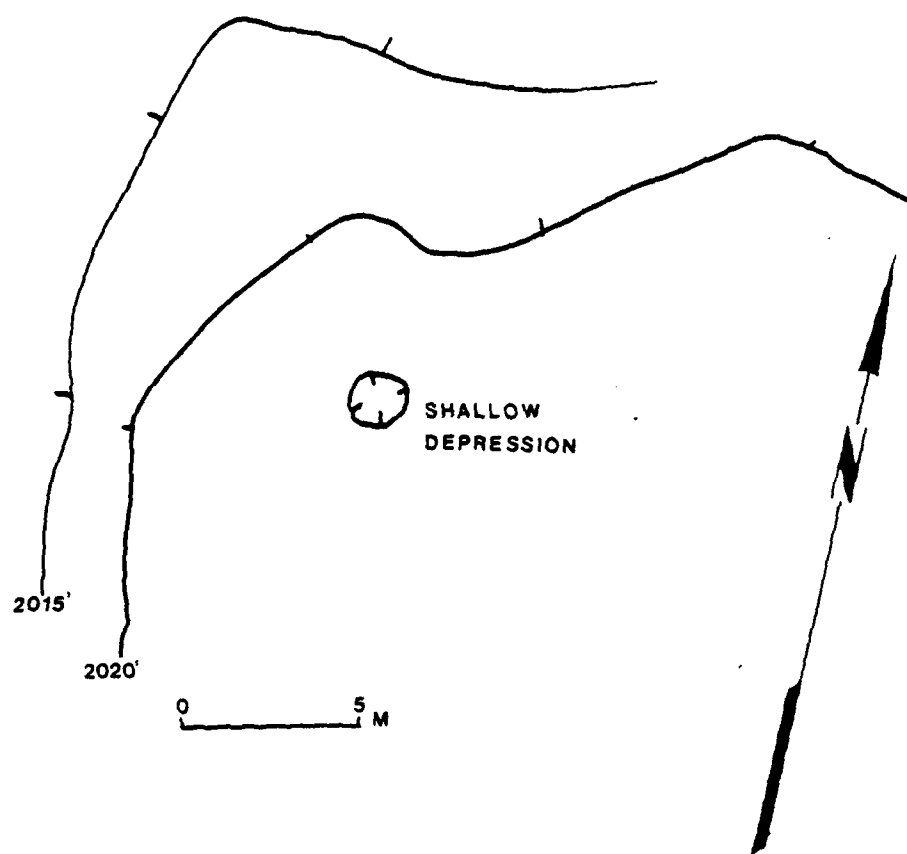


Figure 158. Plan of site 32DU741.

Site number: 32DU742 Site name:
County: Dunn. State: North Dakota. Site map: Figure 159
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: Near the edge of a small knob at the end of a ridge.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Bunch grass, silver sagebrush, dwarf juniper, wood lily.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The pit appears to be undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 1.57m N-S by 1.30m E-W and 0.28m deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and location indicate that it is an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine the nature of the depression.

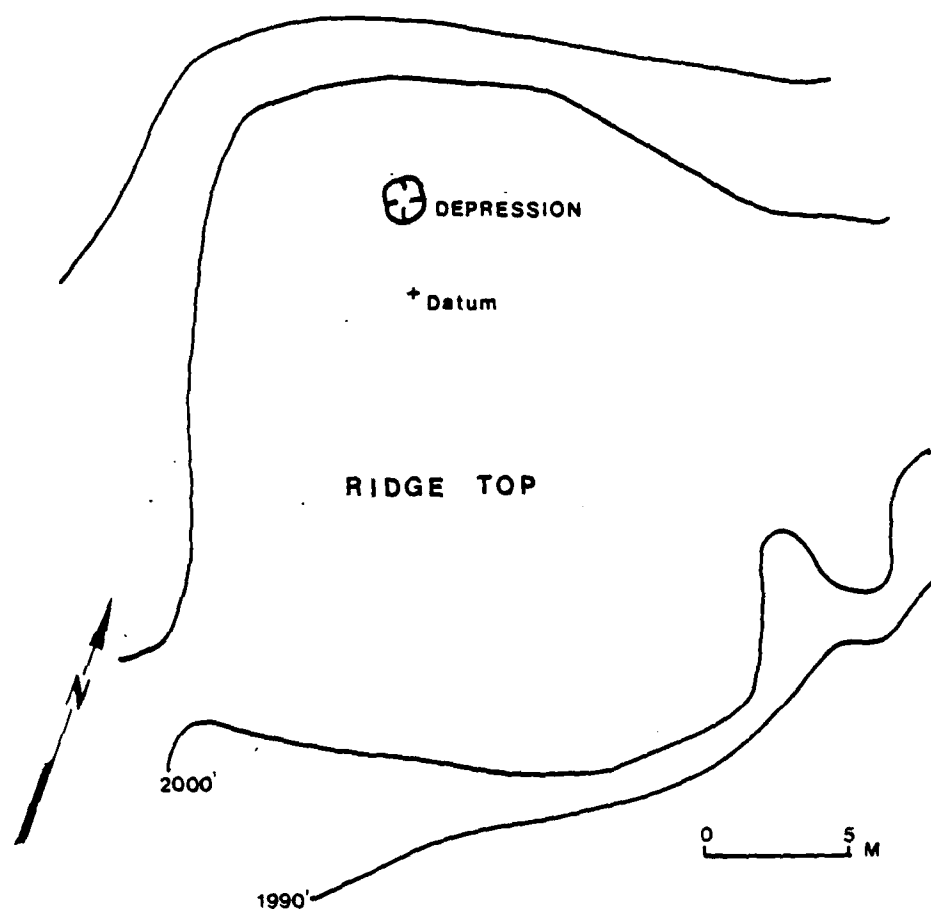


Figure 159. Plan of site 32DU742.

Site number: 32DU743 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 160
Property owner(s) and address(es): Unknown private.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 604.
Topographic position: At the upper end of a long, sloping, flat topped ridge/upland plain.
Site size: 4m².
Strata and depth: Unknown
Vegetation: Buckbrush, chokecherry, poison ivy.
Ground surface visibility (%): 20%.
Nearest water: Little Missouri River - 600m.
Site condition - impacts: The depression is overgrown, but otherwise it is undisturbed..
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 2m square and 1.65m deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is on private land, but if it is to be impacted and access is allowed, test to determine the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and location indicate that it is an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine the nature of the depression.

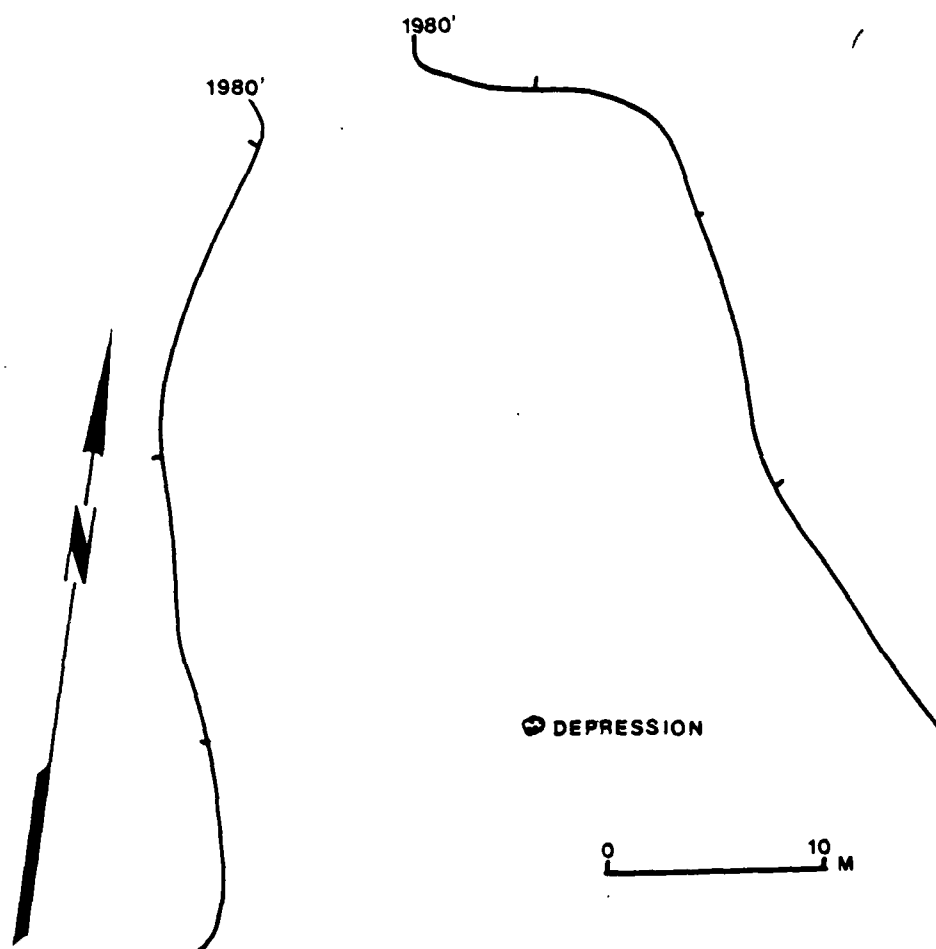


Figure 160. Plan of site 32DU743.

Site number: 32DU744 Site name:
County: Dunn. State: North Dakota. Site map: Figure 161
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Depressions (Historic).
Component(s): Unknown historic.
Elevation (m): 579.
Topographic position: On top of a ridge.
Site size: 40m².
Strata and depth: Unknown.
Vegetation: Needle-and-thread grass, western wallflower.
Ground surface visibility (%): 20%.
Nearest water: Little Missouri River - 450m.
Site condition - impacts: The site appears relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1-5=shallow depressions, 0.5m square.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The significance of this site is unknown. It appears as if the depressions are laid out regularly in relation to the brass cap. A search of survey records might reveal their meaning. Otherwise, some evaluation should be made if the depressions are to be impacted.
Remarks: One row of depressions is 8m N-S; the other measures 4m. The rows are 5m apart.
Testing for National Register Eligibility (purpose of): To determine the nature of the depressions.

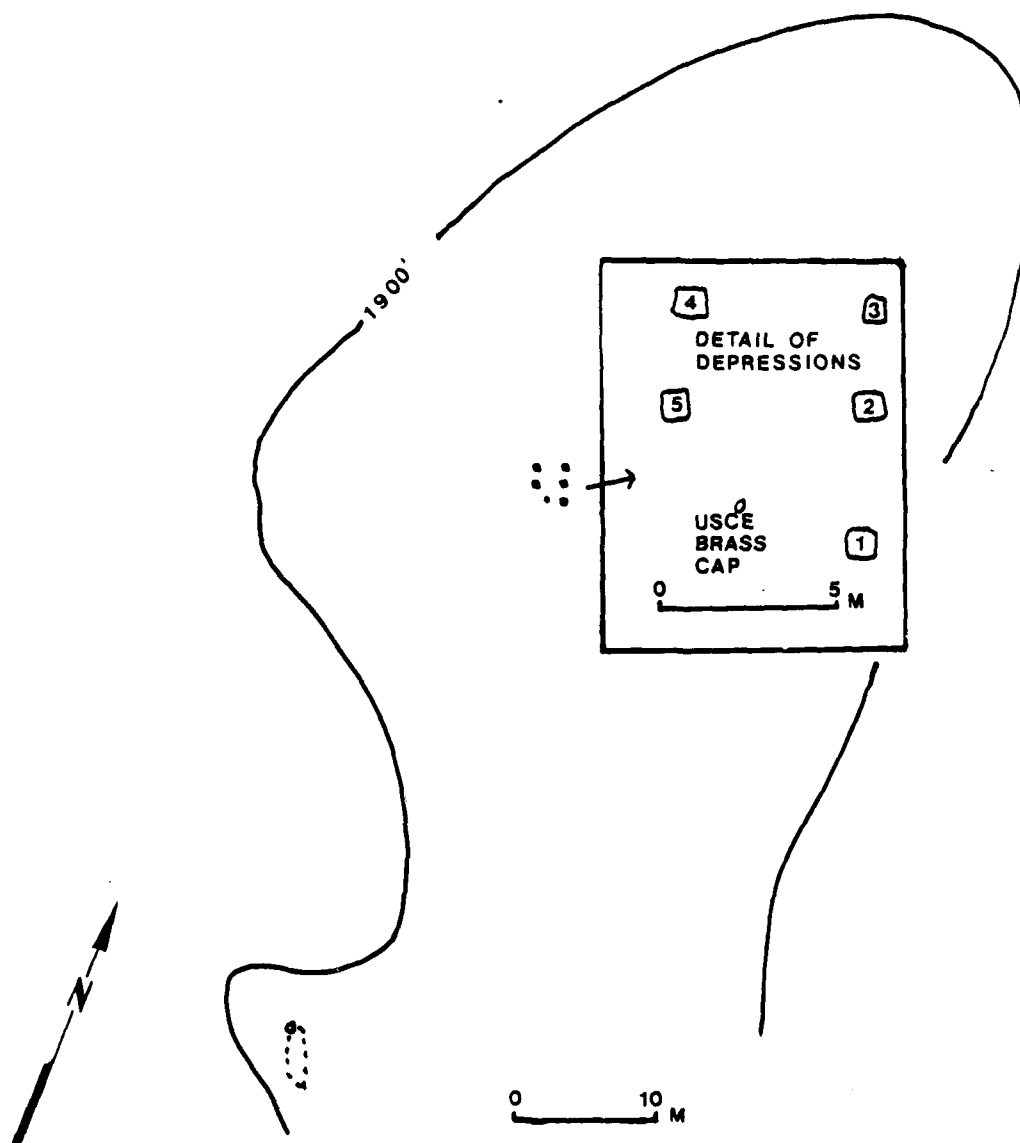


Figure 161. Plan of site 32DU744.

Site number: 32DU745 Site name:
County: Dunn. State: North Dakota. Site map: Figure 162
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a low rise along the west side of a long ridge
jutting into the Little Missouri valley.
Site size: 20m².
Strata and depth: Unknown.
Vegetation: Prickly pear and ball cactus, native grasses and forbs.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 500m.
Site condition - impacts: Some natural erosion has occurred, but the
site is relatively undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: a=KRF tertiary flake; b=KRF secondary flake.
Cairn is 1.35m N-S by 0.5m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, it should be tested to
determine the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity. The relationship to
the five KRF flakes located nearby is unknown.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

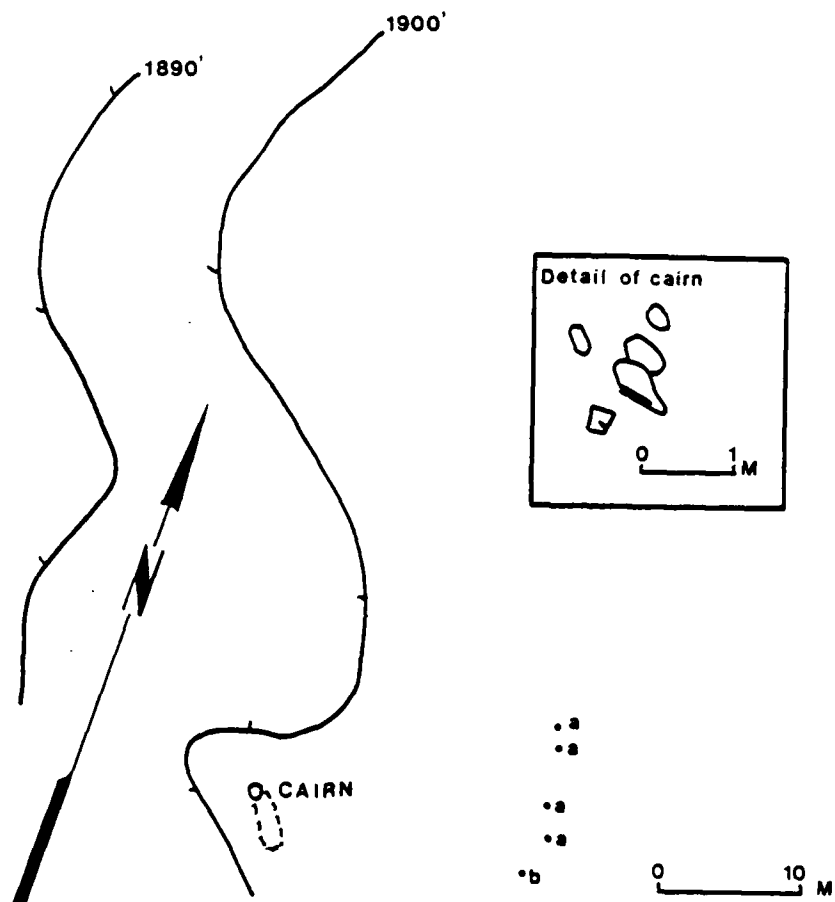


Figure 162. Plan of site 32DU745.

Site number: 32DU746 Site name:
County: Dunn. State: North Dakota. Site map: Figure 163
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On the edge of a ridge bluff overlooking the
Little Missouri River.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Sparse grass and buckbrush.
Ground surface visibility (%): 40%.
Nearest water: Little Missouri River - 200m.
Site condition - impacts: The pit appears to be relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 1.75m N-S x 1.60m E-W and 47cm
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and
location are appropriate for an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

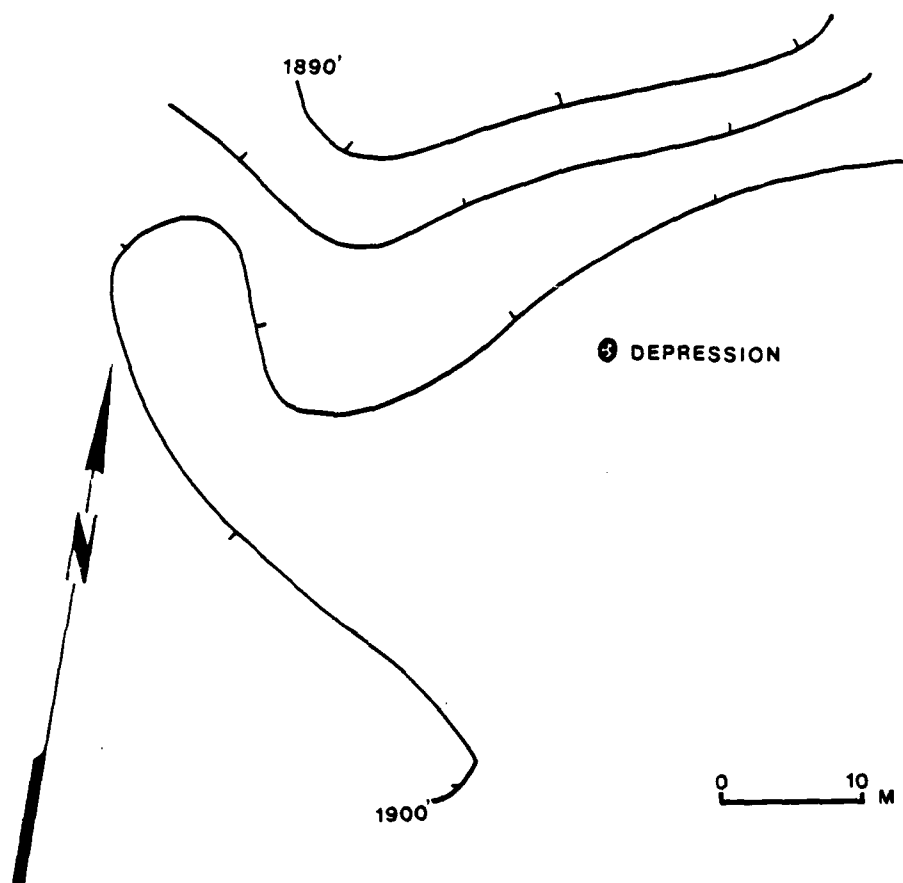


Figure 163. Plan of site 32DU746.

Site number: 32DU747 Site name:
County: Dunn. State: North Dakota. Site map: Figure 164
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Oval stone setting.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On top of a flat-topped hill or slight rise.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Bunch grass, prickly pear cactus, yellow sweet clover.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 750m.
Site condition - impacts: The site is relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Oval setting of stones, 3.0m E-W x 1.75m N-S.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the stone setting.
Remarks: This feature may mark a burial, be a small foundation, or
reflect some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the stone setting.

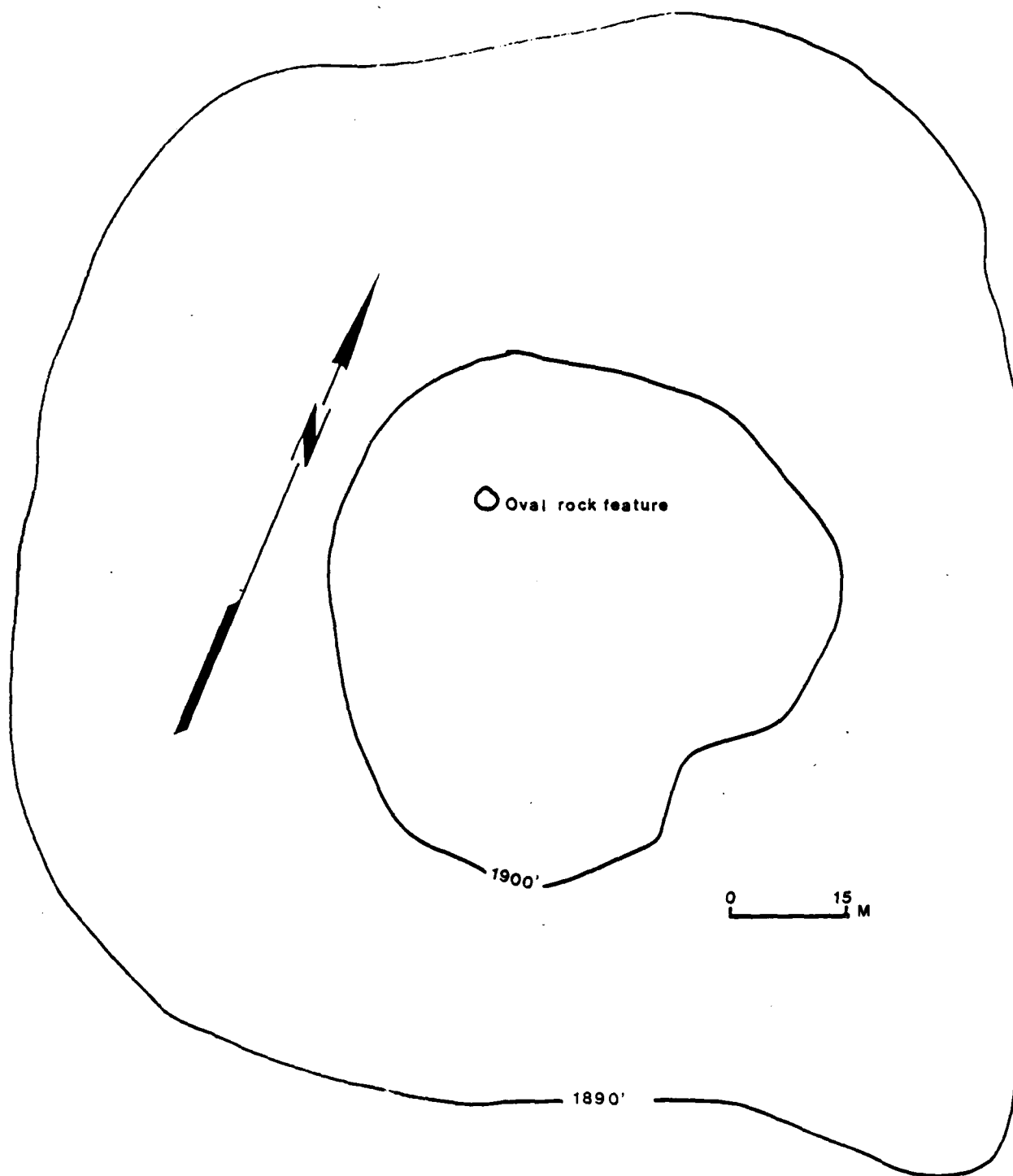


Figure 164. Plan of site 32DU747.

Site number: 32DU748 Site name:
County: Dunn. State: North Dakota. Site map: Figure 165
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 591.
Topographic position: At a bulge along a prominent ridge crest.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Prickly pear cactus, silver sagebrush.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 750m.
Site condition - impacts: The cairn appears to be in fair condition,
but the ridge is badly eroded.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.7m NW-SE x 0.6m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

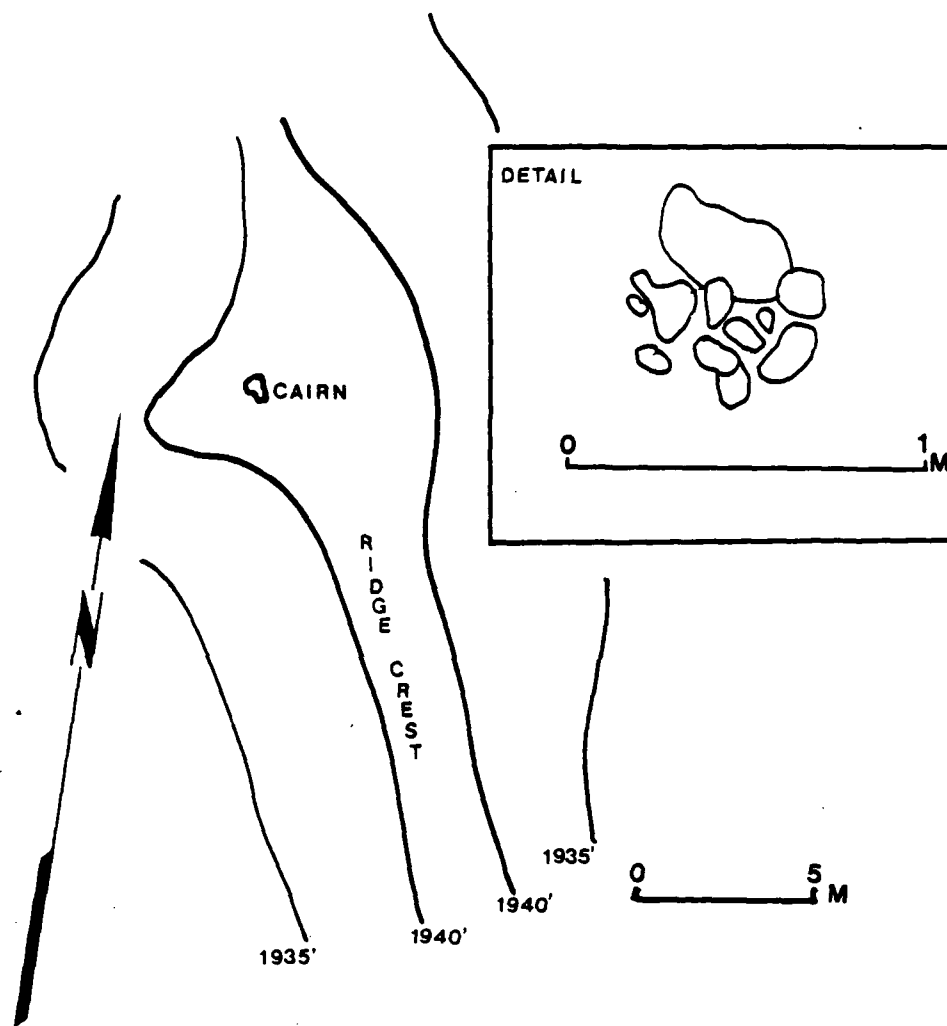


Figure 165. Plan of site 32DU748.

Site number: 32DU749 Site name:
County: Dunn. State: North Dakota. Site map: Figure 166
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 582.
Topographic position: On top of the highest hill of the ridge that
makes up this point of land.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Bunch grass, silver buffaloberry.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site appears relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.55m NW-SE x 0.55m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

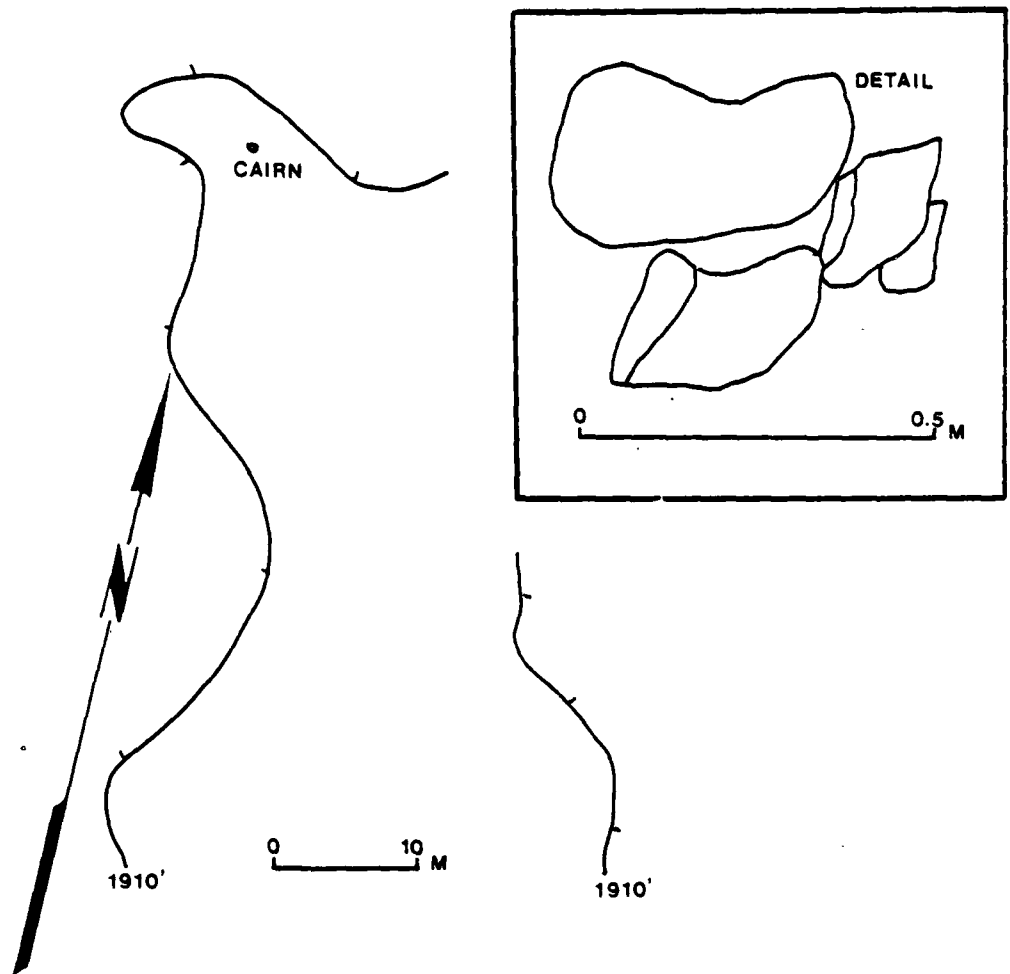


Figure 166. Plan of site 32DU749.

Site number: 32DU750 Site name:
County: Dunn. State: North Dakota. Site map: Figure 167
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Rock alignment.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a low rise/saddle between two prominent hills.
Site size: 150m².
Strata and depth: Unknown - likely 0-20cm.
Vegetation: Sparse native grass.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 600m.
Site condition - impacts: The site appears relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Rock alignment - north arm measures 8.2m;
east arm is 13.35m.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the stone alignment.
Remarks: At the junction of the two arms of the alignment is an area of
cobble paving 2m which is in diameter.
Testing for National Register Eligibility (purpose of): To determine
the nature of the rock alignment.

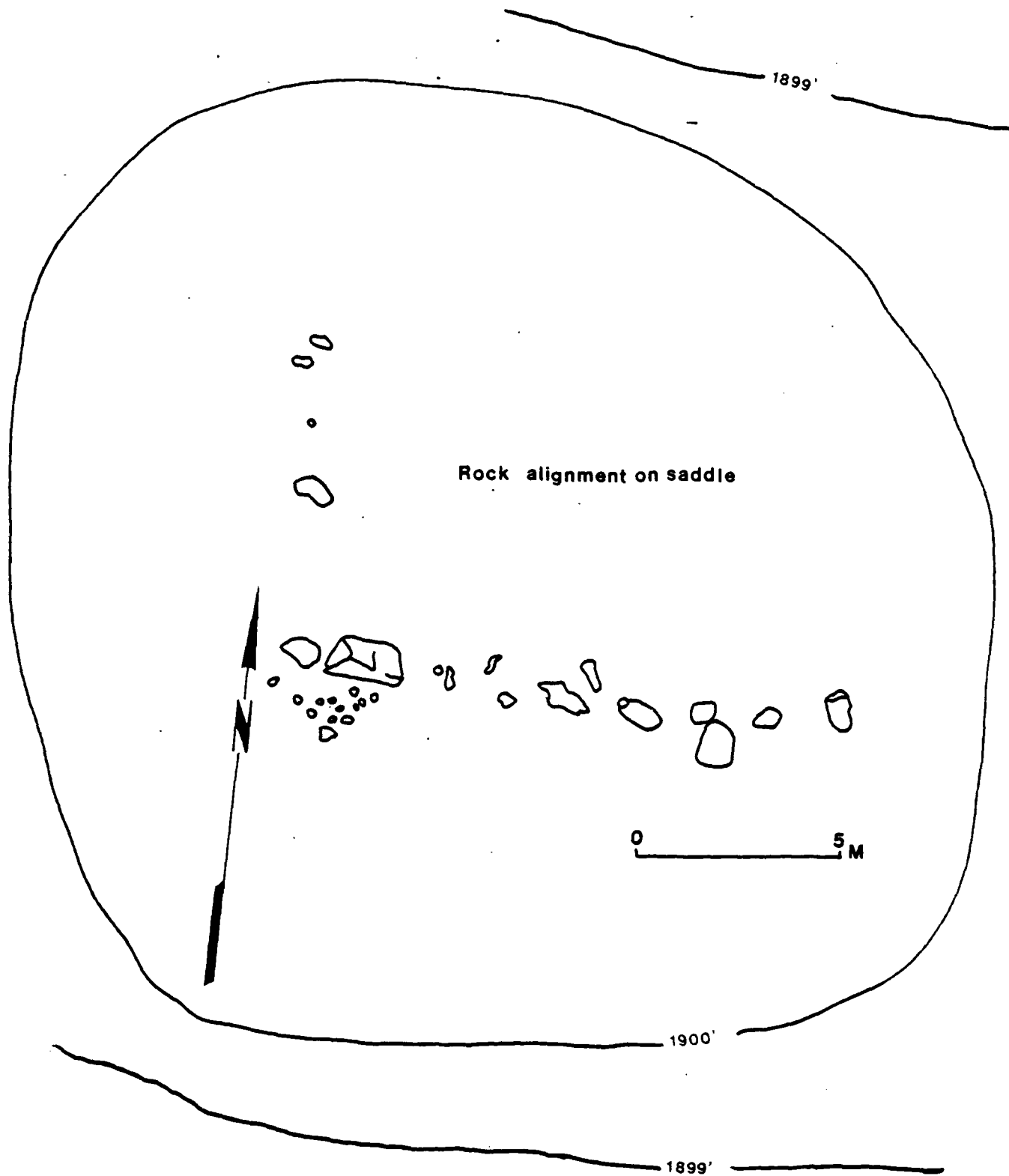


Figure 167. Plan of site 32DU750.

Site number: 32DU751 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 168
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Depressions/quarry pits.
Component(s): Unknown.
Elevation (m): 597.
Topographic position: On the north edge of an elongated hill/ridge or
edge of the terrace.
Site size: 25m².
Strata and depth: Unknown.
Vegetation: Bunch grass, needle-and-thread grass, forbs, yucca.
Ground surface visibility (%): 40%.
Nearest water: Missouri River - 800m.
Site condition - impacts: The site appears relatively undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: 1=shallow pit, 1.0m in diameter. 2=shallow
pit, 1.45m in diameter. 3=KRF tertiary flake.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depressions.
Remarks: One KRF tertiary flake was noted by the easternmost
depression.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depressions.

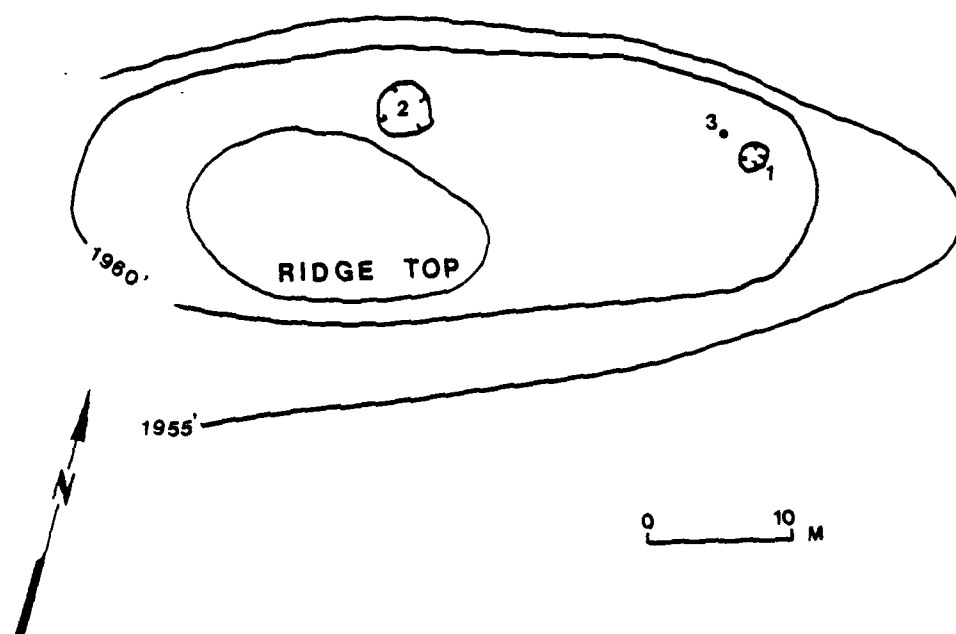


Figure 168. Plan of site 32DU751.

Site number: 32DU752 - Site name:

County: Dunn.

State: North Dakota.

Site map: Figure 169

Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.

Site type: Cairn and artifact scatter.

Component(s): Unknown.

Elevation (m): 604.

Topographic position: Along the edge of a narrow ridge.

Site size: 6m².

Strata and depth: Unknown.

Vegetation: Bunch grass, black sampson.

Ground surface visibility (%): 50%.

Nearest water: Intermittent stream - 400m.

Site condition - impacts: The site is relatively undisturbed apart from natural weathering.

Surface collections (by whom and when): None.

Data plotted on site map: 1=large rock cairn, 1.65m in diameter.

2=four-stone annex. 3=two KRF shatter.

Previous investigations: None.

Other material reported by owner: None.

Recommendations: If the site is to be impacted, test to determine the nature of the cairn.

Remarks: The cairn may mark a trail or a burial, reflect field clearance, or be related to some other activity.

Testing for National Register Eligibility (purpose of): To determine the nature of the cairn.

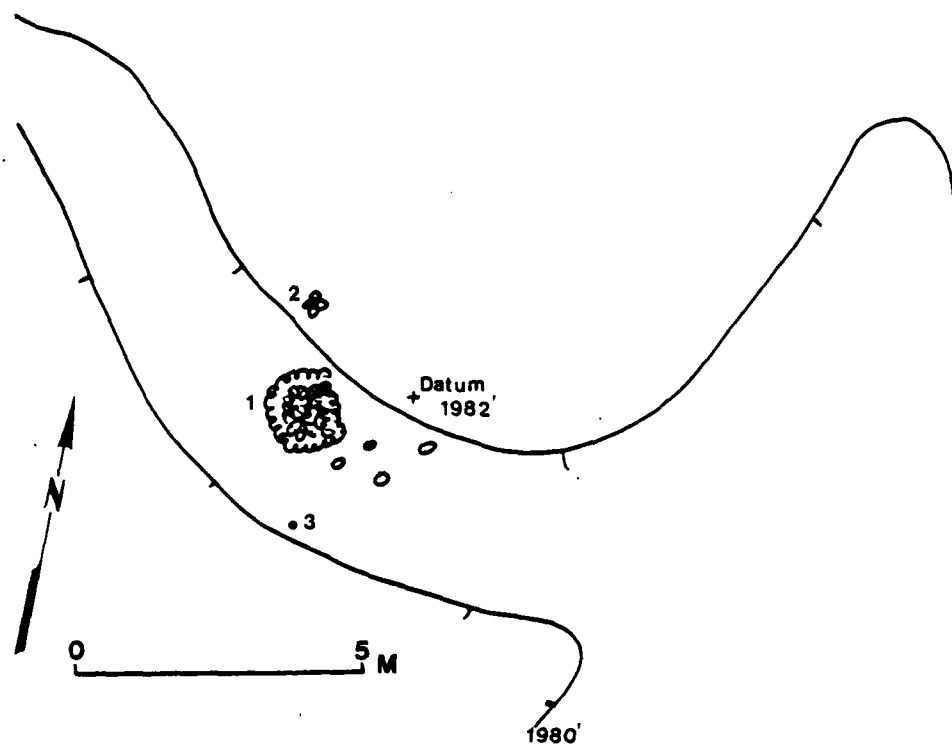


Figure 169. Plan of site 32DU752.

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Site number: 32DU753 Site name:
County: Dunn. State: North Dakota. Site map: Figure 170
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: Along the west edge of a prominent, isolated
ridge.
Site size: 5m².
Strata and depth: Unknown.
Vegetation: Bunch grass and forbs.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The cairn appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.8m N-S x 2.4m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

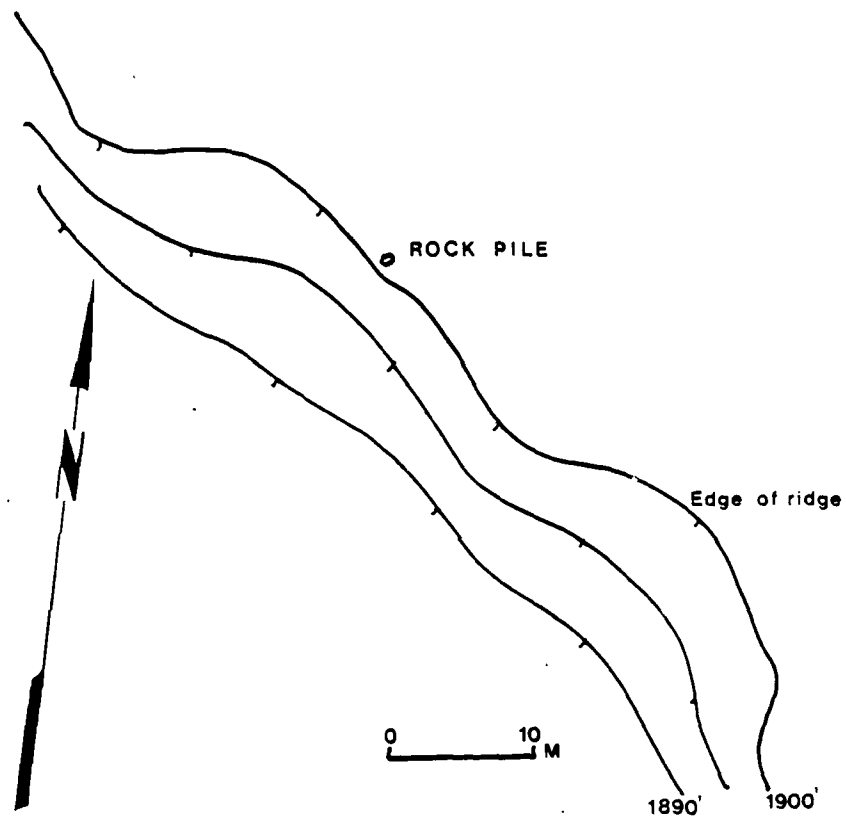


Figure 170. Plan of site 32DU753.

Site number: 32DU754 Site name:
County: Dunn. State: North Dakota. Site map: Figure 171
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On the east end of a low ridge that forms a
bridge/saddle between a prominent hill to the west and a ridge to the
east.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Sparse grasses.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: The area is naturally eroded, but the cairn
appears relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 2m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or serve some other function.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

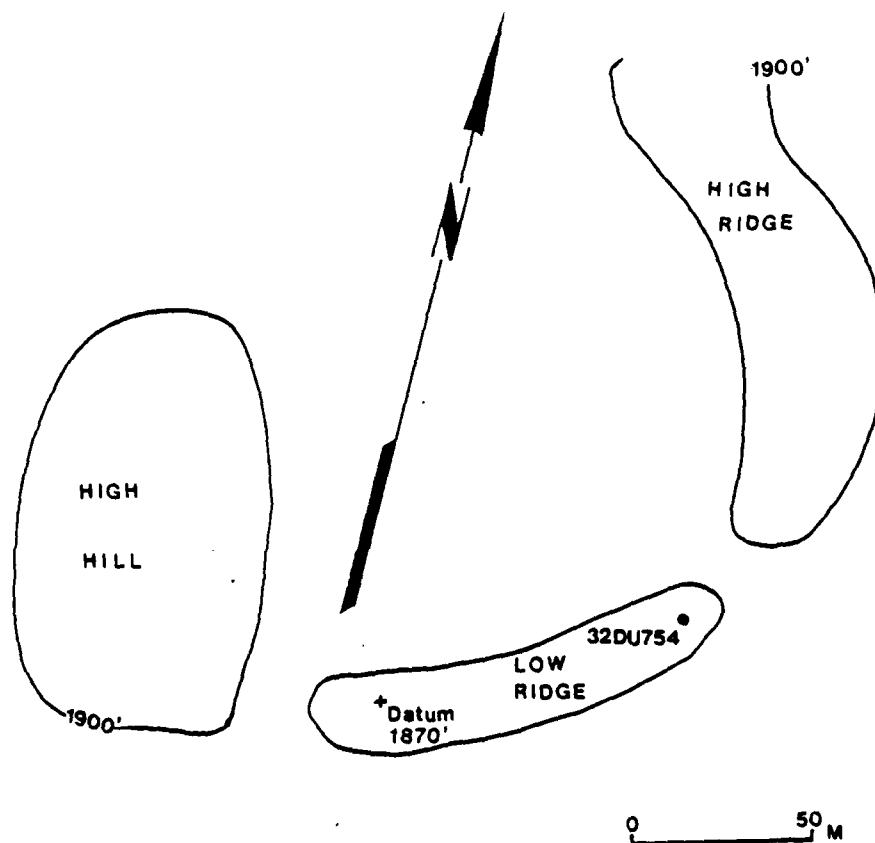


Figure 171. Plan of site 32DU754.

Site number: 32DU755 Site name:
County: Dunn. State: North Dakota. Site map: Figure 172
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On the west end of a low ridge that forms a
bridge/saddle between a prominent hill to the west and a higher ridge to
the east.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Native grasses and forbs.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: Natural weathering and vegetation growth
affect the site, but the cairn appears to be relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 0.75m in diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

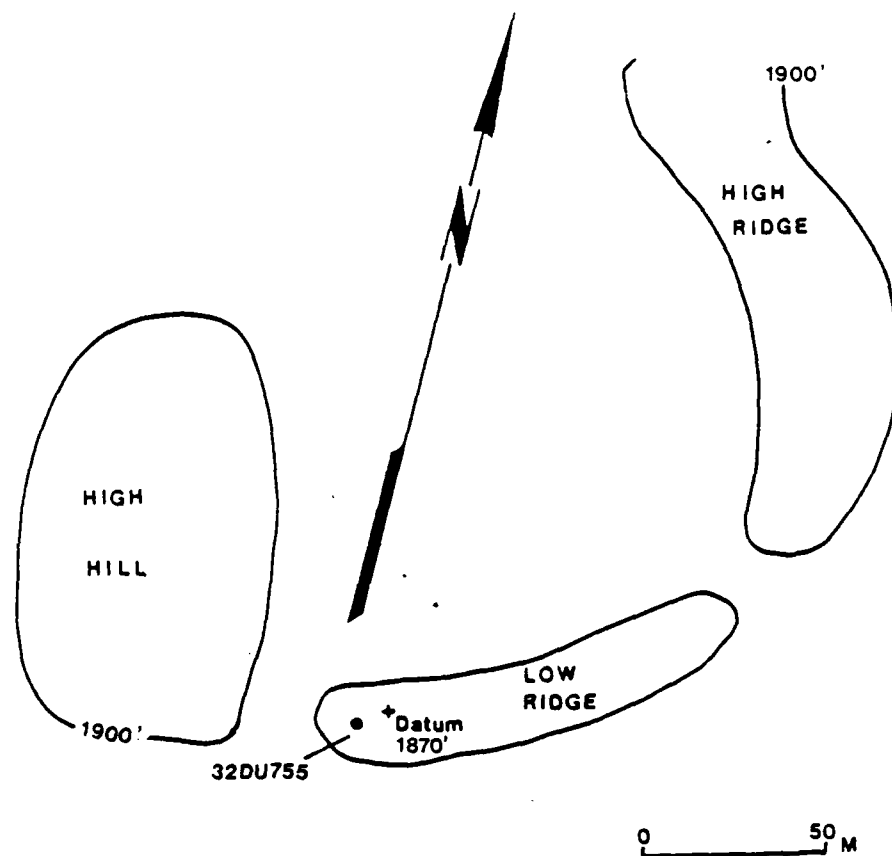


Figure 172. Plan of site 32DU755.

Site number: 32DU756 Site name:
County: Dunn. State: North Dakota. Site map: Figure 173
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Stone circle, cairn.
Component(s): Unknown.
Elevation (m): 576.
Topographic position: Situated towards opposite ends of a flat-topped rise at the end of a long prominent ridge spur.
Site size: 80m².
Strata and depth: Unknown - likely 0-20cm.
Vegetation: Short grass with silver buffaloberry and ash trees on the hill slope to the north.
Ground surface visibility (%): 10-40%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: The site appears to be relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Stone circle, 4.45m N-S x 4.2m E-W and cairn, 1.15m N-S x 2.25m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test for National Register of Historic Places eligibility.
Remarks: The site's significance unknown, but it would appear to have good integrity.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity - especially to investigate the relationship, if any, between the cairn and the stone circle.

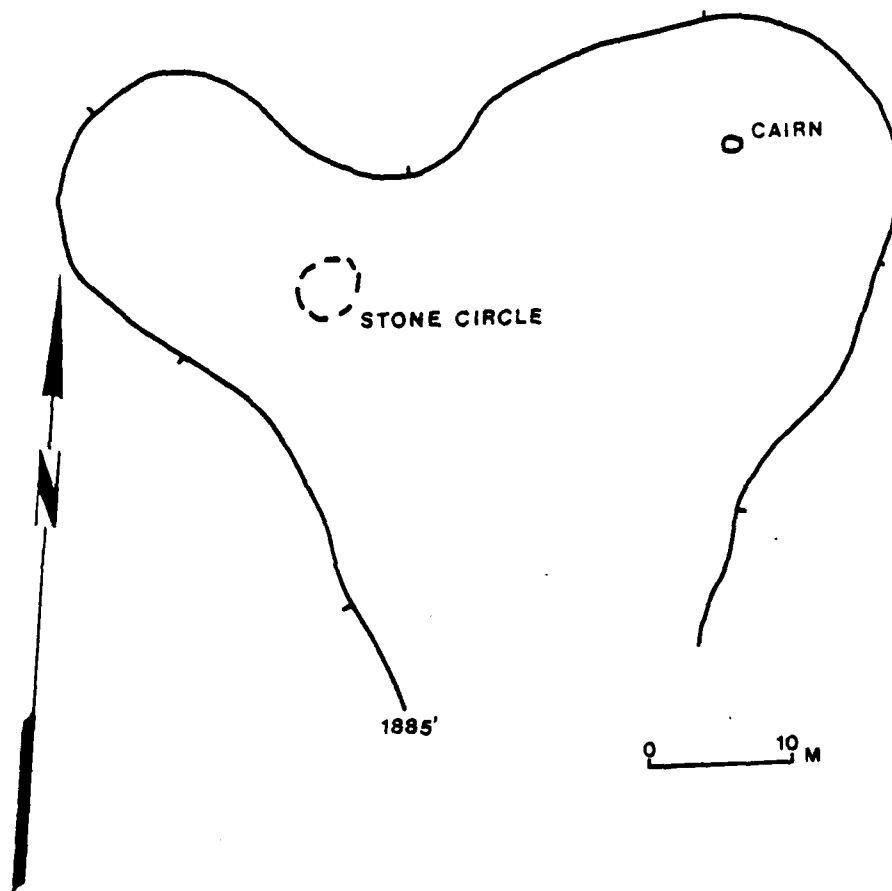


Figure 173. Plan of site 32DU756.

Site number: 32DU757 Site name: Young Bear Cemetery.
County: Dunn. State: North Dakota. Site map: Figure 174
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cemetery.
Component(s): Historic Native American.
Elevation (m): 585.
Topographic position: Site located on the top and sides of a hill, specifically in a shallow swale in-between two slightly higher rises on a prominent hilltop.
Site size: 100m².
Strata and depth: Unknown.
Vegetation: Native grasses, needle-and-thread grass.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 700m.
Site condition - impacts: The site appears to be undisturbed, but abandoned.
Surface collections (by whom and when): None.
Data plotted on site map: 1-11=sunken grave outlines; 12=purple glass bottle neck.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because this is a cemetery/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials remain extant.
Remarks: A Bureau of Indian Affairs report (1950) records this burial ground as containing 11 interments. The grave of Walter Young Bear and 10 unidentified burials are recorded here. The glass bottle neck probably predates 1919; it appeared not to have a seam going over the lip.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, conduct testing to determine the site's areal extent, depth, components present, research potential and integrity - especially to locate any extant human remains.

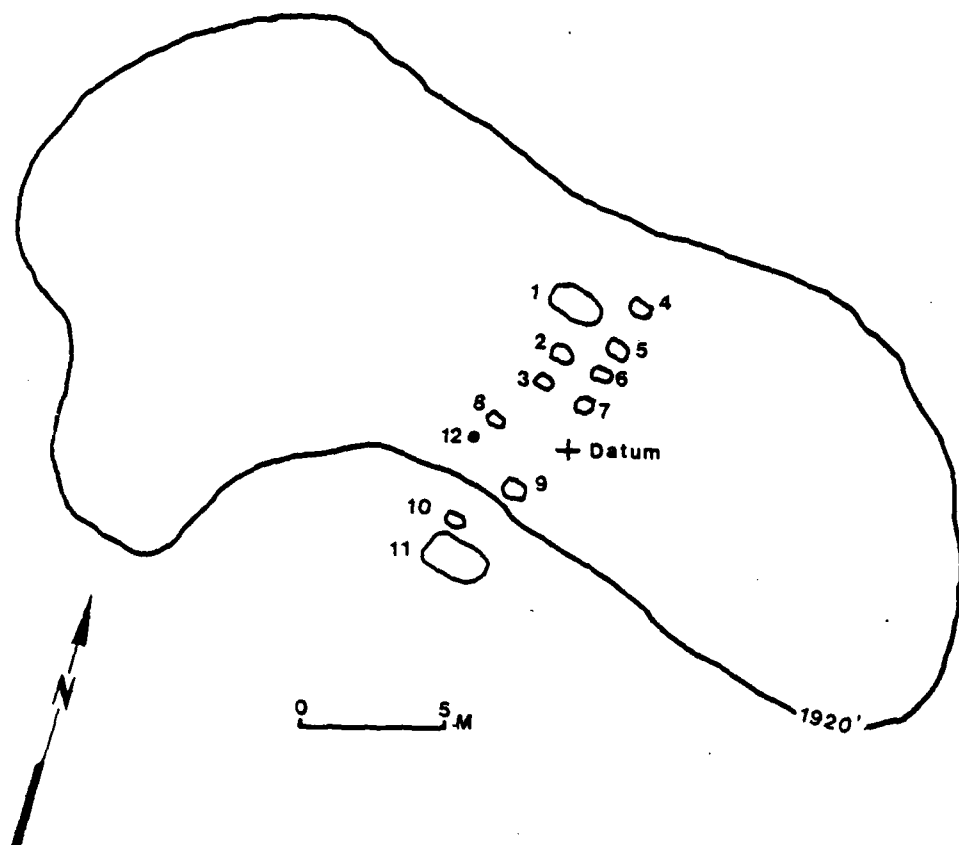


Figure 174. Plan of site 32DU757.

Site number: 32DU758 Site name:
County: Dunn. State: North Dakota. Site map: Figure 175
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Rock alignment.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: Located towards the end of a broad ridge which
overlooks the junction of the Little Missouri and Missouri rivers.
Site size: 3m².
Strata and depth: Unknown.
Vegetation: Little bluestem, needle-and-thread grass.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Rock alignment, overall 2.15m x 1.3m.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the stone alignment.
Remarks: The nature of the site is unknown, but it might relate to a
burial and should be examined if it is to be impacted.
Testing for National Register Eligibility (purpose of): To determine
the nature of the rock alignment.

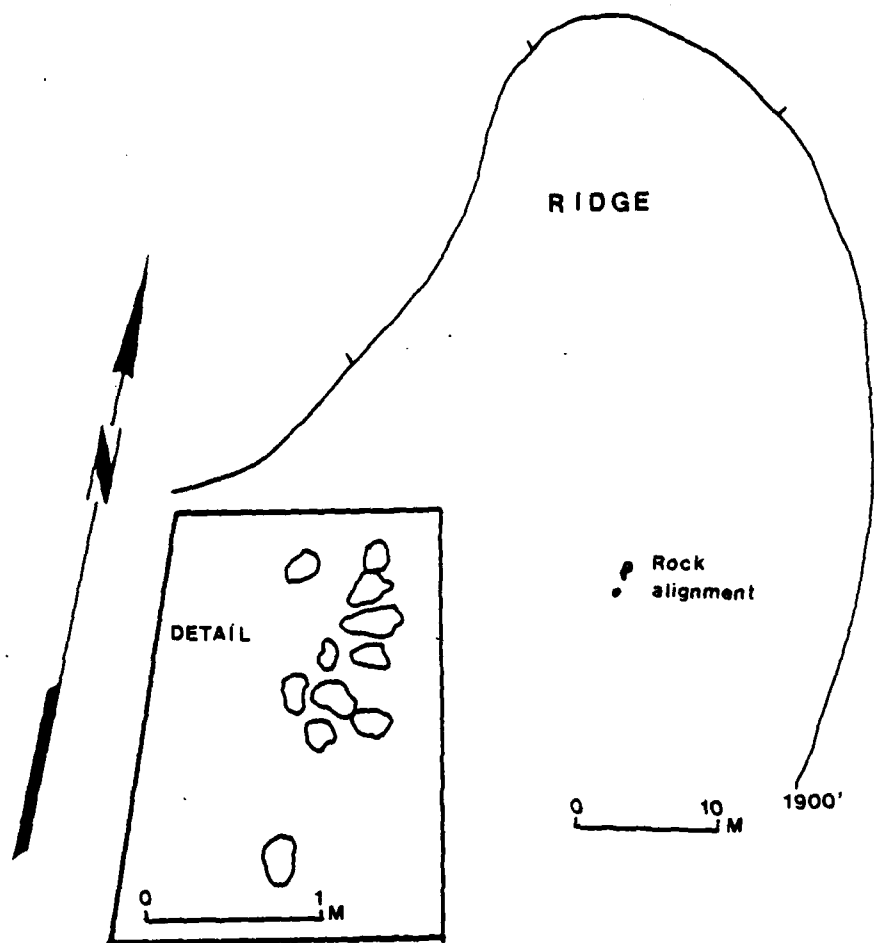


Figure 175. Plan of site 32DU758.

Site number: 32DU759 Site name: Benson Cemetery.
County: Dunn. State: North Dakota. Site map: Figure 176
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cemetery.
Component(s): Historic Native American.
Elevation (m): 585.
Topographic position: On top of a small rise at the extreme end of a long ridge.
Site size: 900m².
Strata and depth: Unknown.
Vegetation: Needle-and-thread grass, wild rose and other grasses.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: The cemetery appears relatively undisturbed, but based on the depth of the depressions the burials may have been removed.
Surface collections (by whom and when): None.
Data plotted on site map: 1-7=sunken grave outlines; 8=area of sandstone slabs and milled lumber, possible grave.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Since this cemetery represents a sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether it can be related to any living person(s) and whether any burials remain extant.
Remarks: A Bureau of Indian Affairs report (1950) records a Benson Cemetery a few hundred meters west of this location, but this is presumed to be the same site. The graves of Ben Benson, Baby Benson and four unidentified (very old) individuals are recorded at this site. The sandstone slabs and milled lumber may relate to a trunk-type burial in a sandstone vault.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted - especially to locate any extant human remains.

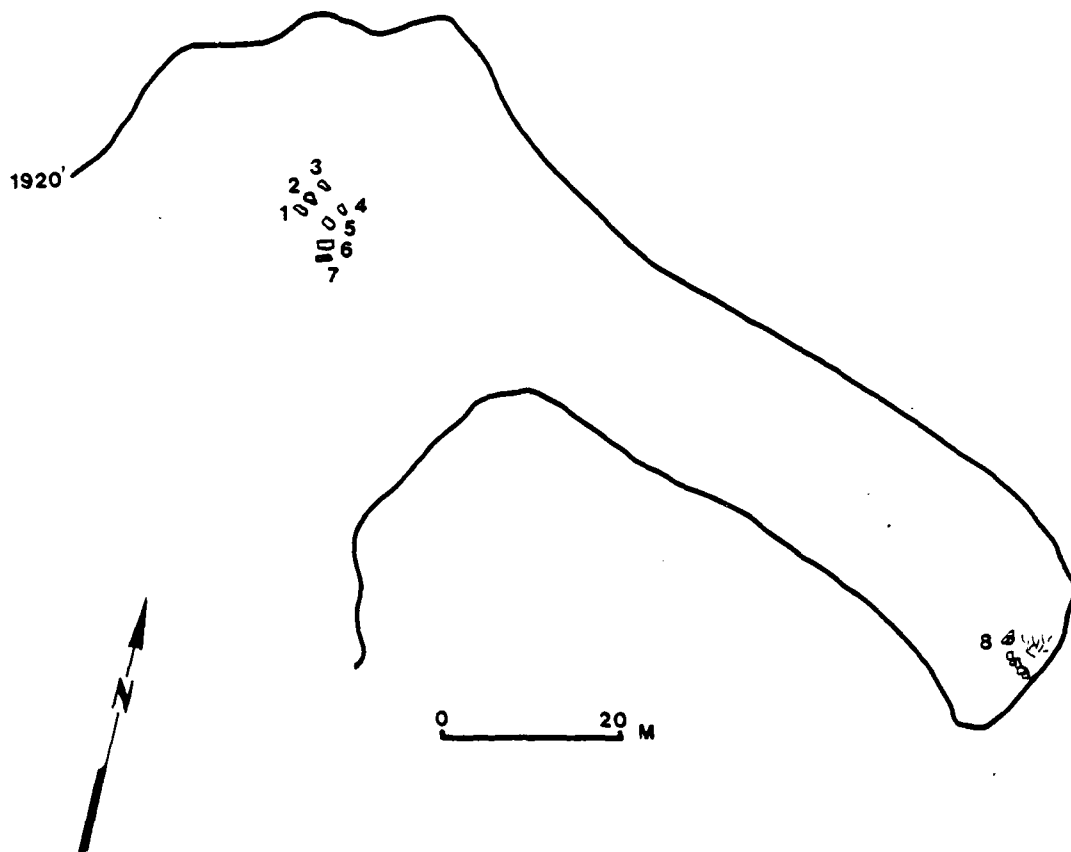


Figure 176. Plan of site 32DU759.

Site number: 32DU760

Site name:

County: Dunn.

State: North Dakota.

Site map: Figure 177

Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.

Site type: Artifact scatter.

Component(s): Unknown.

Elevation (m): 594.

Topographic position: Presently on the beach at the head of Drags Wolf Bay where the stream that feeds the bay makes a sharp right turn.

Site size: 1900m².

Strata and depth: Surficial.

Vegetation: Beach.

Ground surface visibility (%): 100%.

Nearest water: Intermittent stream - 20m.

Pool elevation (feet), when applicable: 1843' amsl.

Site condition - impacts: The site appears to be totally eroded out. No material was exposed in the cutbank.

Surface collections (by whom and when): None.

Previous investigations: None.

Other material reported by owner: None.

Recommendations: This is a very sparse and totally outwashed artifact scatter which is not considered eligible for nomination to the National Register of Historic Places. No further work is recommended in that regard.

Remarks: Two core fragments and seven tertiary flakes of KRF were noted.

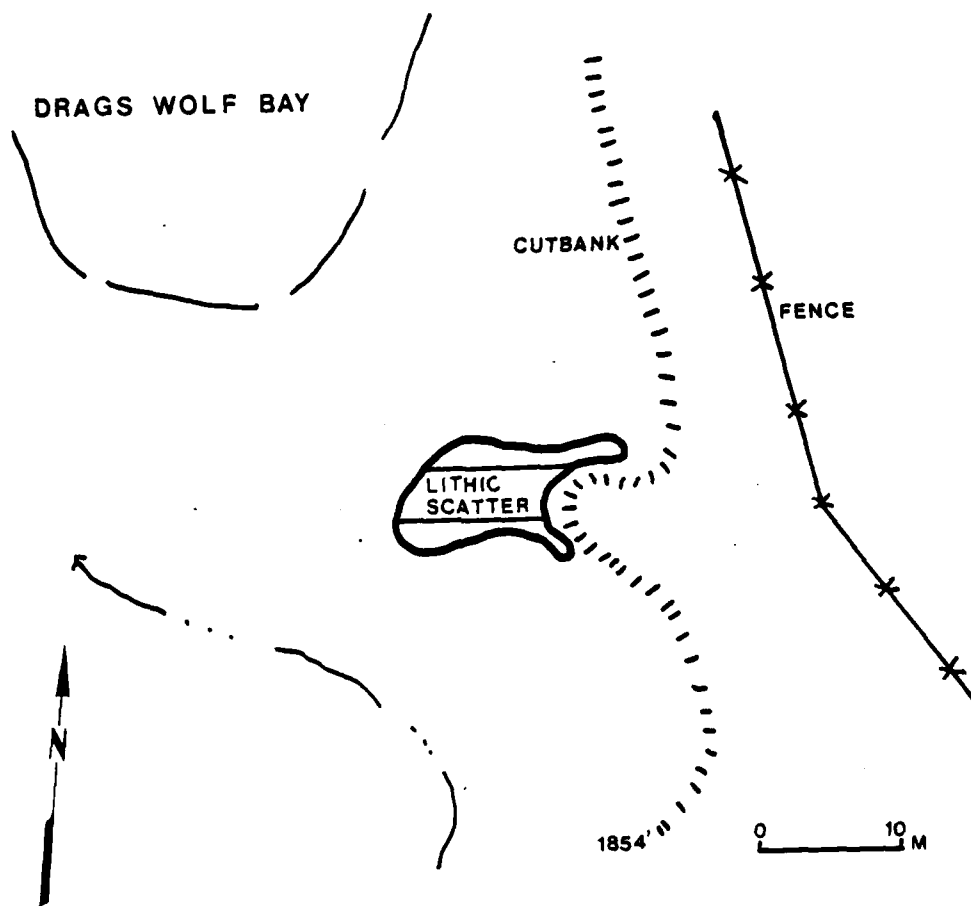


Figure 177. Plan of site 32DU760.

Site number: 32DU761 Site name:
County: Dunn. State: North Dakota. Site map: Figure 178
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 616.
Topographic position: Located along the edge and top of a prominent
ridge.
Site size: 1250m².
Strata and depth: Unknown - but shallow.
Vegetation: Mixed grasses.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site is clearly eroding from shallow
deposits, but no other impacts are apparent.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If additional impacts threaten the site, test for
National Register of Historic Places eligibility.
Remarks: Eleven items of KRF were noted here: two cores, a primary
flake, a secondary flake, four tertiary flakes and three shatter.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

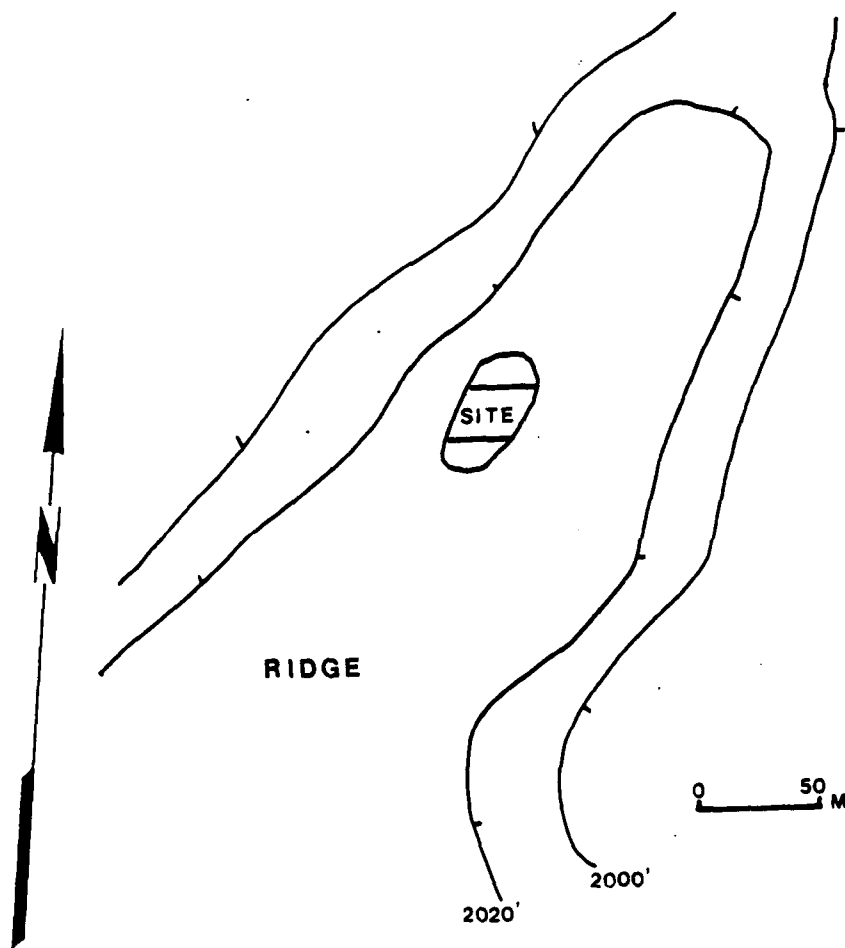


Figure 178. Plan of site 32DU761.

Site number: 32DU762 Site name:
County: Dunn. State: North Dakota. Site map: Figure 179
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 567.
Topographic position: The site is exposed in a few washout areas on a
low ridge top which slopes steeply east to the reservoir.
Site size: 490m².
Strata and depth: Shallow - 10cm, based on exposure in washouts.
Vegetation: Prickly pear cactus, sagebrush, short grass.
Ground surface visibility (%): 85%.
Nearest water: Little Missouri River - 150m.
Site condition - impacts: The site is deflated in several areas.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: This is a very sparse scatter. The site area is
limited to the ridge top and most of that is deflated. It is not
considered eligible for nomination to the National Register of Historic
Places. Therefore, no further work is recommended in that regard.
Remarks: Fourteen items of KRF were noted: 13 flakes and a shatter
fragment.

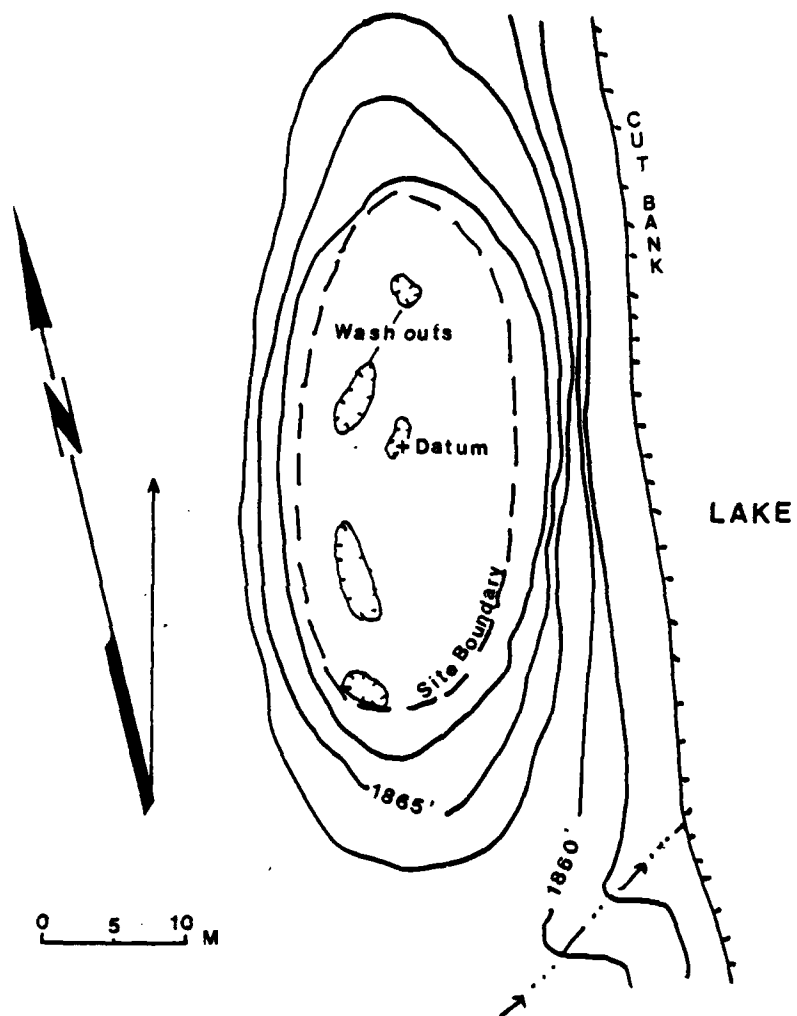


Figure 179. Plan of site 32DU762.

Site number: 32DU763 Site name:
County: Dunn. State: North Dakota. Site map: Figure 180
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn and artifact scatter.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On a flat-topped ridge and associated slopes.
Site size: 4200m².
Strata and depth: Surficial.
Vegetation: Short grass, sagebrush, prickly pear cactus.
Ground surface visibility (%): 40-100%.
Nearest water: Intermittent stream - 150m.
Site condition - impacts: The site is badly eroded and material has
moved by slopewash.
Surface collections (by whom and when): None.
Data plotted on site map: The area of the artifact scatter and location
of a stone pile.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site appears to have little further research
potential; however, if it is to be impacted, the nature of the stone
pile should be determined.
Remarks: Ten items of KRF (five flakes and five shatter) and 12 items
of brown chalcedony (four flakes, five shatter, two utilized and one
retouched flake) were noted.
Testing for National Register Eligibility (purpose of): To determine
the nature of the stone pile/cairn.

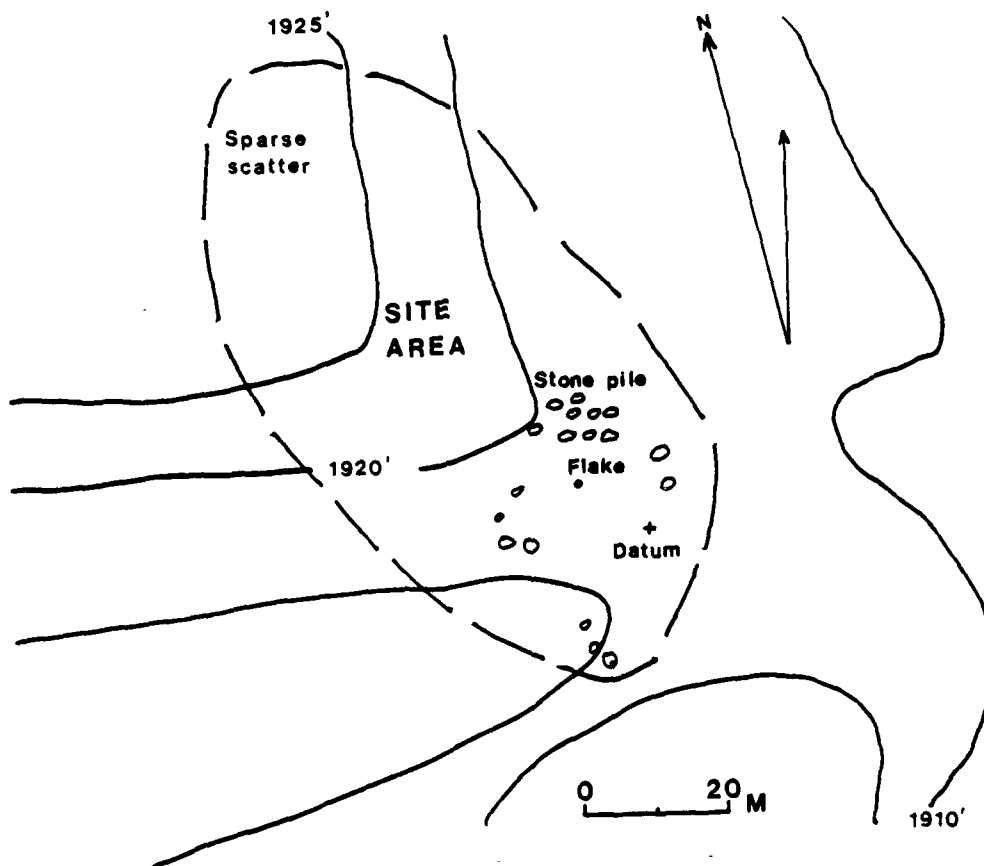


Figure 180. Plan of site 32DU763.

Site number: 32DU764 Site name:
County: Dunn. State: North Dakota. Site map: Figure 181
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: Presently on a beach below a ridge/hill slope.
Material concentrated in areas of run-off/slopewash from hill side.
Site size: 97,150m².
Strata and depth: Unknown.
Vegetation: Bare ground, sparse prairie grasses.
Ground surface visibility (%): 100%.
Nearest water: Moccasin Creek - 40m/springs.
Pool elevation (feet), when applicable: 1843' amsl.
Site condition - impacts: The site is subject to slope wash and
erosion. No in situ material was observed in the cutbanks. Integrity
is considered poor.
Surface collections (by whom and when): None.
Data plotted on site map: Area of artifact scatter with two concen-
trations of material - Areas A and B.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: An extensive site such as this, although apparently
outwashed, offers some research potential for examining KRF procurement
in the area. Further assessment of the impacts to the site and its
integrity are recommended.
Remarks: Over 200 items of KRF (flakes and cores/cobble testing) were
noted: most items were on the beach below high water level, and were not
seen in the cutbank. A few KRF flakes were scattered on the hillside
where several springs are located.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

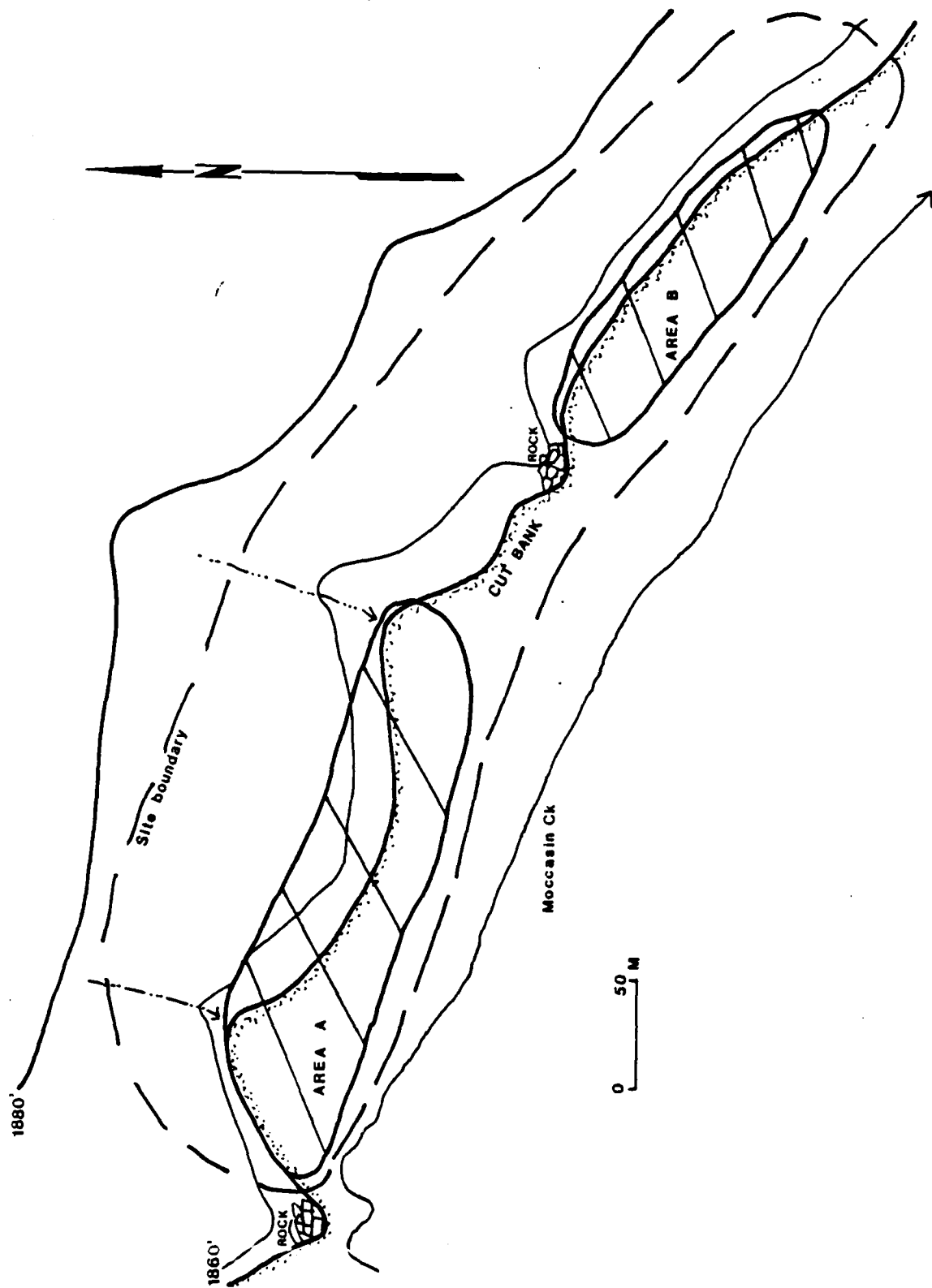


Figure 181. Plan of site 32DU764.

Site number: 32DU765 Site name:
County: Dunn. State: North Dakota. Site map: Figure 182
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter, well and cattle troughs.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: On the lower slope of a ridge/hill. The reservoir has cut a shelf here exposing the artifact scatter.
Site size: 9000m².
Strata and depth: Unknown.
Vegetation: Pasture grasses/shore.
Ground surface visibility (%): 10-100%.
Nearest water: Intermittent stream/spring - 40m.
Pool elevation (feet), when applicable: 1843' amsl.
Site condition - impacts: Extensive reservoir erosion has occurred. No material was noted in the cutbank.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Retouched flake of KRF.
Data plotted on site map: 1=sawn-plank covered well, 4 ft. square; 2=cattle trough; 3=old cattle trough; 4=feeding trough.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: Based on the surficial materials, there is limited potential for further research at this site. Formal testing is recommended to investigate the subsurface potential. The historic materials are recent.
Remarks: Over 100 items of KRF were recorded here. The items were mostly flakes, but six bifaces and a scraper were also noted. Two hammerstones of quartzite were also present.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity of the prehistoric site.

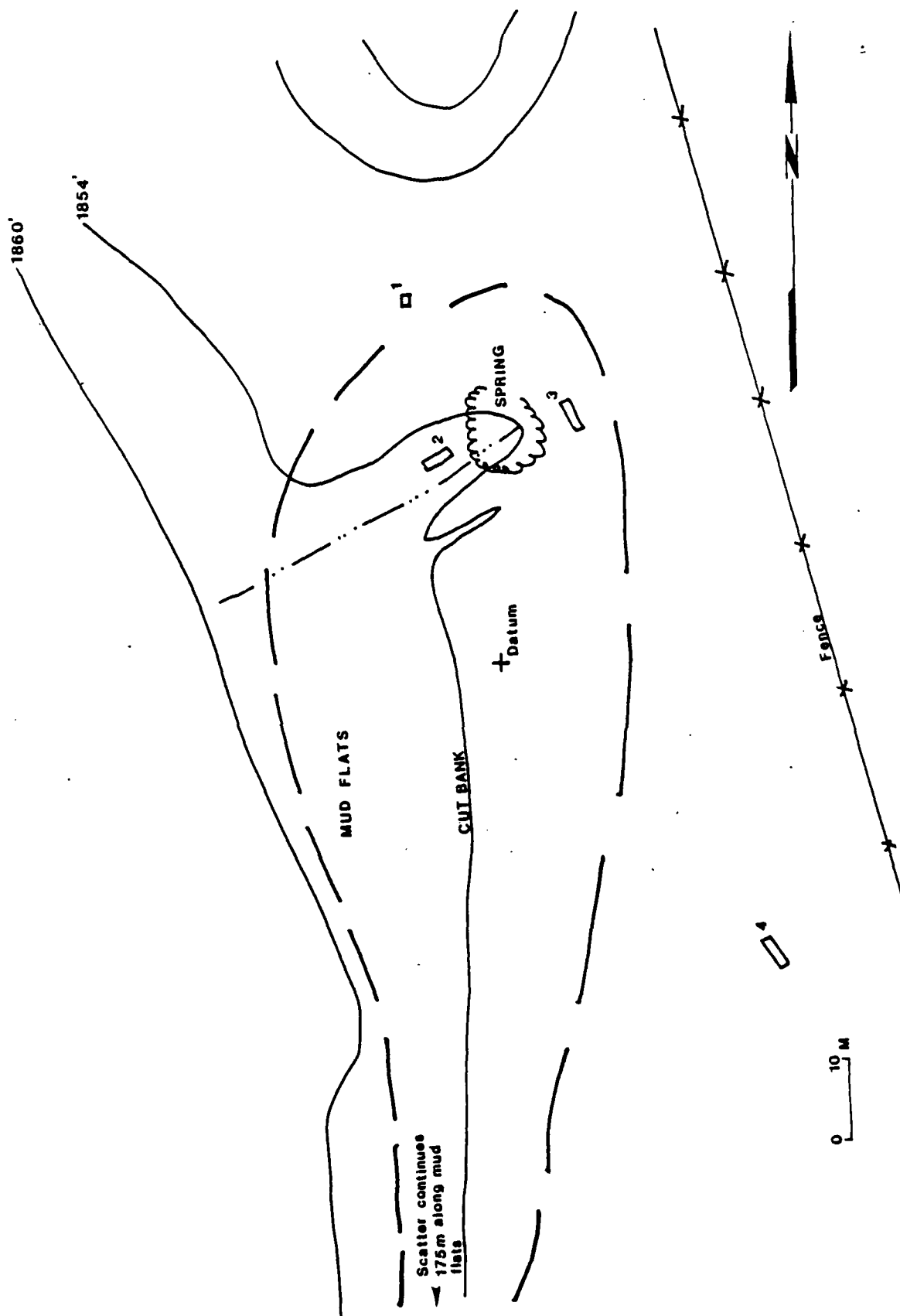


Figure 182. Plan of site 32DU765.

Site number: 32DU766 Site name:
County: Dunn. State: North Dakota. Site map: Figure 183
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 604.
Topographic position: Exposed in a deeply cut two-track on top of a
hill.
Site size: 160m².
Strata and depth: Unknown.
Vegetation: Short grasses.
Ground surface visibility (%): 10-95%.
Nearest water: Little Missouri River - 265m.
Site condition - impacts: A two-track has impacted and exposed the
site. Expect buried deposits on the rest of the knoll.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Patinated primary flake of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: The site is considered to be a limited activity area
with a sparse material concentration, but if it is to be further
impacted, the potential for buried deposits should be investigated.
Remarks: Three secondary and three primary flakes were noted, all KRF.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

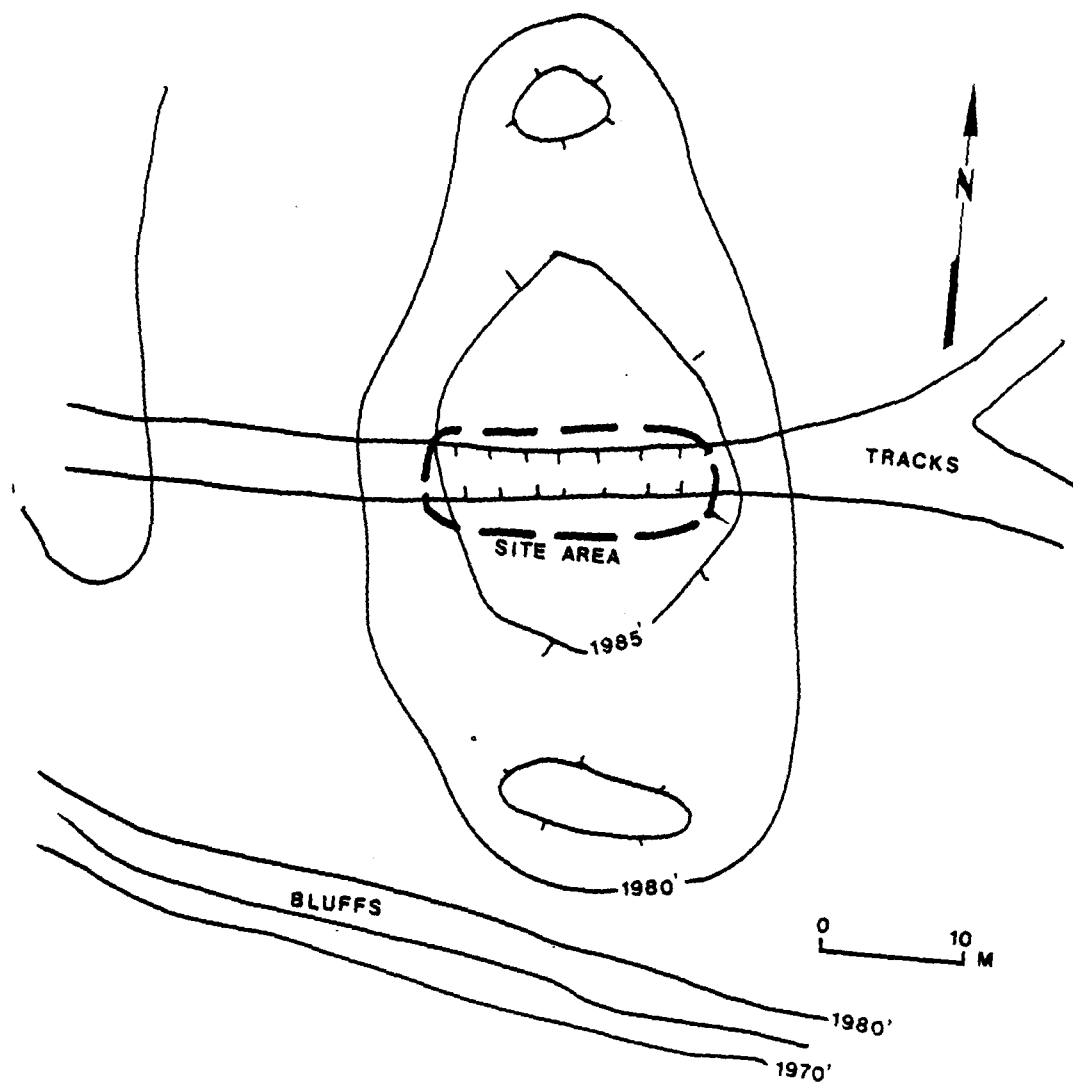


Figure 183. Plan of site 32DU766.

Site number: 32DU767 Site name:
County: Dunn. State: North Dakota. Site map: Figure 184
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Depression (prehistoric).
Component(s): Unknown.
Elevation (m): 622.
Topographic position: On the edge of a ridge top.
Site size: 12m².
Strata and depth: Unknown.
Vegetation: Bunch grass, little bluestem, prickly pear, wild parsley
and prairie golden pea in the pit.
Ground surface visibility (%): 50%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The site is undergoing some slope erosion;
otherwise it has fair integrity.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 3m x 3m with an erosional? exten-
sion of ca. 3m. The depression is 35cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be further impacted, test to
determine the nature of the depression.
Remarks: No cultural material was exposed on the eroded ridge and
the site's significance would appear minimal. However, since the
depression's function is unknown, it should be tested if it is to be
impacted.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

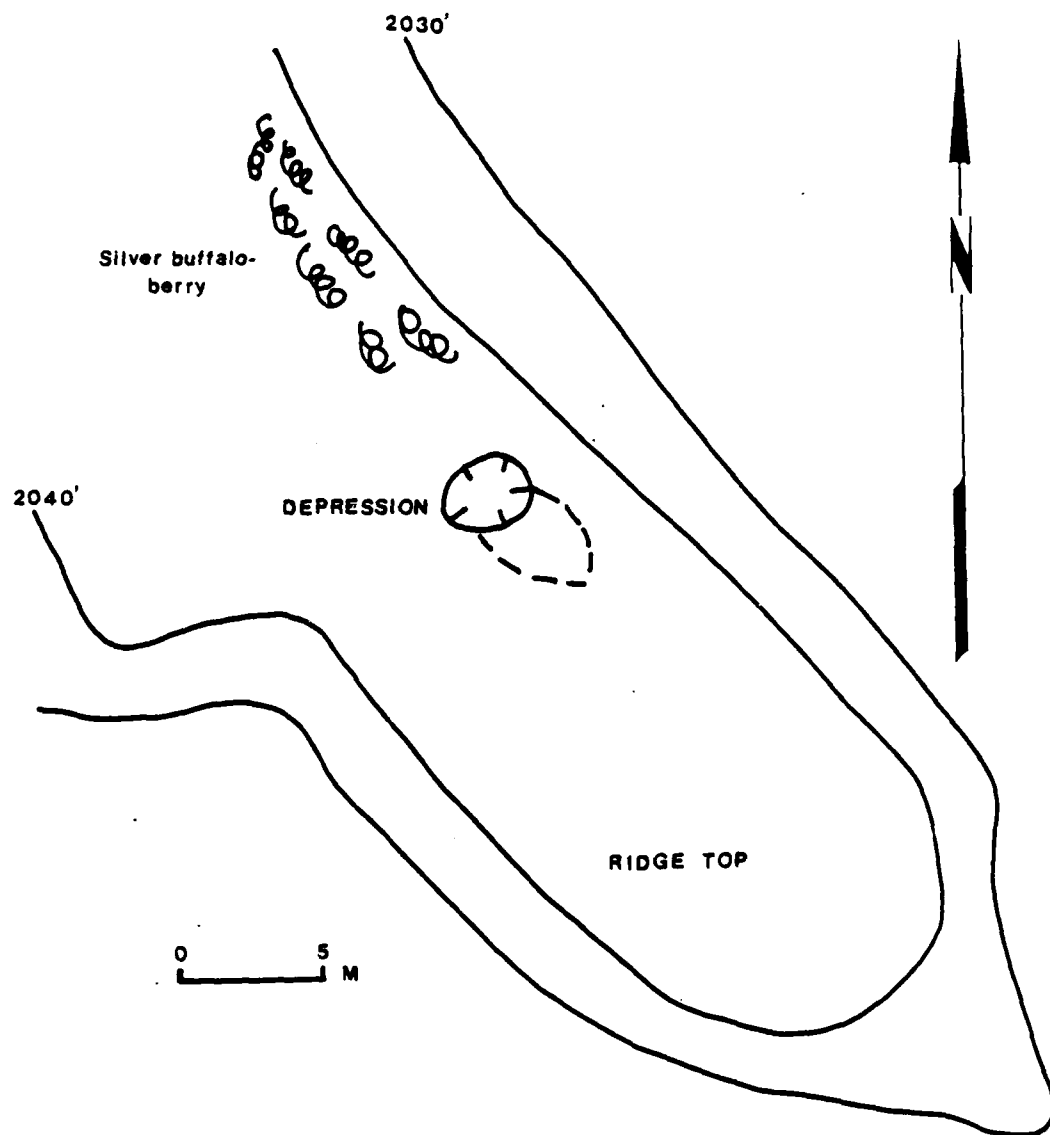


Figure 184. Plan of site 32DU767.

Site number: 32DU768 Site name:
County: Dunn. State: North Dakota. Site map: Figure 185
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn and artifact scatter.
Component(s): Unknown.
Elevation (m): 604.
Topographic position: On top of a small hill.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, wild onion, prickly pear cactus and silver
sagebrush.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 100m.
Site condition - impacts: A bush is beginning to cover the cairn and
the area around the cairn is severely eroded.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn, 0.75m in N-S diameter, 0.25m high.
Twelve stones visible.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site appears to have little further research
potential, but if it is to be impacted, the nature of the cairn should
be determined.
Remarks: Two pieces of KRF tested cobbles and a KRF flake fragment were
also present on the hilltop.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

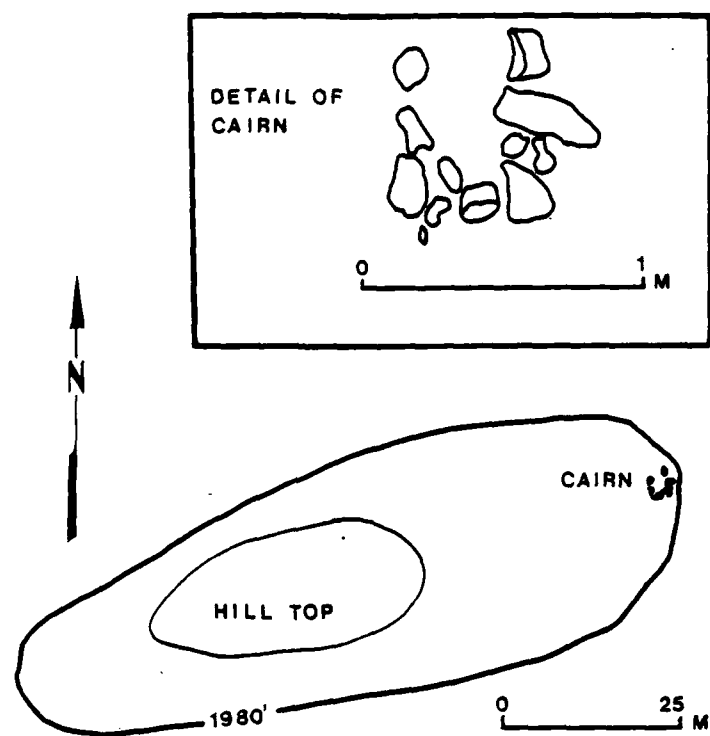


Figure 185. Plan of site 32DU768, with detail of cairn.

Site number: 32DU769

Site name:

County: Dunn.

State: North Dakota. Site map: Figure 186

Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.

Site type: Artifact scatter.

Component(s): Archaic - Oxbow.

Elevation (m): 563.

Topographic position: Presently along the beach at the mouth of Hidatsa Bay and possibly extends onto the flat terrace above.

Site size: 20,000m².

Strata and depth: Unknown.

Vegetation: Beach/heavy grass cover.

Ground surface visibility (%): 100% on beach; 10% on terrace, but there were good cutbank exposures, as well as several eroded areas (100% visibility) inland.

Nearest water: Little Missouri River - 750m.

Pool elevation (feet), when applicable: 1843' amsl.

Site condition - impacts: The site appears to be outwashed; since no material was noted in the cutbanks, it is only conjectured that the site extends inland.

Surface collections (by whom and when): ALCWS 1986.

Collected artifacts: Oxbow projectile point of KRF and a preform reduction blank of KRF.

Previous investigations: None.

Location of artifacts: State Historical Society of North Dakota.

Other material reported by owner: None.

Recommendations: Conduct formal testing to determine if any in situ material is present.

Remarks: Over 250 lithic items were noted; all items except the point and two bifaces were KRF debitage.

Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

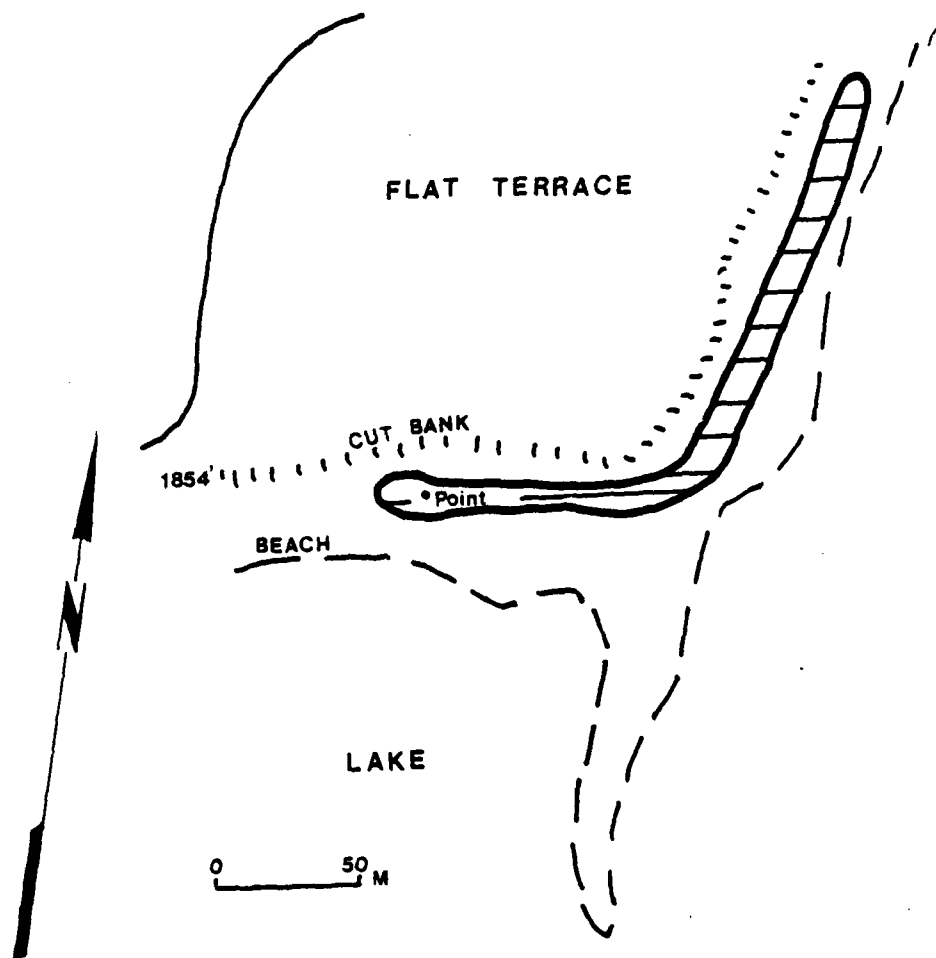


Figure 186. Plan of site 32DU769.

Site number: 32DU770

Site name:

County: Dunn.

State: North Dakota.

Site map: Figure 187

Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.

Site type: Artifact scatter.

Component(s): Unknown.

Elevation (m): 567.

Topographic position: On a low hill on a ridge at a point where the Little Missouri River shifts 90° from flowing SE to flowing NE.

Site size: 7500m².

Strata and depth: An upper layer of brown sandy loam with cultural material at 15cm b.s., and a lower layer of fine brown sand with cultural material at 45cm b.s.

Vegetation: Short prairie grasses, silver sagebrush and wild onion.

Ground surface visibility (%): 40%.

Nearest water: Little Missouri River - 700m.

Pool elevation (feet), when applicable: 1843' amsl.

Site condition - impacts: An unknown portion has been impacted by slope and reservoir erosion, but buried deposits were noted in the cutbank.

Surface collections (by whom and when): ALCWS 1986.

Collected artifacts: KRF scraper with retouch on proximal end.

Previous investigations: None.

Location of artifacts: State Historical Society of North Dakota.

Other material reported by owner: None.

Recommendations: Test for National Register of Historic Places eligibility.

Remarks: Over 100 items of KRF debitage were noted on the upper surface and thousands were observed at the base of the eroded cutbank. One opaque chalcedony flake was the only non-KRF item noted. Some broken bone and a large bovid tooth were also present. In situ materials at 15cm b.s. and 45cm b.s. suggest multiple occupations/components.

Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

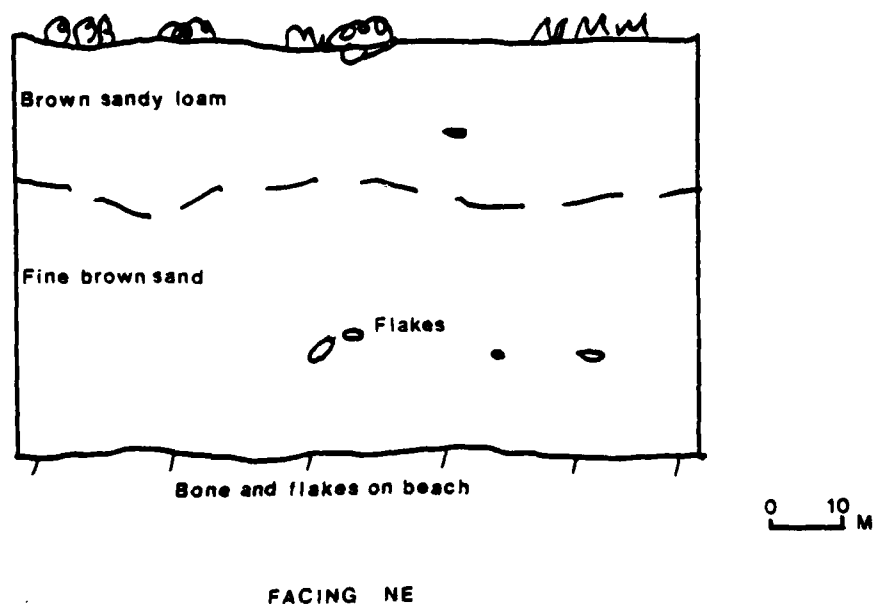
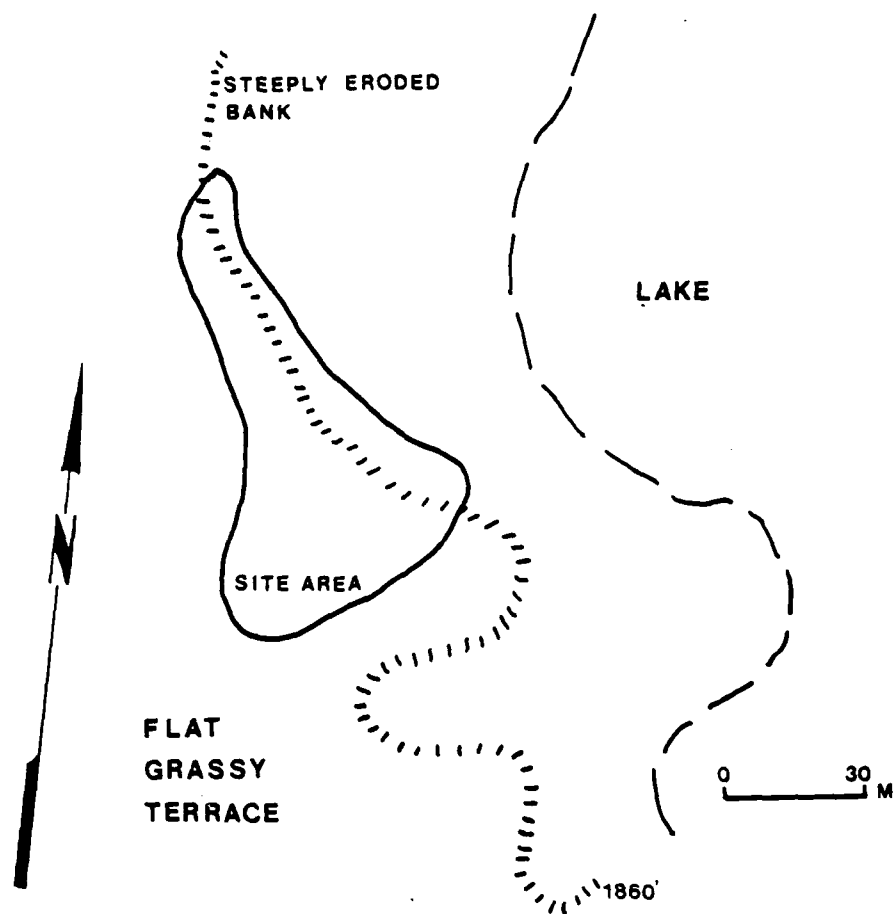


Figure 187. Plan of site 32DU770, with northeast facing profile.

Site number: 32DU771 Site name:
County: Dunn. State: North Dakota. Site map: Figure 188
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a flat area at the end of a ridge slope.
Site size: 75m².
Strata and depth: Unknown.
Vegetation: Sparse short grasses, wild parsley, silver sagebrush,
prickly pear cactus and silver buffaloberry.
Ground surface visibility (%): 50%.
Nearest water: Little Missouri River - 900m.
Site condition - impacts: The site is eroded out on a ridge. Rock
outcrops suggest only shallow burial of materials is possible.
Surface collections (by whom and when): None.
Data plotted on site map: 1=30-30 Winchester cartridge case.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be further impacted, test to
determine the potential for buried deposits/features.
Remarks: Over 50 pieces of KRF debitage and one grey porcelanite flake
were noted in an eroded area measuring 15m in diameter.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

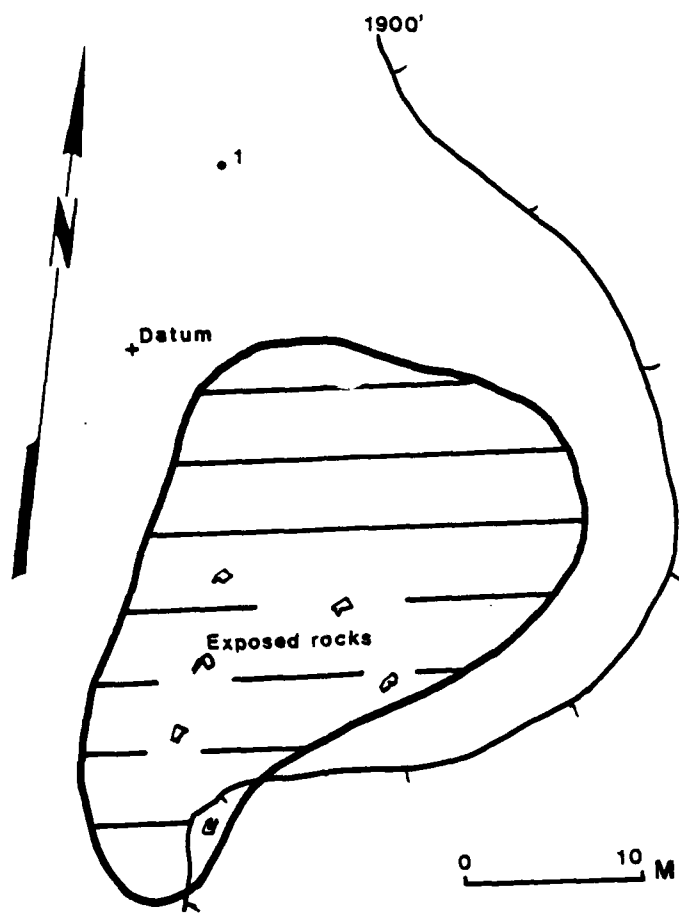


Figure 188. Plan of site 32DU771.

Site number: 32DU772 Site name:
County: Dunn. State: North Dakota. Site map: Figure 189
Property owner(s) and address(es): Private.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 713.
Topographic position: On a prominent viewpoint/hill overlooking the badlands.
Site size: 500m².
Strata and depth: Unknown.
Vegetation: Short prairie grasses.
Ground surface visibility (%): 60%.
Nearest water: Intermittent stream - 600m.
Site condition - impacts: The site is extensively eroded, but the potential for buried deposits exists.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is on private land, but it should be tested if it is to be impacted.
Remarks: Thousands of items of KRF debitage were encountered here - up to 10 items per square meter.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

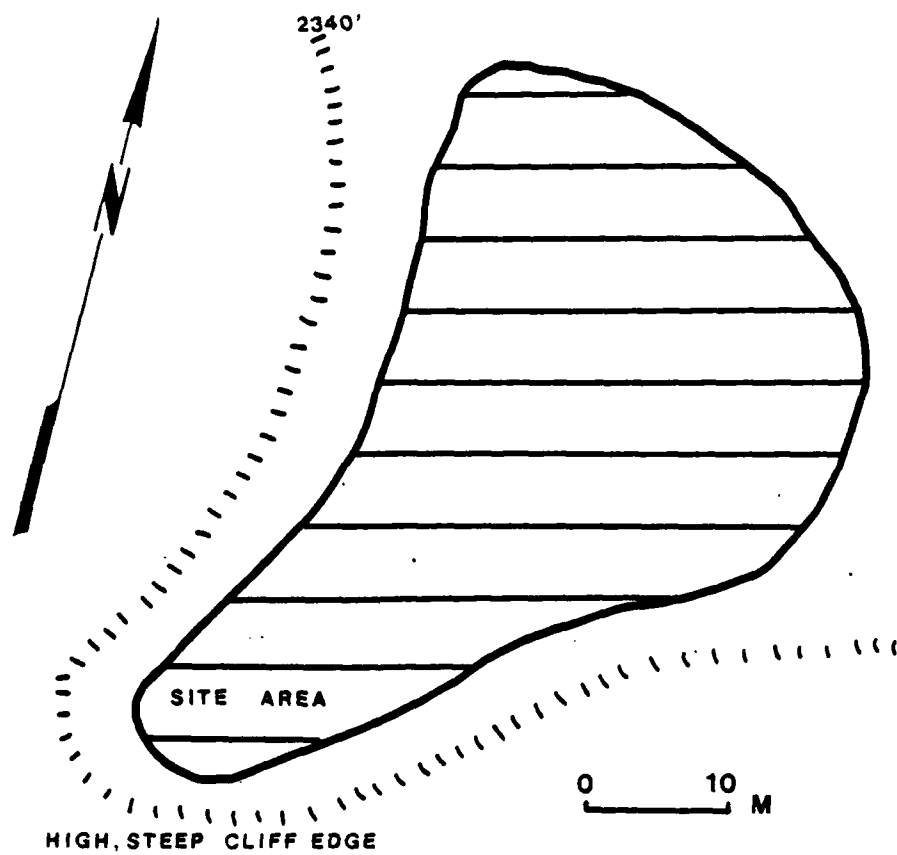


Figure 189. Plan of site 32DU772.

Site number: 32DU773 Site name:
County: Dunn. State: North Dakota. Site map: Figure 190
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 561.
Topographic position: Presently exposed along the reservoir beach.
Site size: 12,500m².
Strata and depth: Unknown - appears outwashed.
Vegetation: Thistle and smartweed.
Ground surface visibility (%): 80%.
Nearest water: Little Missouri River - 400m.
Pool elevation (feet), when applicable: 1843' amsl.
Site condition - impacts: The site appears to be outwashed, with no
material exposed in the extensive cutbank.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Preform reduction blank fragment of KRF.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: Test to confirm or refute the presence of in situ
cultural materials.
Remarks: Hundreds of items of KRF debitage as well as bifaces and re-
touched flakes were noted.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity.

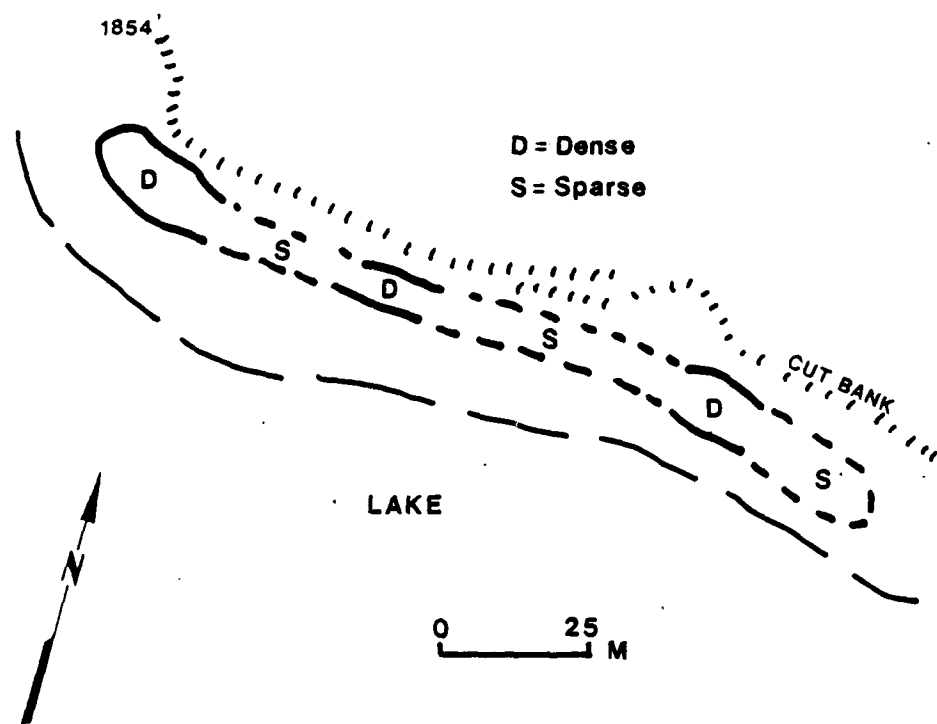


Figure 190. Plan of site 32DU773.

Site number: 32DU774 Site name:
County: Dunn. State: North Dakota. Site map: Figure 191
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 623.
Topographic position: On a small ridge or erosional upland plain
remnant that is semi-circular in plan.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Silver buffaloberry bushes east of the depression; short
grass prairie.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: There are no obvious disturbances.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Depression, 2m diameter in and 15cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depression.
Remarks: The nature of the depression is unknown, but its size and
location are appropriate for an eagle trapping pit.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

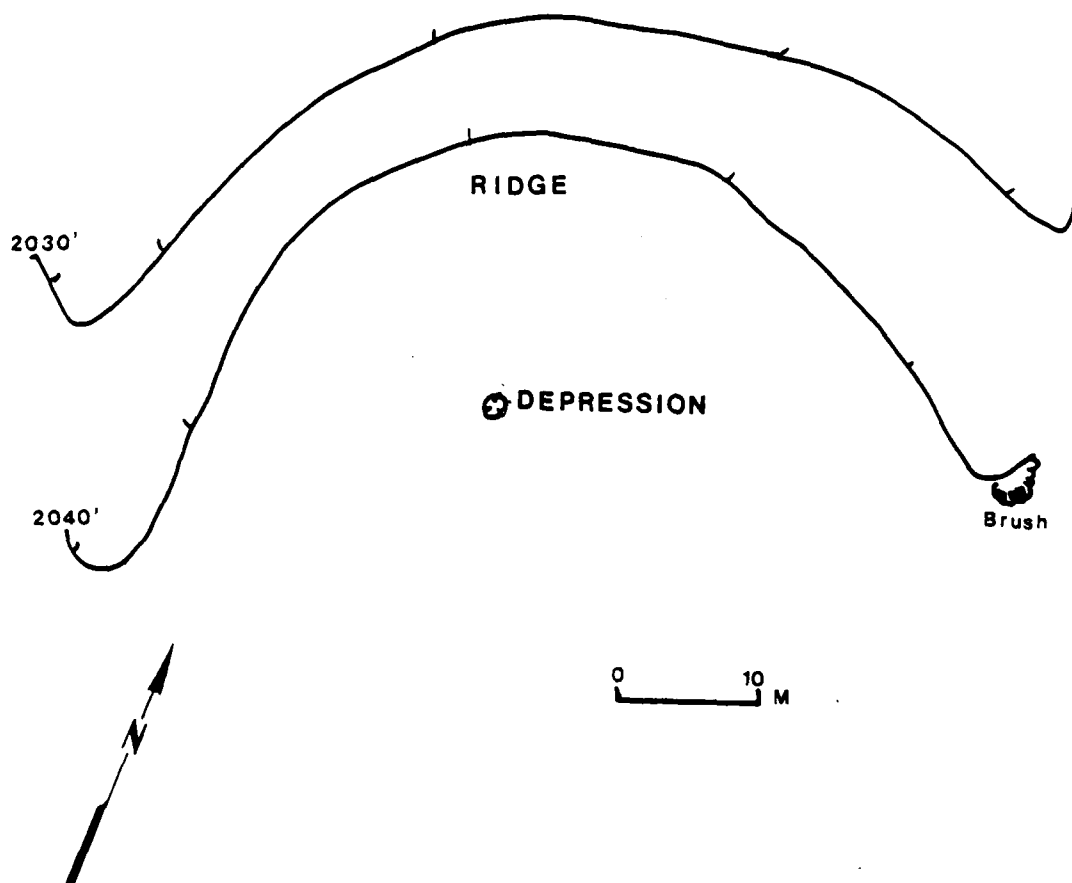


Figure 191. Plan of site 32DU774.

Site number: 32DU775 Site name:
County: Dunn. State: North Dakota. Site map: Figure 192
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pit.
Component(s): Unknown.
Elevation (m): 618.
Topographic position: In the middle of a relatively large bluff top or
upland plain/terrace remnant.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Native prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Missouri River - 500m.
Site condition - impacts: The site is basically undisturbed, but a
fence and brass cap are nearby.
Surface collections (by whom and when): None.
Data plotted on site map: Depression, 2.18m NW-SE, 2.07m NE-SW and 25cm
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the depression.
Remarks: The nature of the depression is unknown, but based on size and
location, it is considered to be eagle trapping pit. However, the
depression may relate to the brass cap marker or more recent activity.
A horse drawn one-bottom plow is in an adjacent field.
Testing for National Register Eligibility (purpose of): To determine
the nature of the depression.

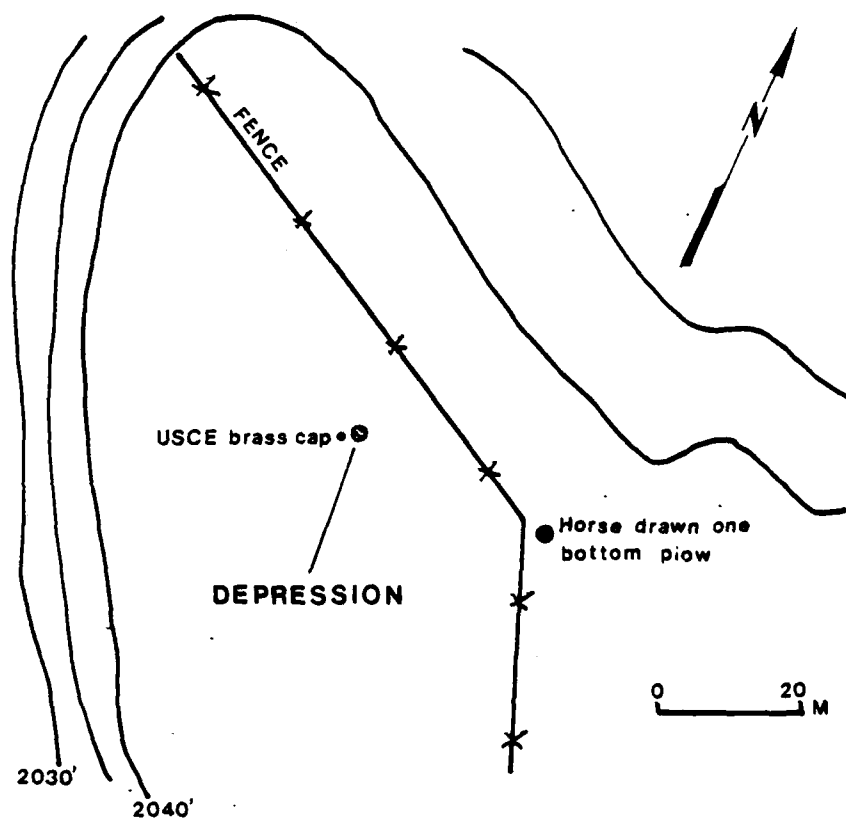


Figure 192. Plan of site 32DU775.

Site number: 32DU776 Site name:
County: Dunn. State: North Dakota. Site map: Figure 193
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 579.
Topographic position: On a generally featureless, sloping upland plain.
Site size: 1m².
Strata and depth: Unknown.
Vegetation: Prairie grasses and forbs.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 700m.
Site condition - impacts: The cairn appears to be undisturbed apart
from natural erosion and grazing impacts.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn of nine visible rocks, 1m N-S x 0.6m
E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine the
nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

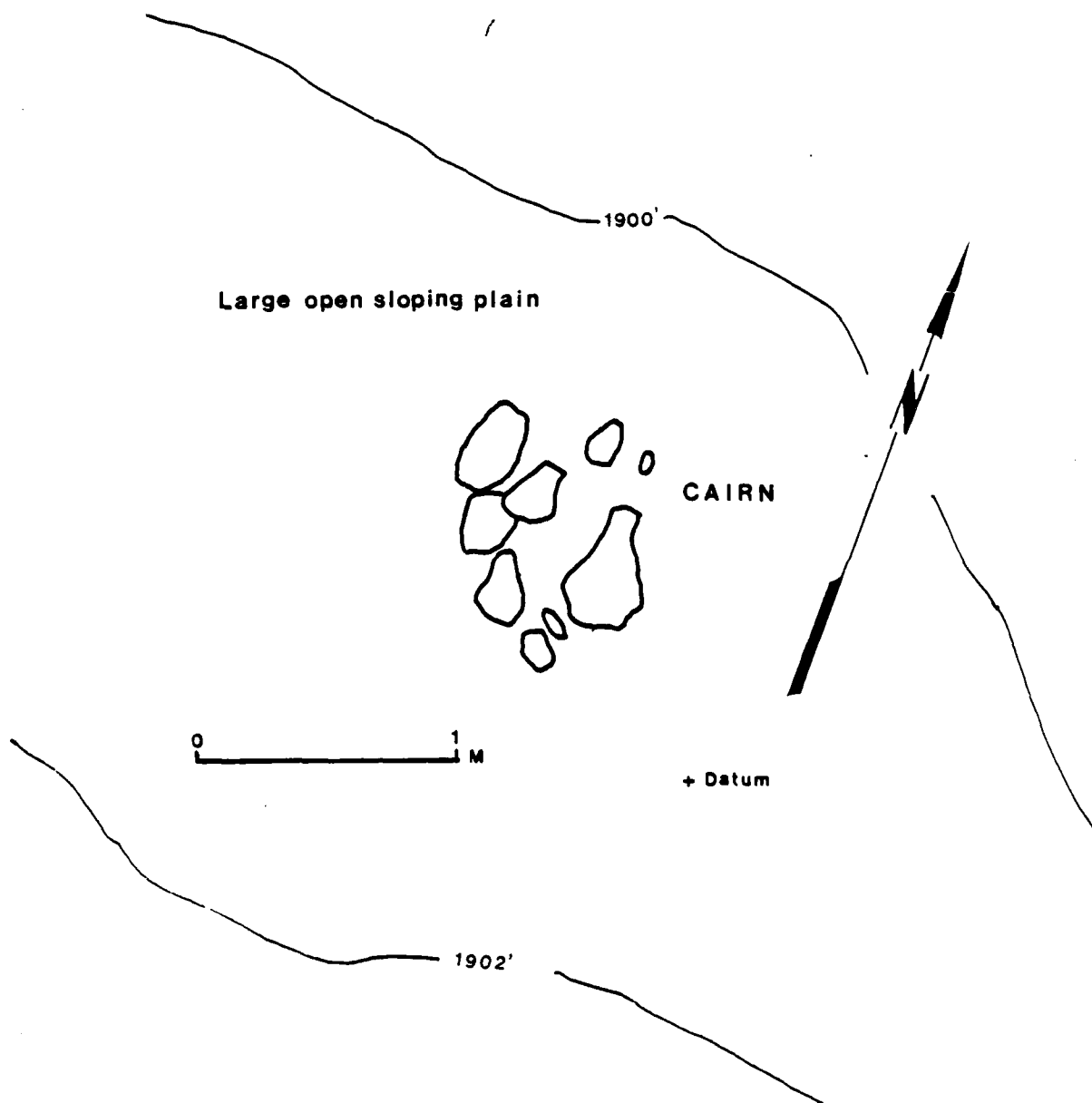


Figure 193. Plan of site 32DU776.

Site number: 32DU777 Site name:
County: Dunn. State: North Dakota. Site map: Figure 194
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Livestock watering tanks.
Component(s): Recent Native American/Euro-American.
Elevation (m): 576.
Topographic position: At the base of a hill/ridge.
Site size: 400m².
Strata and depth: Unknown.
Vegetation: Prairie grasses.
Ground surface visibility (%): 30%.
Nearest water: Spring - 1m.
Site condition - impacts: The site has good integrity.
Surface collections (by whom and when): None.
Data plotted on site map: 1=rectangular sheet metal stock tank (rust-
ed). 2=circular sheet metal stock tank (rusted). 3=rectangular
fiberglas stock tank with hose inlet from spring.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: No further work is recommended. The site is too
recent to be of significance.
Remarks: Three livestock watering tanks, various lengths of rubber
hosing and a cobbled area around a natural artesian spring outlet were
noted at this location.

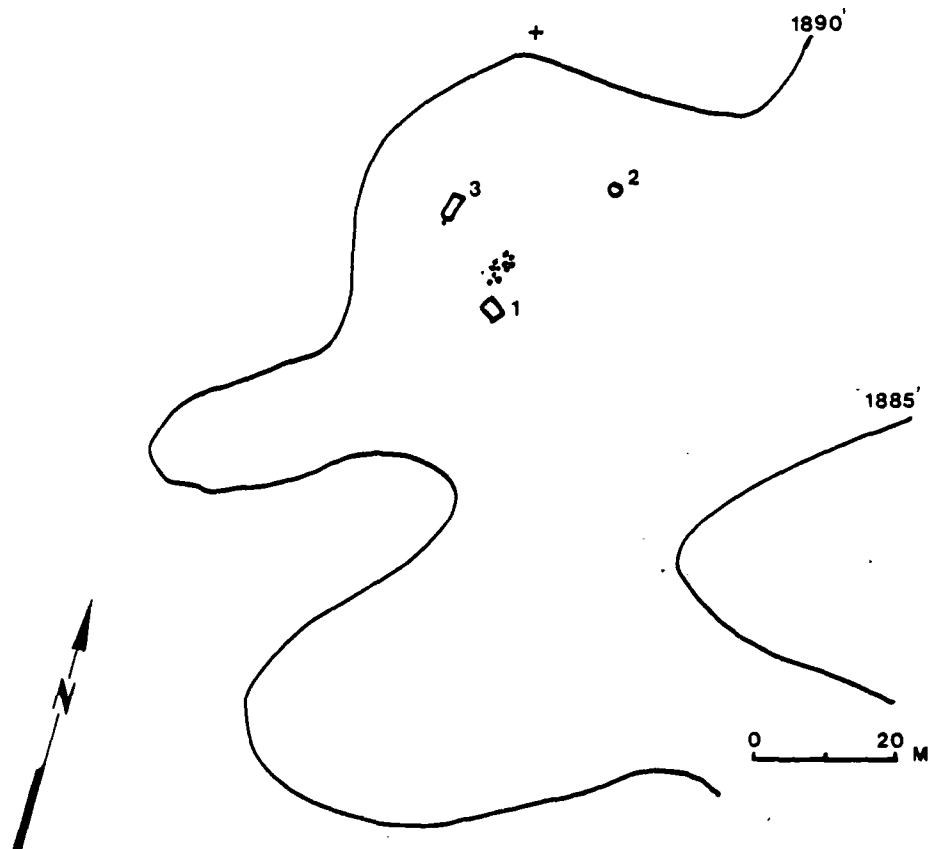


Figure 194. Plan of site 32DU777.

Site number: 32DU778 Site name:
County: Dunn. State: North Dakota. Site map: Figure 195
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairns/rock pavement.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: On the upper and lower slope/side of a
hill/ridge.
Site size: 250m².
Strata and depth: Unknown.
Vegetation: Native short grass prairie.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 500m.
Site condition - impacts: The site is relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1=rock cairn, 0.85m N-S. 2=rock cairn, 0.75m
N-S. 3=rock cairn, 1.22m N-S. 4=rock pavement, 2.88m N-S x 1.55m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairns and pavement.
Remarks: The cairns may mark a trail or burials, reflect field
clearance, or result from some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairns and rock pavement.

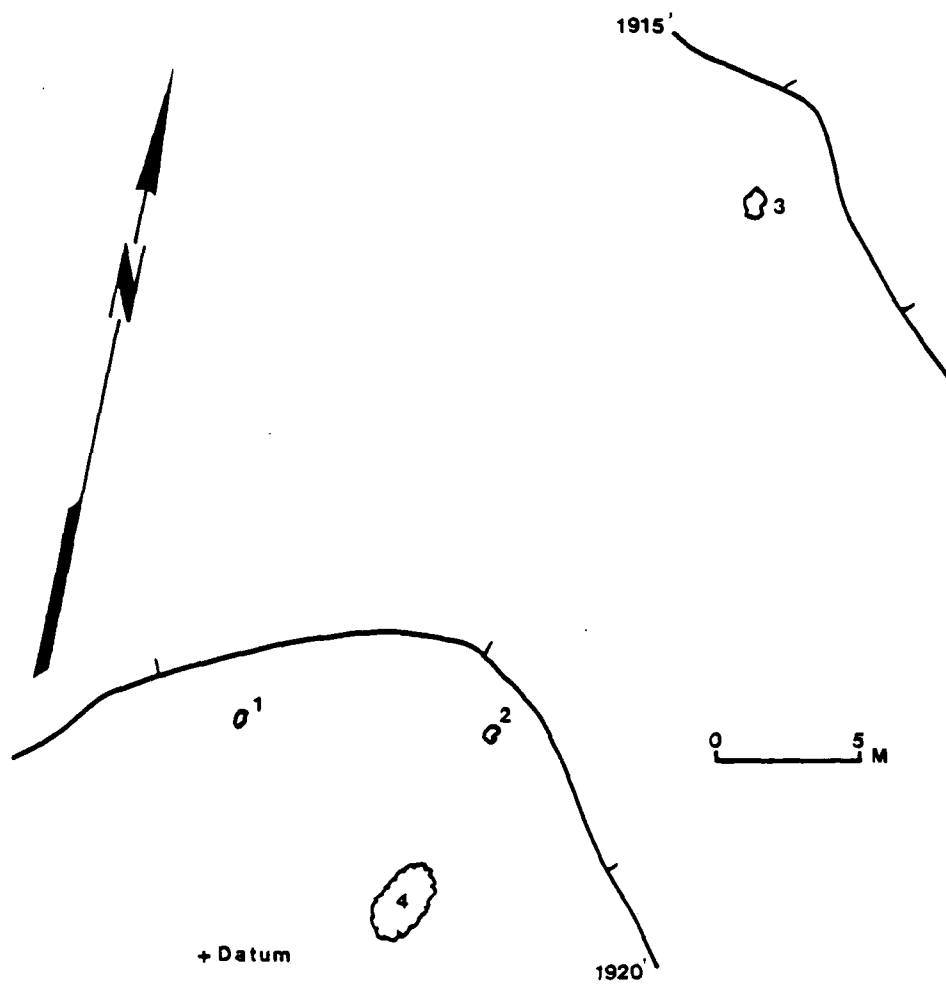


Figure 195. Plan of site 32DU778.

Site number: 32DU779 Site name:
County: Dunn. State: North Dakota. Site map: Figure 196
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Small stone circle and two rock alignments.
Component(s): Unknown.
Elevation (m): 570.
Topographic position: On an upper terrace/upland plain of an unnamed
tributary of the Missouri River.
Site size: 12m².
Strata and depth: Unknown.
Vegetation: Native prairie grasses, silver buffaloberry.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 300m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1=small stone circle, 1.44m N-S x 0.86m E-W.
2=rock alignment, 1.55m E-W. 3=rock alignment, 1.2m NW-SE.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the features.
Remarks: These features may be remnants of something of greater
dimension, or they may reflect the site as it originally was. The small
circle may be similar to a cairn and may mark a burial, reflect field
clearance, or result from some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the features.

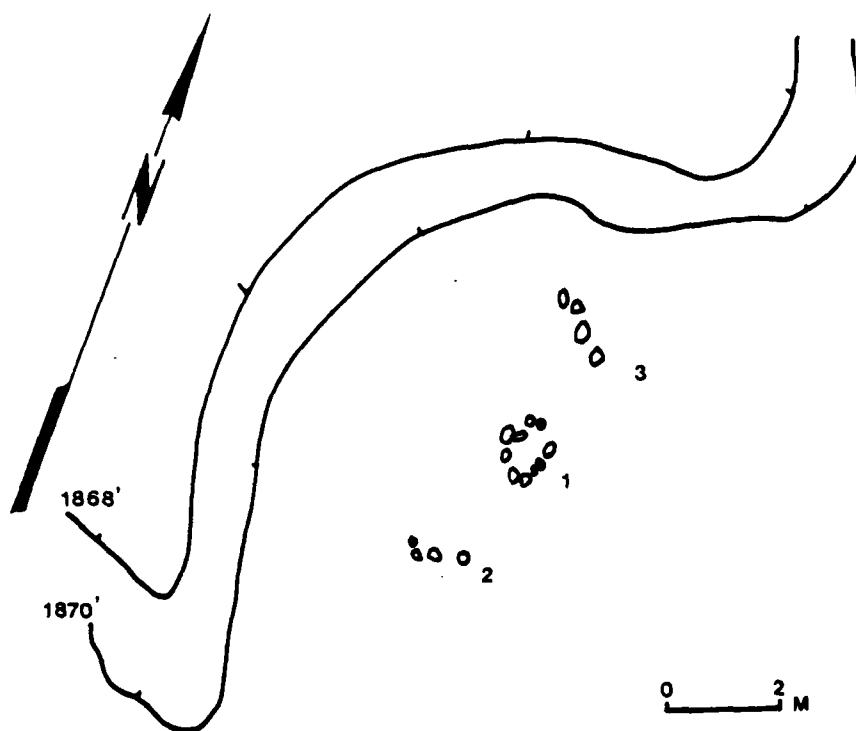


Figure 196. Plan of site 32DU779.

Site number: 32DU780 Site name:
County: Dunn. State: North Dakota. Site map: Figure 197
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Trunk burial.
Component(s): Native American - Mandan/Hidatsa.
Elevation (m): 579.
Topographic position: On top of a high ridge.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, wild rose.
Ground surface visibility (%): 20%.
Nearest water: Missouri River - 1000m.
Site condition - impacts: The wooden trunk has been disturbed, presumably to remove the burial. Otherwise the site has fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: Wooden trunk, 72cm long, with 25 encircling stones in an area 1.5m N-S x 1m E-W.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: Because this is a burial/sacred site, impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials are extant.
Remarks: Numerous "trunk burial" sites are known in the area. Given further research, they may be eligible for nomination to the National Register of Historic Places under a thematic classification .
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. In that circumstance, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

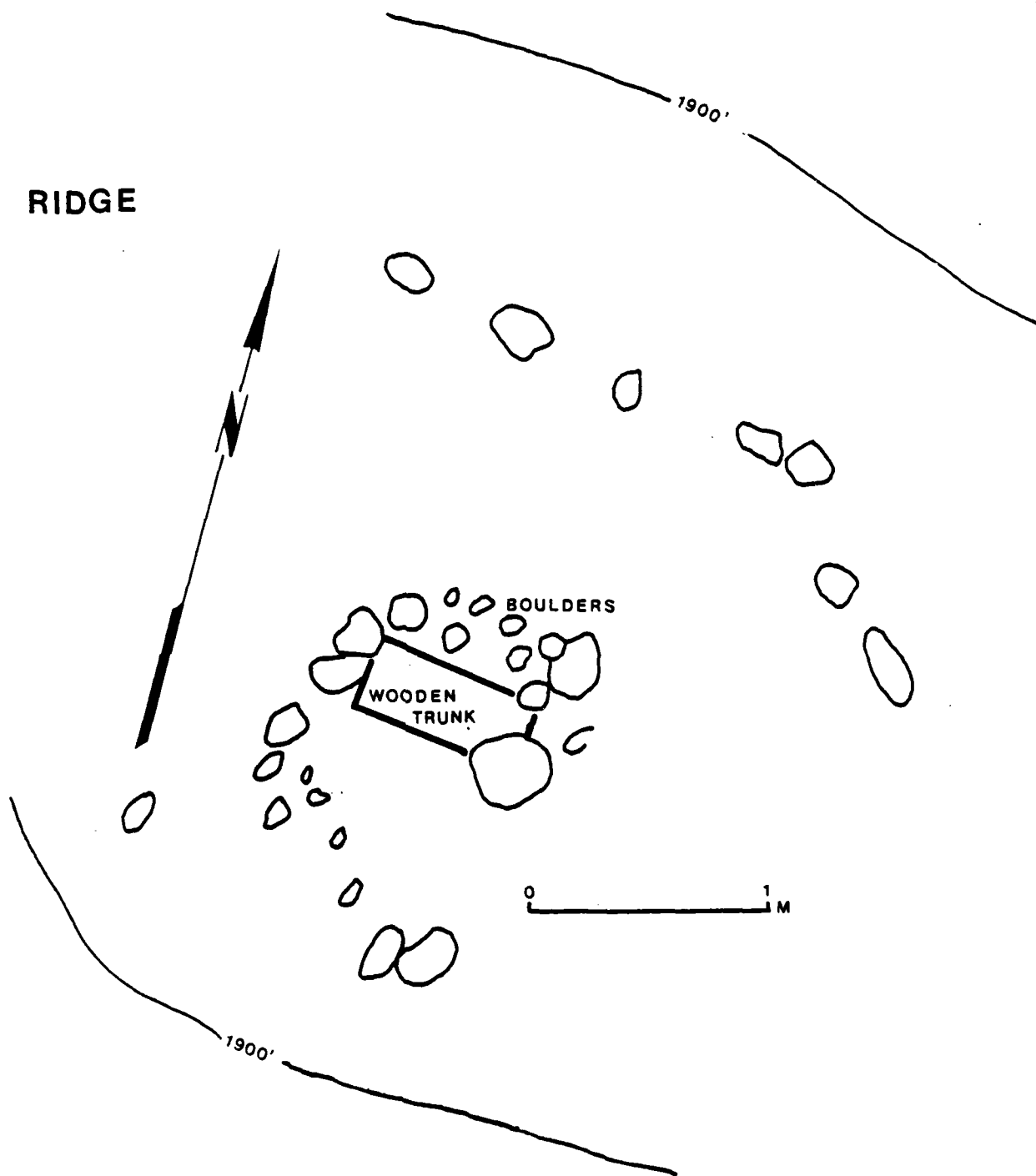


Figure 197. Plan of site 32DU780.

Site number: 32DU781 Site name:
County: Dunn. State: North Dakota. Site map: Figure 198
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 565.
Topographic position: On the bottom and side of a ridge above Squaw
Creek.
Site size: 10,800m².
Strata and depth: Unknown.
Vegetation: None.
Ground surface visibility (%): 100%.
Nearest water: Intermittent stream - 20m.
Pool elevation (feet), when applicable: 1840' amsl.
Site condition - impacts: Reservoir erosion may have destroyed the
integrity of this site; no material was noted in the cutbank.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Unfinished projectile point of patinated KRF.
Data plotted on site map: Site area with two material concentrations, 1
and 2.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: Assess the impact to the site resulting from reservoir
erosion; test inland to determine if in situ materials exist.
Remarks: Items in concentration 1 included 100+ tertiary and secondary
flakes, 30+ primary flakes, cores and shatter of KRF; a projectile point
(collected); a retouched cobble of KRF and fire-cracked rock (granite).
In concentration 2 were 25+ tertiary and secondary flakes, a retouched
flake, a uniface and biface segment of KRF, bone fragments and fire-
cracked rock. A dark grey shale secondary flake was noted between these
areas and a few other flakes of KRF were scattered around.
Testing for National Register Eligibility (purpose of): To determine
areal extent, depth, components present, research potential and integ-
rity - particularly if the site extends inland from the cutbank.

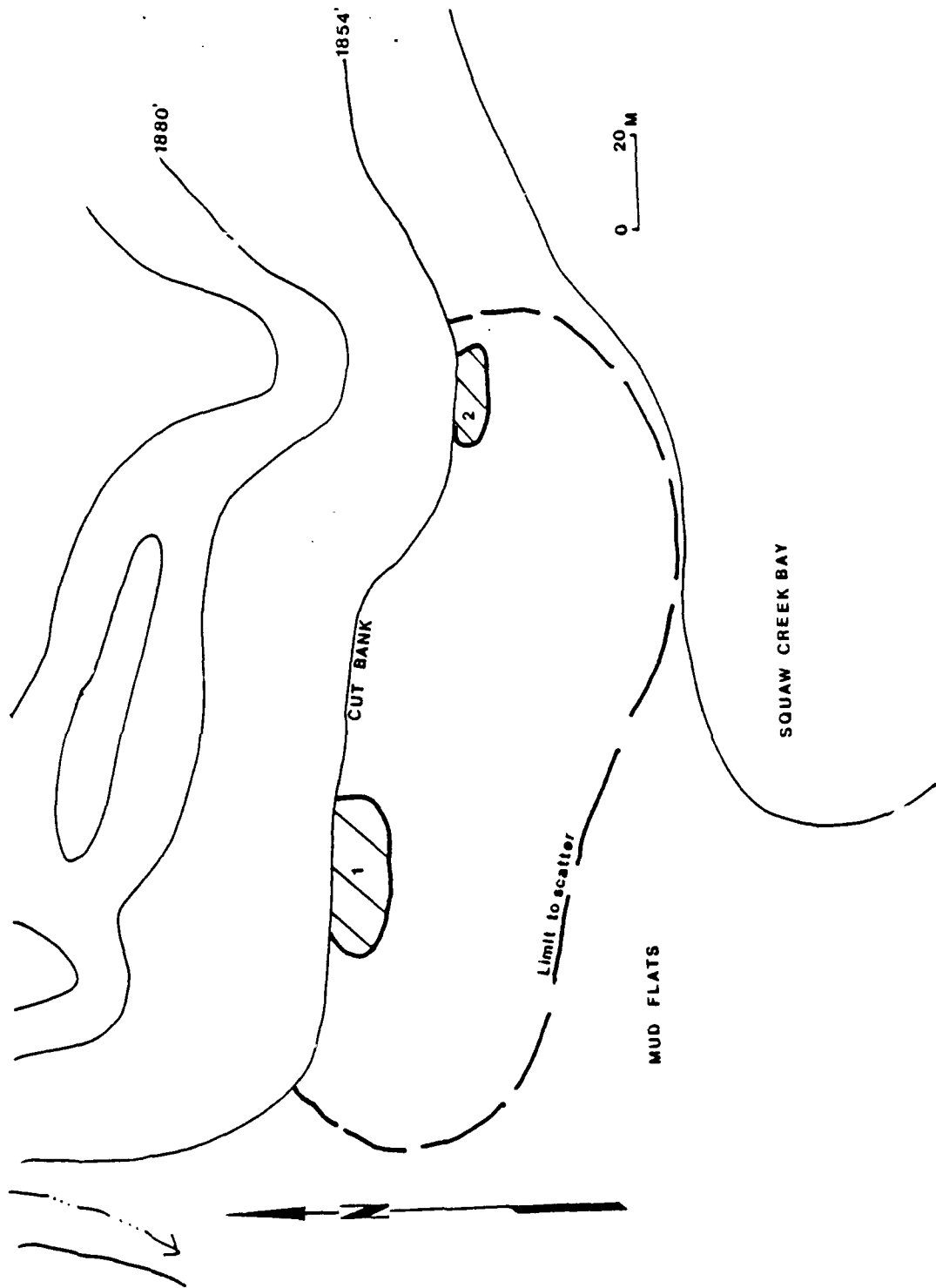


Figure 198. Plan of site 32DU781.

Site number: 32DU782 Site name:
County: Dunn. State: North Dakota. Site map: Figure 199
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cemetery.
Component(s): Historic Native American.
Elevation (m): 585.
Topographic position: On a prominent sandstone bluff or ridge end.
Site size: 300m².
Strata and depth: Unknown.
Vegetation: Prairie grass, skunkbrush, yucca, chokecherry.
Ground surface visibility (%): 30%.
Nearest water: Little Missouri River - 500m.
Site condition - impacts: The site has been deliberately disturbed in the past, but still retains a fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: 1=sunken grave outline encircled with sandstone slabs, 2.95m E-W x 1.30m. 2-4=sunken grave outlines: 2 is 0.9m x 1.05m; 3 is 2.55m x 1.55m; and 4 is 1.75m x 1m. 5=sandstone slab covered area - possible grave, 2.73m x 1.1m. 6=large chokecherry bush.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The cemetery is a burial/sacred site and impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether it can be related to any living person(s) and whether any burials are extant.
Remarks: This cemetery is recorded on the USGS 7.5' quadrangle map. Individual burial pits are oriented with the long axis E-W. Some unidentifiable bone fragments are present in the largest one. One KRF tertiary flake was observed under a rock overhang. The area of sandstone slabs (Map feature 5) emits a hollow sound as if it might be another burial.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

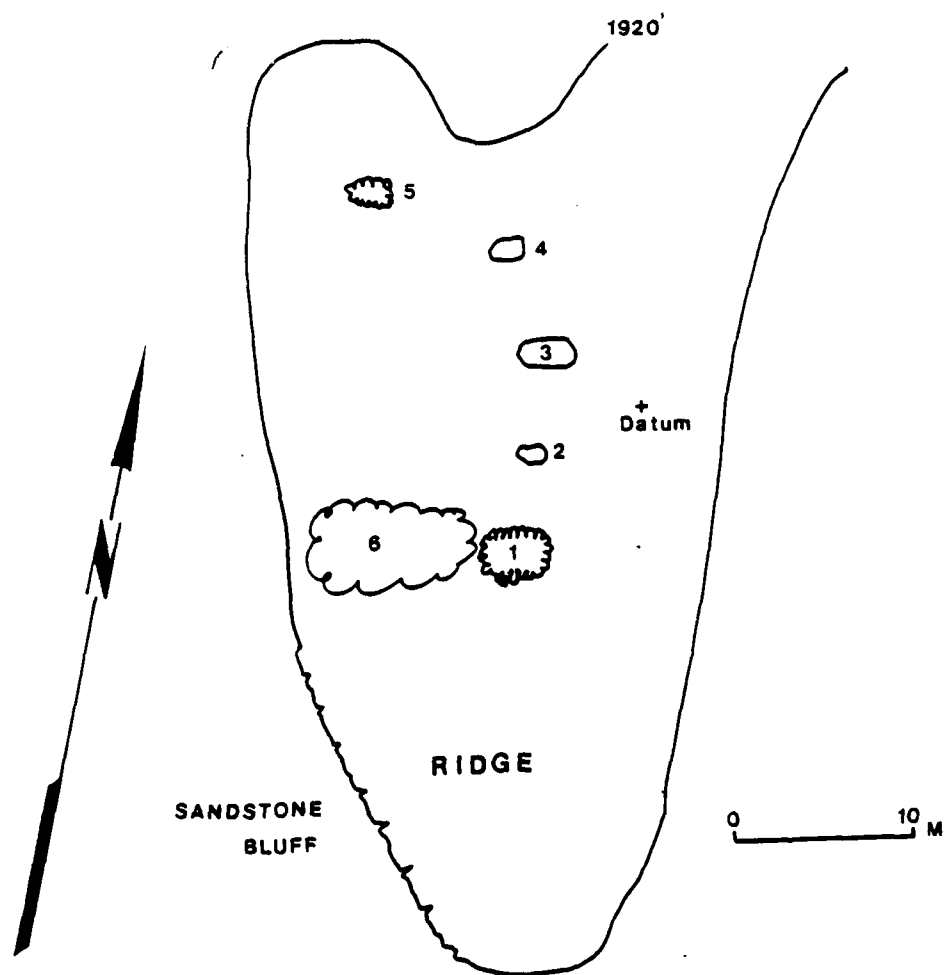


Figure 199. Plan of site 32DU782.

Site number: 32DU783 Site name:
County: Dunn. State: North Dakota. Site map: Figure 200
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: At the end of a small rise on the south end of a
N-S ridge.
Site size: 2m².
Strata and depth: Unknown.
Vegetation: Prairie grass.
Ground surface visibility (%): 40%.
Nearest water: Little Missouri River - 400m.
Site condition - impacts: The site is relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Cairn, 1.1m NW-SE x 0.7m NE-SW.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or be related to some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

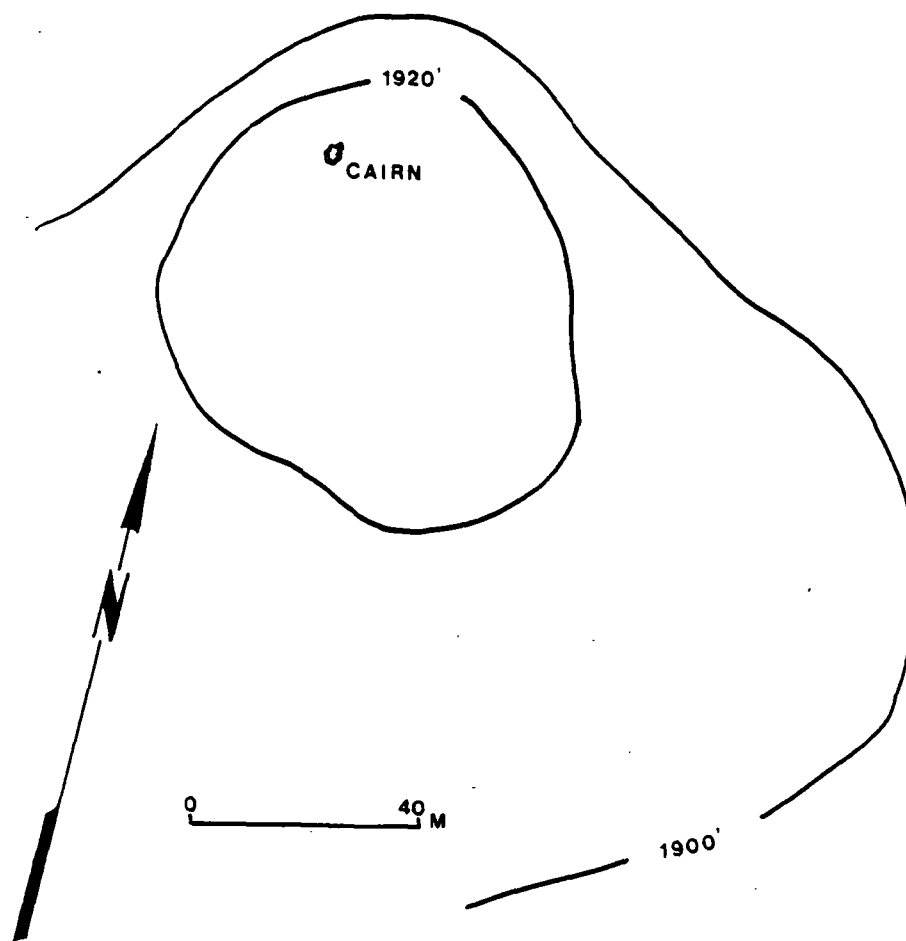


Figure 200. Plan of site 32DU783.

Site number: 32DU784 Site name:
County: Dunn. State: North Dakota. Site map: Figure 201
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Artifact scatter.
Component(s): Unknown.
Elevation (m): 628.
Topographic position: On top of an isolated knoll or butte.
Site size: 3750m².
Strata and depth: 0-10cm based on erosional features.
Vegetation: Bunch grass and silver sagebrush.
Ground surface visibility (%): 20-40%.
Nearest water: Intermittent stream - 350m.
Site condition - impacts: The site is eroding from the edges of the knoll/butte. This suggests that intact deposits may be present on the knoll/butte, but the deposits would be shallow.
Surface collections (by whom and when): ALCWS 1986.
Collected artifacts: Preform reduction blank of KRF.
Data plotted on site map: 1=flake concentration at edge of knoll/butte. 2=preform reduction blank. 3=metal T-shaped post in ground.
Previous investigations: None.
Location of artifacts: State Historical Society of North Dakota.
Other material reported by owner: None.
Recommendations: If the site is to be further impacted, test for National Register of Historic Places eligibility.
Remarks: The knoll/butte top defines the potential site area. Data appear limited, but could relate to site function, use and temporal placement. Sixty-two items were noted, all KRF debitage, except a KRF preform reduction blank, three opaque chalcedony flakes, and a tan chert tertiary flake.
Testing for National Register Eligibility (purpose of): To determine components present, research potential and integrity.

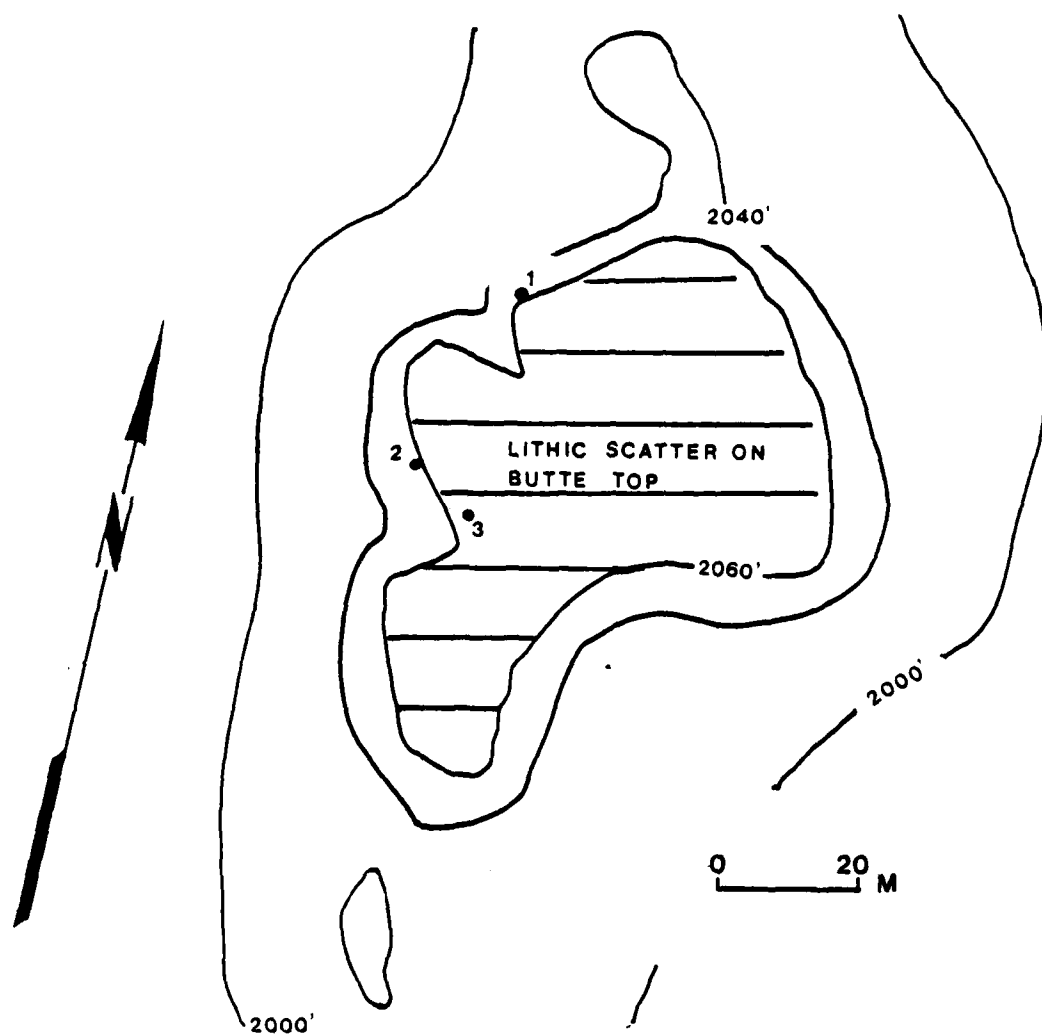


Figure 201. Plan of site 32DU784.

Site number: 32DU785 Site name:
County: Dunn. State: North Dakota. Site map: Figure 202
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Eagle trapping pits.
Component(s): Unknown.
Elevation (m): 610.
Topographic position: At the end of an erosional knob or an elevated
hilltop.
Site size: 6m².
Strata and depth: Unknown.
Vegetation: Bunch grass, flax, Canadian thistle, wood lily.
Ground surface visibility (%): 30%.
Nearest water: Intermittent stream - 900m.
Site condition - impacts: The site appears to be relatively
undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1=depression, 1.45m N-S x 1.6m E-W and 30cm
deep. 2=depression, 1.28m N-S x 1.2m E-W and 20cm deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the depressions.
Remarks: The nature of the depressions is unknown, but based on size
and location, they are considered to be eagle trapping pits.
Testing for National Register Eligibility (purpose of): To determine
nature of depressions.

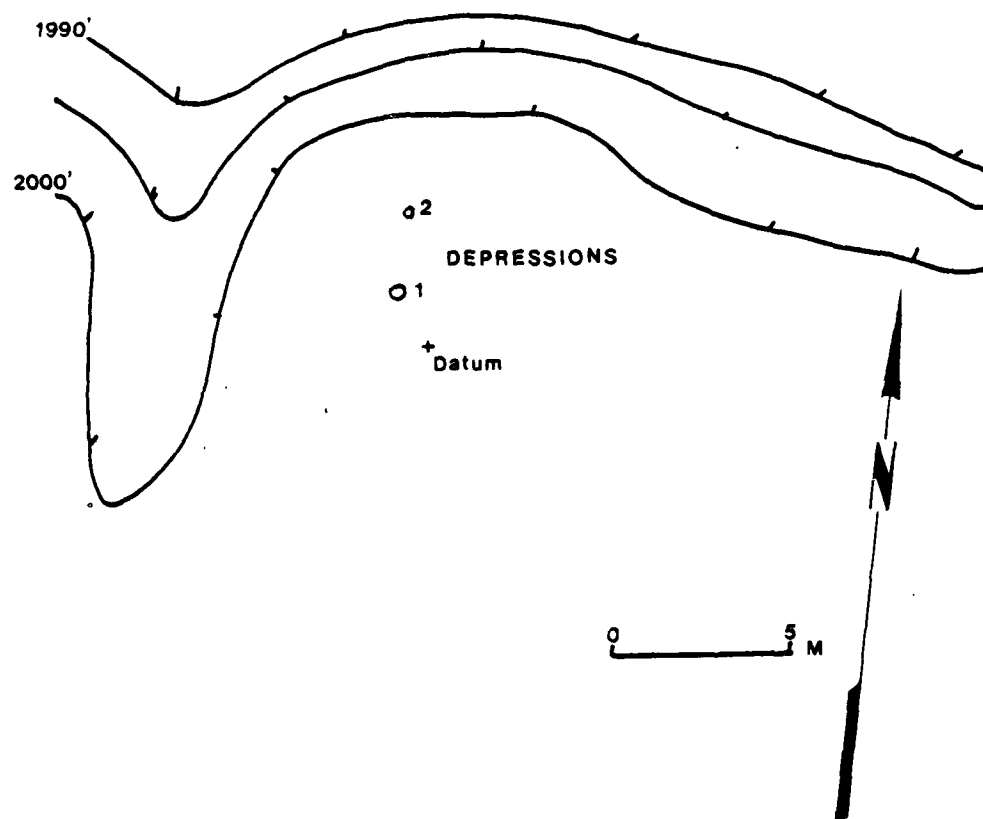


Figure 202. Plan of site 32DU785.

Site number: 32DU786 Site name:
County: Dunn. State: North Dakota. Site map: Figure 203
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Cemetery.
Component(s): Historic Native American.
Elevation (m): 591.
Topographic position: On top of an isolated butte, hill or terrace remnant.
Site size: 600m².
Strata and depth: Unknown.
Vegetation: Prairie grasses, ash tree.
Ground surface visibility (%): 40%.
Nearest water: Intermittent stream - 400m.
Site condition - impacts: The integrity is fair; some slope erosion and sunken grave outlines may indicate burials have been removed.
Surface collections (by whom and when): None.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: As a cemetery, this represents a sacred site and impacts to the area should be avoided. If the site is to be impacted, detailed research and testing should be undertaken to determine whether the site can be related to any living person(s) and whether any actual burials are extant.
Remarks: Some artifacts were present at this site, including 12 faceted blue glass beads, a large yellow button, three to four dentalium shells, a broken safety pin, broken china or crockery (some painted) and many wooden trunk parts.
Testing for National Register Eligibility (purpose of): No testing should be carried out unless the site is to be impacted. If impacts occur, testing to determine areal extent, depth, components present, research potential and integrity should be conducted, especially to locate any extant human remains.

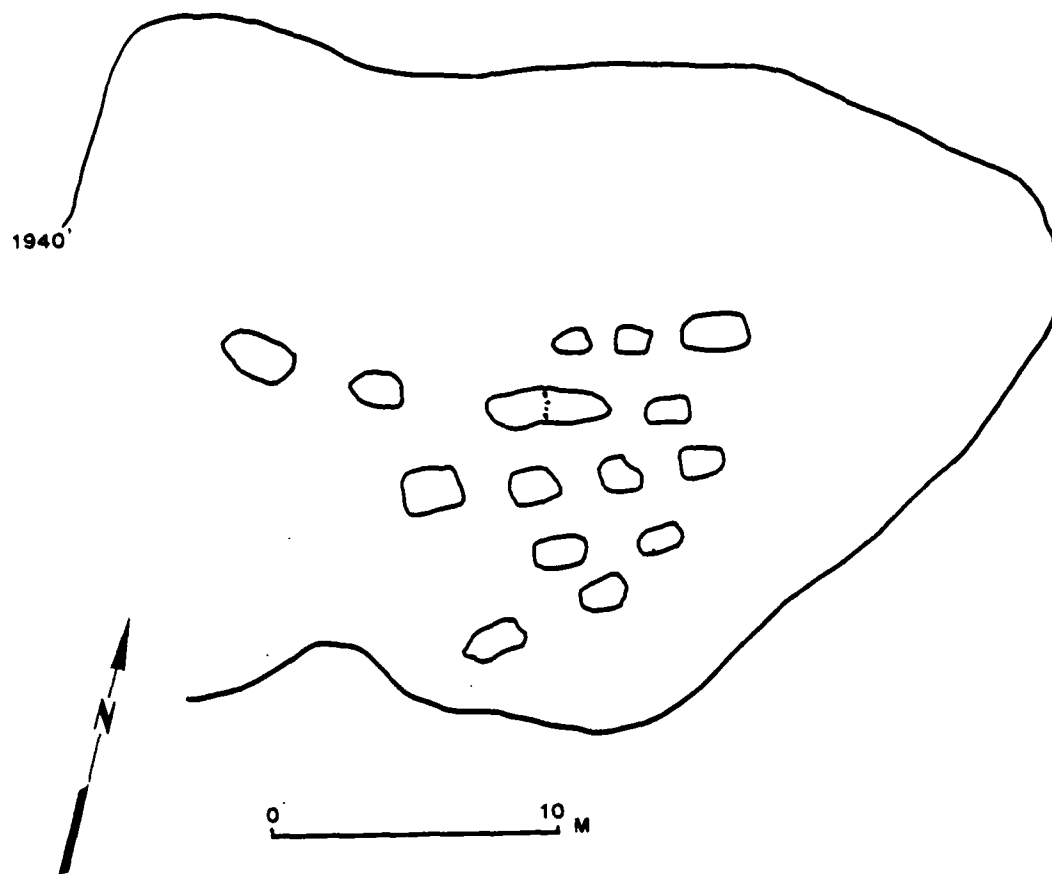


Figure 203. Plan of site 32DU786.

Site number: 32DU787 Site name: -
County: Dunn. State: North Dakota. Site map: Figure 204
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn and depression.
Component(s): Unknown.
Elevation (m): 573.
Topographic position: On top of a ridge.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Little bluestem, buckbrush, thistle.
Ground surface visibility (%): 20%.
Nearest water: Intermittent stream - 200m.
Site condition - impacts: The site appears to be relatively
undisturbed, but a fence line is nearby and an allotment marker is in
the center of the cairn.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: 1=Indian allotment brass cap - 1913. 2=rock
cairn; 1.4m N-S x 1.1m E-W. 3=depression, 1.0m in diameter and 20cm
deep.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: It is highly likely that the cairn and allotment
marker are related and the depression may be a borrow area for the cairn
stones. The site does not appear to warrant any further investigation.
Remarks: The cairn has 20 visible rocks.

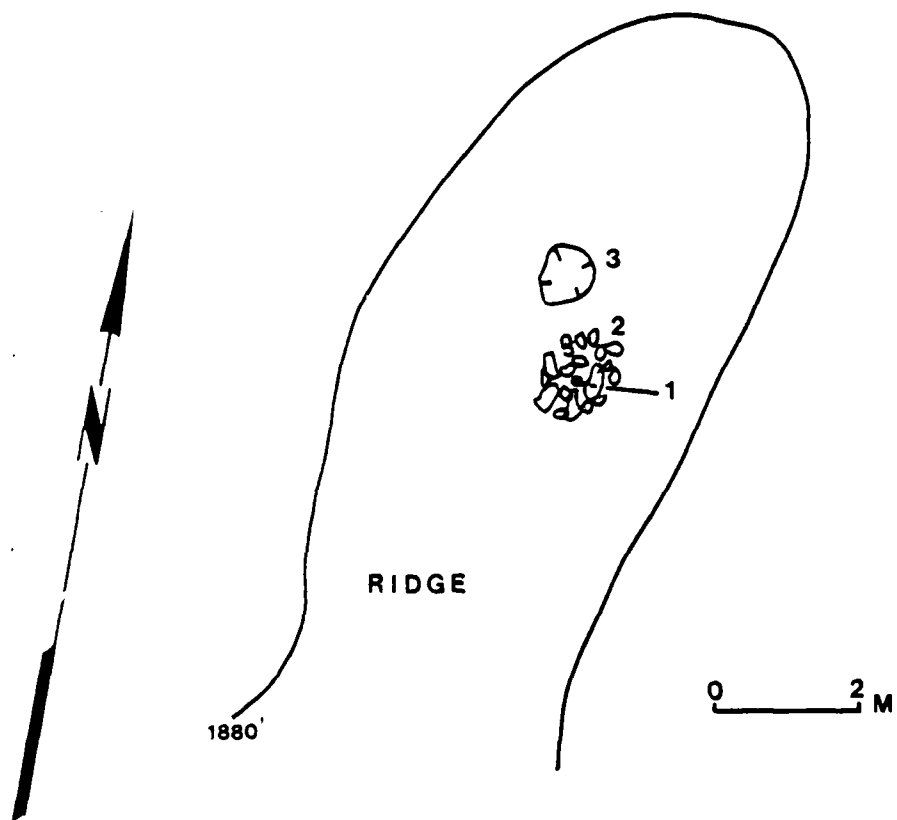


Figure 204. Plan of site 32DU787.

Site number: 32DU788 Site name:
County: Dunn. State: North Dakota. Site map: Figure 205
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha,
Nebraska.
Site type: Cairn.
Component(s): Unknown.
Elevation (m): 597.
Topographic position: On top of an isolated hill.
Site size: 4m².
Strata and depth: Unknown.
Vegetation: Prairie grasses.
Ground surface visibility (%): 20%.
Nearest water: Little Missouri River - 900m.
Site condition - impacts: The site appears to be undisturbed.
Surface collections (by whom and when): None.
Data plotted on site map: Cairn, 1.0m N-S x 1.45m E-W. a=screw top jar
lid.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: If the site is to be impacted, test to determine
the nature of the cairn.
Remarks: The cairn may mark a trail or a burial, reflect field
clearance, or result from some other activity.
Testing for National Register Eligibility (purpose of): To determine
the nature of the cairn.

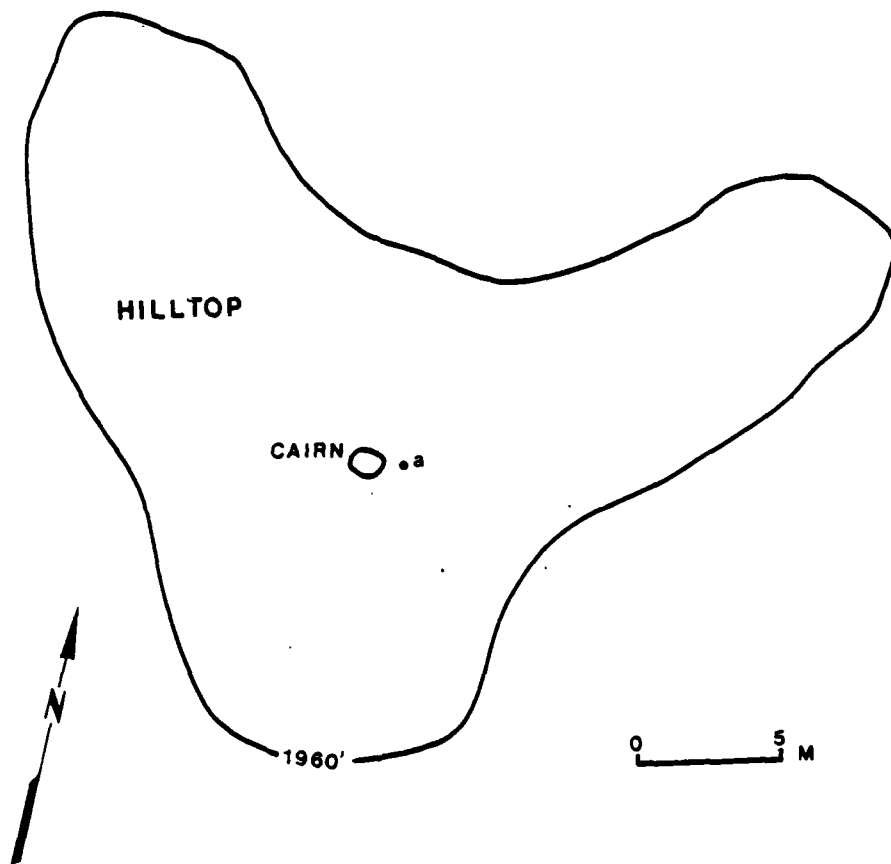


Figure 205. Plan of site 32DU788.

Site number: 32DU789 Site name:
County: Dunn. State: North Dakota. Site map: Figure 206
Property owner(s) and address(es): U.S. Army Corps of Engineers, Omaha, Nebraska.
Site type: Historic/recent recreation area with outhouse.
Component(s): Historic Euro-American/Native American.
Elevation (m): 567.
Topographic position: Along the south shore of a small bay within Mandan Bay of Lake Sakakawea.
Site size: 300m².
Strata and depth: Surficial.
Vegetation: Small trees, buckbrush, wild rose bushes.
Ground surface visibility (%): 5%.
Nearest water: Intermittent stream - 200m.
Pool elevation (feet), when applicable: 1845' amsl.
Site condition - impacts: The site appears to have fair integrity.
Surface collections (by whom and when): None.
Data plotted on site map: 1=plywood outhouse. 2=possible dock of tree trunks and 2x4s. 3=sheet metal cattle water trough.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: No further work is recommended - the site is too recent.
Remarks: The outhouse is 1.32m long, 1.23m wide, 1.97m high at the front and 1.6m high at the rear. It is made of several sheets of plywood and has a plexiglass panel above the door.

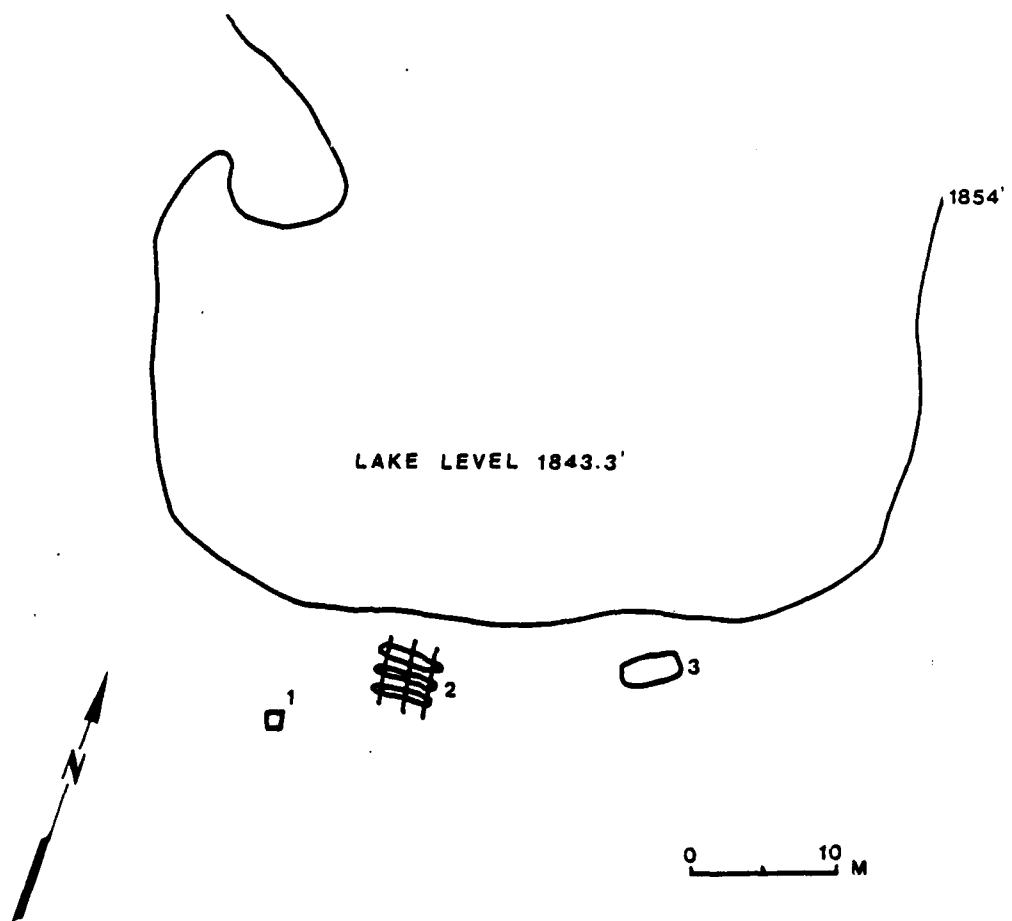


Figure 206. Plan of site 32DU789.

Site number: 32DU790 Site name:
County: Dunn. State: North Dakota. Site map: Figure 207
Property owner(s) and address(es): Private.
Site type: Stone circle.
Component(s): Unknown.
Elevation (m): 585.
Topographic position: At the center of a broad ridge or upper terrace/upland plain.
Site size: 23m².
Strata and depth: Unknown - likely 0-20cm based on feature type.
Vegetation: Short grass, forbs, western wallflower.
Ground surface visibility (%): 40%.
Nearest water: Skunk Creek - 500m.
Site condition - impacts: A track and U.S. Army Corps of Engineers stakes are nearby, but the circle appears to be relatively undisturbed.
Surface collections (by whom and when): No cultural materials.
Data plotted on site map: Stone circle of 15 stones, 6.6m inside diameter.
Previous investigations: None.
Other material reported by owner: None.
Recommendations: The site is on private land, but if it is to be impacted, test for National Register of Historic Places eligibility.
Remarks: If cultural material is present the site might have research potential for understanding temporal position and function.
Testing for National Register Eligibility (purpose of): To determine areal extent, depth, components present, research potential and integrity.

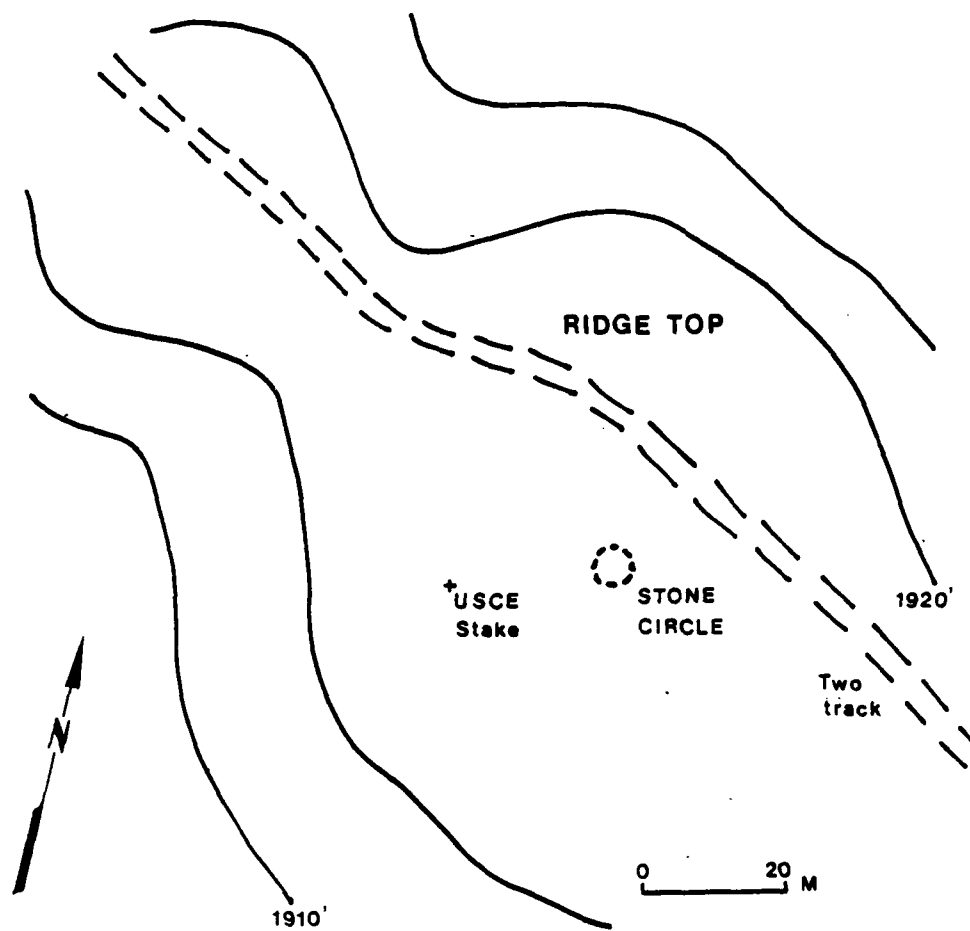


Figure 207. Plan of site 32DU790.

The analyses of data generated from the Dunn County survey focused on the quantification and summarization of information related to site morphology (type), content (features, artifacts) and location. Specific analyses were accomplished for diagnostic materials and other selected artifacts collected (projectile points, scrapers, preform reduction blanks, bifaces, prehistoric ceramics and one historic artifact).

Site locational data were analyzed using the SPSS-11 program on a PDP-11 computer. FREQUENCIES and CROSS TABULATIONS were constructed as a baseline for examining the data. The total number of sites utilized in the computer analysis was 190 [N=190] (presented in Appendix F). The categories/index of sites tabulated included: 74 artifact scatters; 54 rock cairns and other stone settings/alignments; 18 eagle trapping pits; nine stone circle sites; two earthlodge villages; four other prehistoric pits; 14 historic sites; ten trunk burial sites; and five cemeteries.

Data derived through the general studies are presented within the context of the site type discussions. Summaries and analyses of the projectile points, scrapers, bifaces and other lithic artifacts, prehistoric ceramics, and one historic artifact are presented below. An analysis of the occurrence of Knife River Flint (KRF) in the lithic assemblages, the distribution of sites relating to the utilization of naturally occurring KRF deposits and the results of computer data manipulations relating to site location also follow.

Projectile Points/Chronology

A total of 190 sites from the survey were analyzed. Ten contained evidence (based on projectile points located during the current survey) for being assigned to the following chronologic positions. Two contained evidence of multiple components - both ranging from the Late Plains Archaic to the Late Prehistoric. One site is assigned to the Paleoindian period, one to the early/middle Plains Archaic, two to the middle Plains Archaic, three to the Late Plains Archaic and one to the Late Prehistoric.

Based on the descriptions of projectile points given by Leaf (1976) from seven sites located during the 1975 survey, one additional site component can be assigned to the Late Plains Archaic period and seven

site components to the Late Prehistoric period. Two earthlodge villages located in the survey area date from the late eighteenth/early nineteenth century A.D., with one having a Woodland component.

Thirty sites are historic Native American or Euro-American, including ten trunk burials (Mandan-Hidatsa) and five cemeteries. The remaining 143 sites lack sufficient data to permit temporal placement. Twenty-one projectile points or point fragments were recovered during this survey. Table 3 relates the projectile points to a cultural/techno complex and a temporal locus. Table 3 is followed by descriptions (ordered by cultural/techno complex) of each projectile point with illustrations (Figures 208-216). The tables following these descriptions (Tables 4 and 5) provide morphological data and other information (raw material, color) for the points. The discriminate dimensions recorded are based on the earlier work of Ahler (1971) and are utilized here as a means of standardizing the data reported. By providing standardized information in this manner, it is hoped that comparative studies will be made easier and more reliable.

Table 4 lists the following attributes for each individual projectile point (SPECIMEN): stem form, base form, shoulder form, notch type and blade form. These attributes are graphically represented in Figure 217. Some or all of these attributes may not be able to assigned to incomplete specimens. In addition, the lithic raw material type and color (derived from Munsell color charts) are presented in the last two columns.

Table 5 provides a series of measurements for each projectile point (SPECIMEN). The measurements taken are graphically illustrated in Figure 218. As defined by Ahler (1971), these measurements can be described as follows. Total length (A) is measured perpendicularly from the baseline to the distal blade tip. Basal contact width (B) is the maximum distance between points of tangency on the baseline. Basal center point length (C) is the distance from the baseline to the basal haft element margin, measured along the centerline. Proximal haft element width (D) is the distance between the two points, one on each lateral haft element margin, most proximally positioned and at which the orientation of the lateral haft element margin is most nearly parallel to the centerline, measured parallel to the baseline. Proximal haft element length (E) is the average perpendicular distance from the

baseline to the two points on the lateral haft element margins defined above. Distal haft element width (F) is the distance between two points, one on each lateral haft element margin, which are more distally located than the proximal haft element points, and at which the orientation of the lateral haft element margin is most nearly parallel to the centerline, measured parallel to the baseline. Distal haft element length (G) is the average perpendicular distance from the baseline to the two points on the lateral haft element margins defined above. Blade base width (H) is the distance between the two points, one on each lateral blade margin, nearest the baseline, measured parallel to the baseline. Shoulder to base length (I) is the average perpendicular distance from the baseline to the two points defined when measuring blade base width. Maximum width (J) is the greatest distance, measured parallel to the baseline, between any two points on the artifact. Total haft element length (K) is the average perpendicular distance from the blade/haft element division to the baseline. Maximum thickness (L) is the greatest distance, measured perpendicular to the baseline and centerline, between any two points on the artifact. Finally, the cultural-technological complex the point has been assigned to (Table 3) is again listed here.

It is recognized that the assessment of cultural-chronological affiliations of projectile points, especially fragmentary specimens, is often tenuous and based to a large extent on the analyst's background. In this report comparative examples from the literature are referenced to substantiate the assessment presented, but undoubtedly as further work is undertaken in the area, some of these assessments will be changed. All of the projectile point forms are individually described, and illustrated at actual size, in this chapter.

Table 3. Sites and Cultural Affiliation.
 [Based on projectile point types recovered from current survey]

SITE (Find #) - ISOLATED FIND	CULTURAL/TECHNO COMPLEX	TEMPORAL LOCUS
32DU662[2]	Agate Basin	Paleoindian
32DU769[1]	Oxbow	Early/Middle Plains Archaic
32DU724[1]	McKean Complex	Middle Plains Archaic
IF 161	McKean Complex	Middle Plains Archaic
32DU633[1]	Yonkee	Middle Plains Archaic
32DU132[3]	Pelican Lake	Late Plains Archaic
32DU412[1]	Pelican Lake	Late Plains Archaic
32DU418[1]	Pelican Lake	Late Plains Archaic
32DU664[2]	Pelican Lake	Late Plains Archaic
32DU669[1]	Pelican Lake	Late Plains Archaic
IF 2	Pelican Lake	Late Plains Archaic
IF 134	Pelican Lake	Late Plains Archaic
32DU3[1]	Besant	Late Prehistoric
32DU132[2]	Besant	Late Prehistoric
32DU664[1]	Besant	Late Prehistoric
32DU132[1]	Late Prehistoric	
	Side-Notched	Late Prehistoric
IF 110	Late Prehistoric	
	Corner-Notched	Late Prehistoric
IF 120	Late Prehistoric	
	Side-Notched	Late Prehistoric
IF 158	Late Prehistoric	
	Corner-Notched	Late Prehistoric
Unidentifiable points: 32DU672[2]; 32DU781[1] (fragmented specimens)		

Cultural/Techno Complex: Agate Basin

Site: 32DU662

Specimen: 32DU662 [2]

Description: The specimen is the basal portion of a lanceolate point with a straight base and expanding blade form. The point is produced on KRF (moderate patination), and exhibits parallel-oblique flaking.

Munsell Color: 7.5YR-3/2

Measurements

Length: 32.2mm*

Width: 23.2mm

Thickness: 6.2mm

Related Materials: Frison 1978: 156-159; Frison and Stanford 1982.

* Underlining = Specimen incomplete along this dimension.

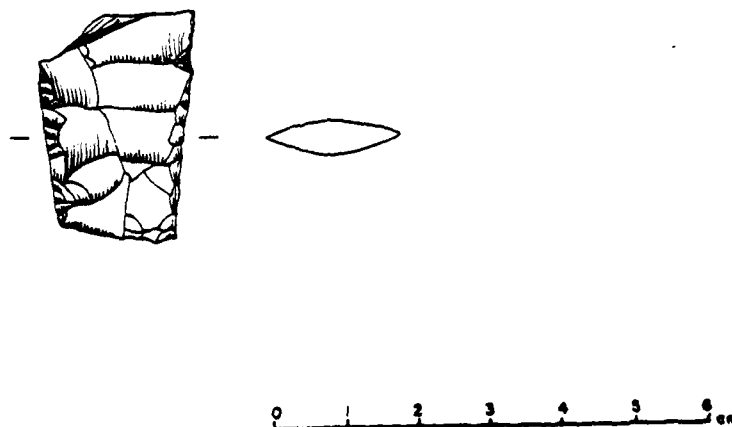


Figure 208. Agate Basin projectile point from 32DU662.

Cultural/Techno Complex: Oxbow

Site: 32DU769

Specimen: 32DU769 [1]

Description: The specimen is triangular in overall configuration. It is an eared point, bifacially flaked with marginal secondary retouch and thinning of the basal margin, which is incurvate. The shoulders of the point are rounded as are the eared tangs of the hafting element. The material is a translucent KRF with a moderate patination.

Munsell Color: 7.5YR-3/4

Measurements

Length: 31.9mm

Width: 20.9mm

Thickness: 4.7mm

Related Materials: Gant and Hurt 1965:48 Plate 7(u); McNerney 1970:292 Figure 2 (No. 12); Ahler 1971:14; Ahler et al. 1977:67 Figure 13(k); Frison 1978:4 Figure 2.9 (f & g); Frison 1978:45.

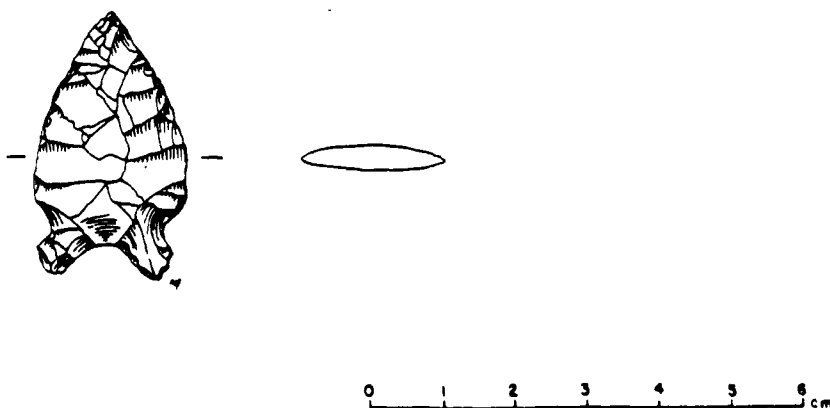


Figure 209. Oxbow projectile point from 32DU769.

Cultural/Techno Complex: McKean Complex

a. Figure 210 (a)

Site: 32DU724

Specimen 32DU724 [1]

Description: The specimen is a Hanna-like point of the McKean Complex. It is a midsection and base. The midsection terminates abruptly in a lateral fracture caused by impact to the distal tip. The base is slightly incurvate and exhibits faint grinding which extends into the corner notches. The specimen is produced on KRF and exhibits heavy patination.

Munsell Color: 5YR-3/3

Measurements	Length:	<u>26.0mm</u> *
	Width:	24.0mm
	Thickness:	6.1mm

b. Figure 210 (b)

Site: IF 161

Specimen IF 161

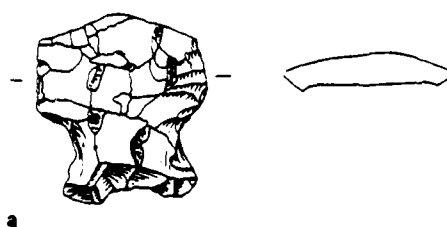
Description: The specimen is a midsection terminated in a hinge fracture, the result of impact to the distal tip. The basal section terminates in a hinge fracture. The specimen is on KRF and exhibits heavy patination.

Munsell Color: 5YR-2.5/2

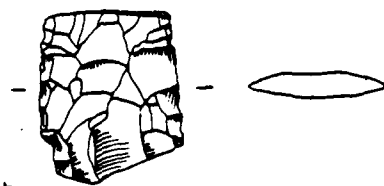
Measurements	Length:	<u>23.9mm</u> *
	Width:	<u>19.8mm</u>
	Thickness:	5.0mm

Related Materials: Mulloy 1954:446 Figure 4 (Lower Level No. 37); Wheeler 1954:7,8; Neuman 1964:187 Figure 3(j); Gant and Hurt 1965:48 Plate 7(r); McNerney 1970:293 Figure 2 (No. 18) and Figure 3 (Nos. 4 and 8); Reeves 1970b:Appendix page 13 Figure 13 (No. 13); Reeves 1970b:74; Frison 1978:54 Figure 2.9 (o and p); Frison 1978:83; Frison 1978:225 Figure 5.41(b); Kornfeld and Todd (eds.) 1985.

* Underlining = Specimen incomplete along this dimension.



a



b

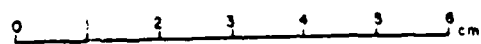


Figure 210. McKean Complex points from Dunn County survey:
 (a) 32DU724 [1] (Hanna-like); (b) IF 161.

Cultural/Techno Complex: Yonkee

Site: 32DU633

Specimen: 32DU633 [1]

Description: The specimen is a complete (resharpened) 'eared' point with an expanding stem and incurvate base. It is bifacially flaked with secondary pressure flaking along the lateral margins. The point is produced on KRF (heavily patinated).

Munsell Color: 5YR-3/2

Measurements

Length: 37.8mm

Width: 20.1mm

Thickness: 4.9mm

Related Materials: Bentzen 1961:19 (Nos. 1-51); Bentzen 1961:18; Frison 1978:50-55.

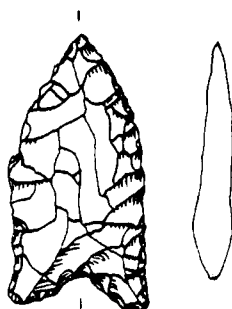


Figure 211. Yonkee projectile point from site 32DU633.

Cultural/Techno Complex: Pelican Lake

a. Figure 212 (a)

Site: 32DU412

Specimen: 32DU412 [1]

Description: The specimen is a corner-removed projectile point produced on KRF (patinated).

Munsell Color: 5YR-2.5/2

Measurements Length: 46.8mm
 Width: 21.4mm
 Thickness: 5.6mm

b. Figure 212 (b)

Site: IF 2

Specimen: IF 2

Description: The specimen is a corner-notched projectile point with the basal portion missing. It is produced on KRF and exhibits slight patination.

Munsell Color: 5YR-3/3

Measurements Length: 49.3mm*
 Width: 23.1mm
 Thickness: 5.0mm

c. Figure 212 (c)

Site: IF 134

Specimen: IF 134

Description: The specimen is a side-notched projectile point. The distal tip has been removed through an impact fracture. It is produced on KRF (heavily patinated).

Munsell Color: 5YR-3/3

Measurements Length: 34.4mm*
 Width: 24.1mm
 Thickness: 4.0mm

d. Figure 212 (d)

Site: 32DU132

Specimen: 32DU132 [3]

Description: The specimen is the basal portion of a corner-removed projectile point. The base is slightly incurvate. The base and corner notches exhibit slight grinding. The piece is produced on KRF (slight patination).

Munsell Color: 5YR-2.5/2

Measurements Length: 16.0mm*
 Width: 24.7mm
 Thickness: 5.3mm

Related Materials (for all of the above): Neuman 1964:187 Figure 3(r); Reeves 1970b:Appendix page 12, Figure 12 (Nos. 6-8); Frison 1978:83 Figure 2.26; Frison 1978:58; Ahler 1981:Type 04 points; Nowak 1981:79 Figure 4(c); Nowak 1981:118.

* Underlining = Specimen incomplete along this dimension.

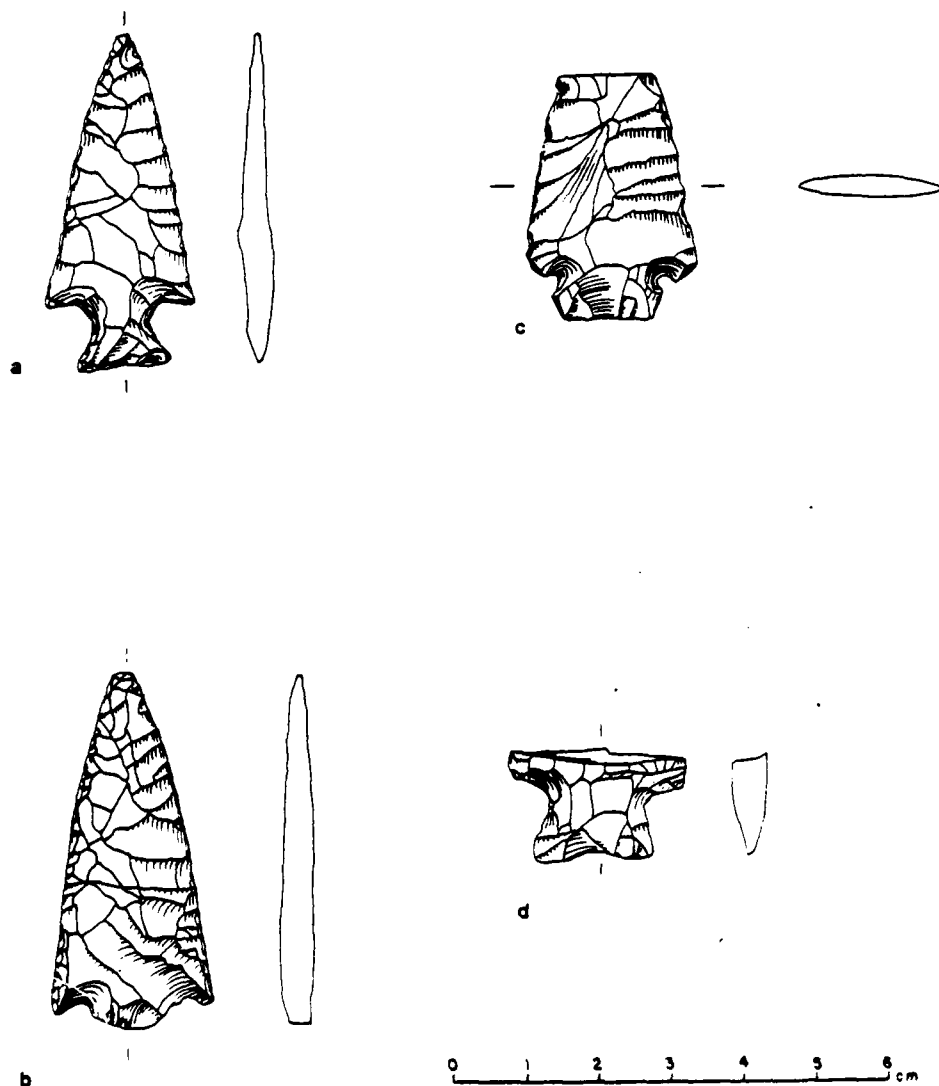


Figure 212. Pelican Lake projectile points from Dunn County survey: (a) 32DU412 [1]; (b) IF 2; (c) IF 134; (d) 32DU132 [3].

Cultural/Techno Complex: Pelican Lake (continued)

a. Figure 213 (a)

Site: 32DU669

Specimen: 32DU669 [1]

Description: The specimen is a deeply corner-notched midsection and base. The midsection is terminated in a hinge fracture, the result of an impact fracture. The base is straight. The point is produced on Tongue River silica.

Munsell Color: 10YR-5/1

Measurements Length: 29.8mm*
 Width: 33.6mm
 Thickness: 5.1mm

b. Figure 213 (b)

Site: 32DU664

Specimen: 32DU664 [2]

Description: The specimen is a midsection and base of a corner-notched point. The distal tip was removed by impact fracture. The base is slightly excurvate. The point was produced on KRF (slight patination).

Munsell Color: 5YR-3/2

Measurements Length: 34.8mm*
 Width: 26.7mm
 Thickness: 4.2mm

c. Figure 213 (c)

Site: 32DU418

Specimen: 32DU418 [1]

Description: The specimen is a midsection and basal portion of a deeply corner-notched point. The distal tip has been removed by an impact fracture. The point was produced on KRF with slight patination.

Munsell Color: 5YR-3/2

Measurements Length: 24.0mm*
 Width: 27.0mm
 Thickness: 4.1mm

Related Materials (for all of the above): Neuman 1964:187 Figure 3(r); Reeves 1970b:Appendix page 12, Figure 12 (Nos. 6-8); Frison 1978:83 Figure 2.26; Frison 1978:58; Ahler 1981:Type 04 points; Nowak 1981:79 Figure 4(c); Nowak 1981:118.

* Underlining = Specimen incomplete along this dimension.

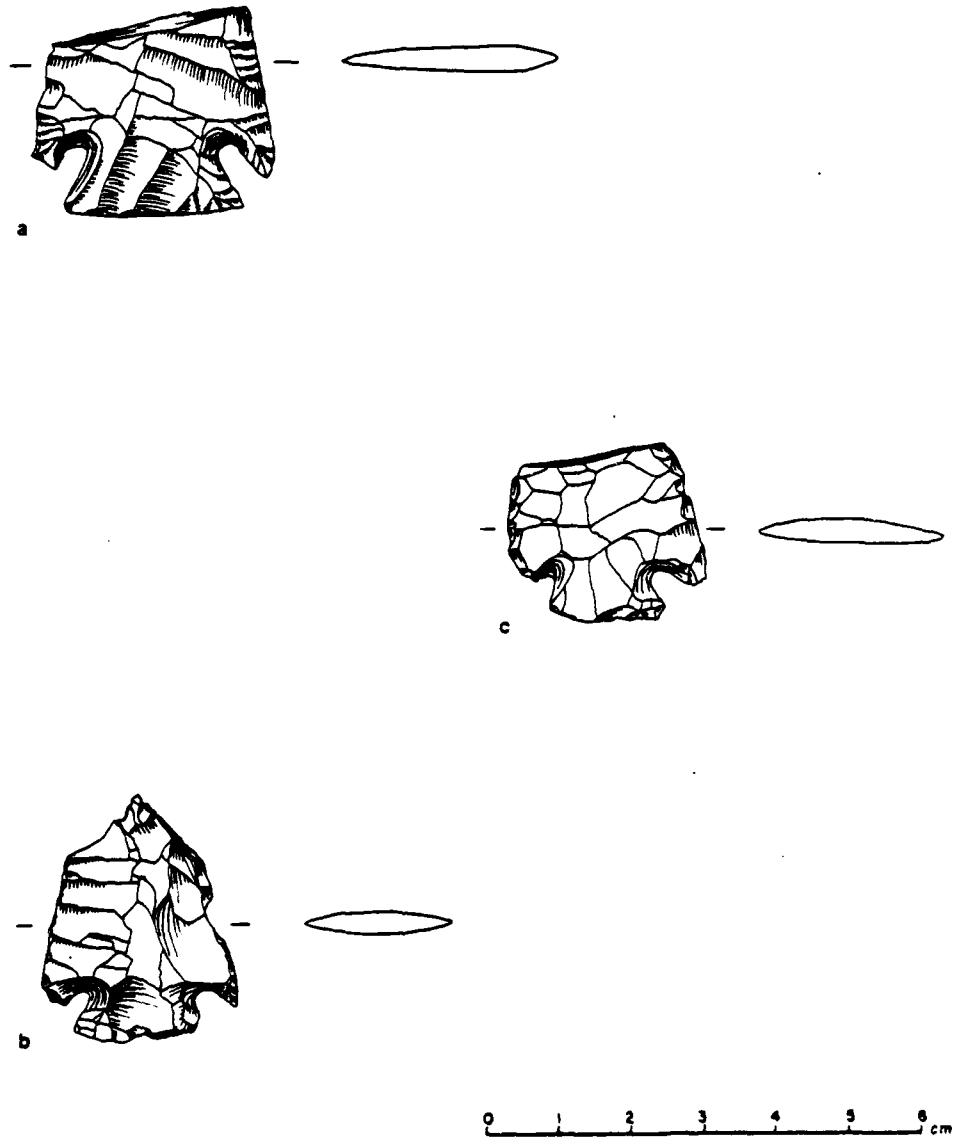


Figure 213. Pelican Lake projectile points from Dunn County survey: (a) 32DU669 [1]; (b) 32DU664 [2]; (c) 32DU418 [1].

Cultural/Techno Complex: Besant

a. Figure 214 (a)

Site: 32DU664

Specimen: 32DU664 [1]

Description: The specimen is a side-notched point missing a fraction of the distal tip and a tine from the base. The base is slightly excurvate and exhibits heavy grinding. The point is produced on KRF (moderate patination).

Munsell Color: 5YR-3/3

Measurements Length: 41.1mm*
 Width: 22.4mm
 Thickness: 5.9mm

b. Figure 214 (b)

Site: 32DU132

Specimen: 32DU132 [2]

Description: The specimen is a midsection and base of a side-notched projectile point. The basal margin exhibits heavy grinding. It is produced on unpatinated KRF.

Munsell Color: 5YR-3/2

Measurements Length: 23.3mm*
 Width: 20.3mm
 Thickness: 4.6mm

c. Figure 214 (c)

Site: 32DU3

Specimen: 32DU3 [1]

Description: The specimen is the basal portion of side-notched projectile point. It exhibits heavy basal grinding and is produced on KRF (slight patination).

Munsell Color: 5YR-4/2

Measurements Length: 13.8mm*
 Width: 22.3mm*
 Thickness: 4.5mm

Related Materials (for all of the above): Mulloy 1954:446 Figure 4 (Upper Level Nos. 1 and 4); McNerney 1970:293 Figure 3 (Nos. 9 and 11); McNerney 1970:294 Figure 4 (Nos. 4, 12 and 13); Reeves 1970b:Appendix page 11 Figure 11 (No. 13); Reeves 1970b:91; Ahler et al. 1977:67 Figure 13(f); Frison 1978:83.

* Underlining = Specimen incomplete along this dimension.

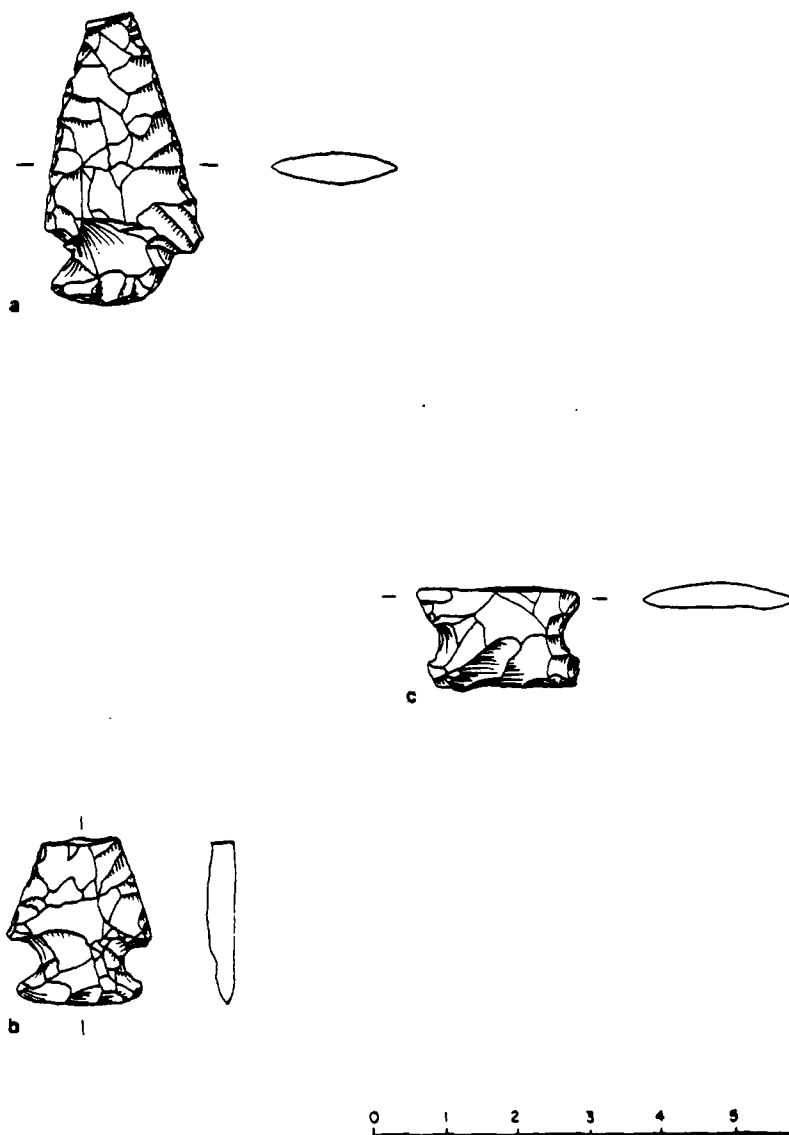


Figure 214. Besant projectile points from Dunn County survey:
(a) 32DU664 [1]; (b) 32DU132 [2]; (c) 32DU3 [1].

Cultural/Techno Complex: Late Prehistoric

a. Figure 215 (a)

Site: IF 110

Specimen: IF 110

Description: The specimen is a corner-notched projectile point. The base is slightly incurvate. A fraction of the distal tip is missing. It is produced on KRF and has slight patination.

Munsell Color: 5YR-3/2

Measurements Length: 52.2mm*
Width: 17.9mm
Thickness: 4.6mm

b. Figure 215 (b)

Site: 32DU132

Specimen: 32DU132 [1]

Description: The specimen is a side-notched projectile point with the proximal end (base) removed (snapped in haft). It is produced on KRF and exhibits heavy patination.

Munsell Color: 10YR-2/2

Measurements Length: 57.6mm*
Width: 20.3mm
Thickness: 5.8mm

c. Figure 215 (c)

Site: IF 158

Specimen: IF 158

Description: The specimen is a corner-notched projectile point with a slightly incurvate base. It is produced on KRF (moderate patination).

Munsell Color: 5YR-2.5/2

Measurements Length: 46.7mm
Width: 24.0mm
Thickness: 5.2mm

d. Figure 215 (d)

Site: IF 120

Specimen: IF 120

Description: The specimen is the midsection and base of a side-notched projectile point. The distal tip is terminated in a hinge fracture due to an impact fracture. The left lateral portion of the side notch and base is missing. It is produced on KRF (unpatinated).

Munsell Color: 5YR-3/3

Measurements Length: 23.5mm*
Width: 19.9mm*
Thickness: 4.2mm

Related Materials (for all of the above): Kivett 1952:88 Plate XVI-A (No. 4); Mulloy 1954:446 Figure 4 (Upper Level Nos. 26-29); Neuman 1964:187 Figure 3(p); Reeves 1970b:Appendix page 16 Figure 16 (Nos. 4, 5 and 13); Reeves 1970b:131-134, 136; Ahler 1981: Type 04 points; Ahler 1981:4; Nowak 1981:77 Figure 3(n).

* Underlining = Specimen incomplete along this dimension.

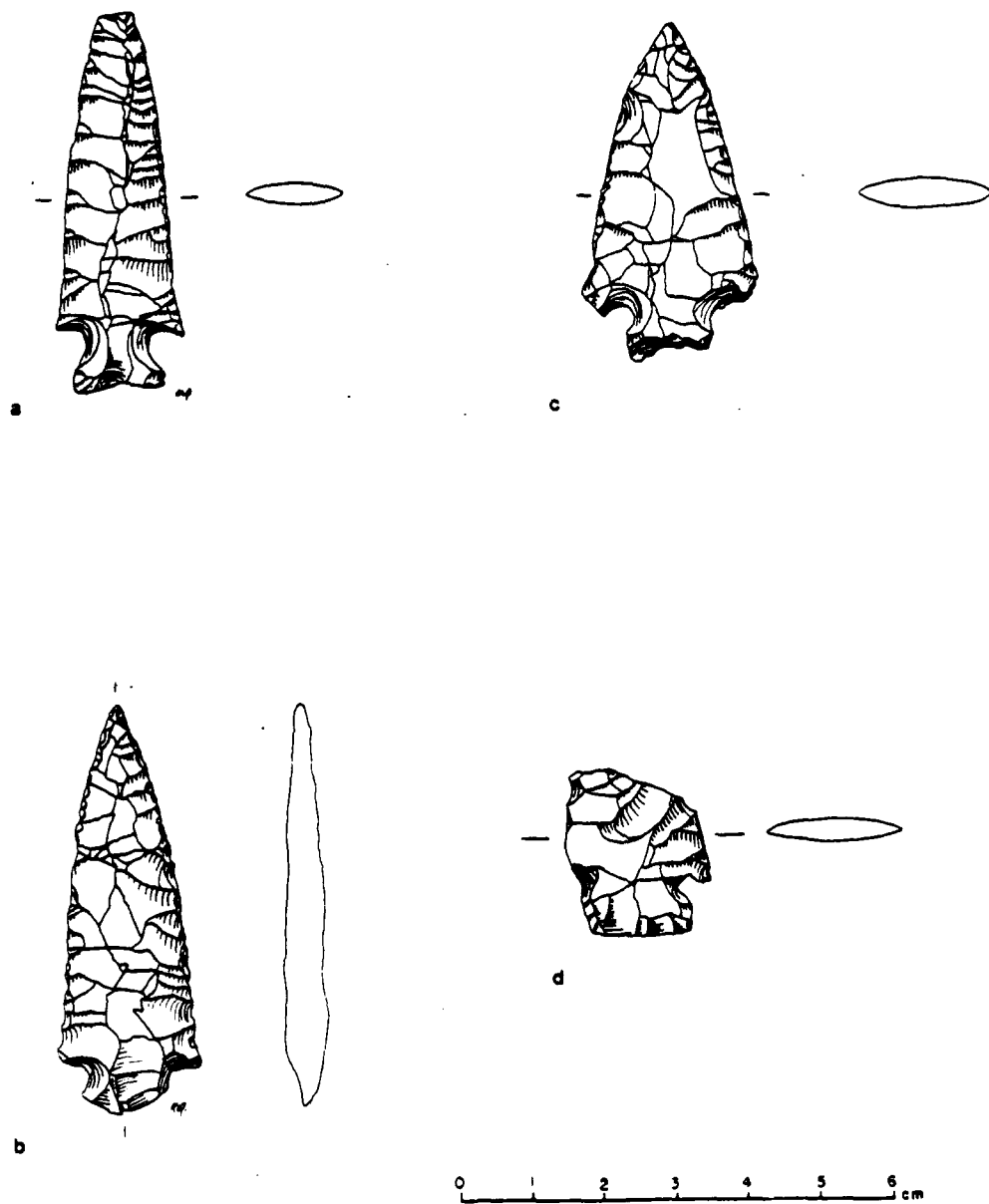


Figure 215. Late Prehistoric projectile points from Dunn County survey: (a) IF 110; (b) 32DU132 [1]; (c) IF 158; (d) IF 120.

Cultural/Techno Complex: Unknown

a. Figure 216 (a)

Site: 32DU781

Specimen: 32DU781 [1]

Description: The specimen is an unfinished projectile point with a side notch on the right lateral margin. The striking platform and bulb of percussion are present on the distal end. It is produced on KRF (heavily patinated).

Munsell Color: 5YR-3/3

Measurements Length: 40.3mm
 Width: 24.1mm
 Thickness: 5.5mm

b. Figure 216 (b)

Site: 32DU672

Specimen: 32DU672 [2]

Description: The specimen is a distal tip of a projectile point. The piece is produced on KRF (heavy patination).

Munsell Color: 7.5YR-3/2

Measurements Length: 16.2mm*
 Width: 11.0mm*
 Thickness: 3.4mm*

* Underlining = Specimen incomplete along this dimension.

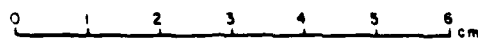
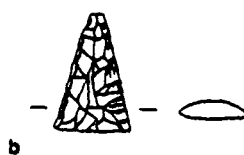
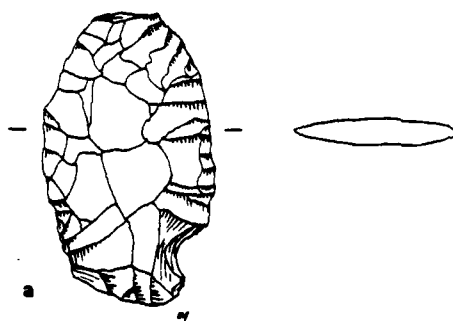


Figure 216. Non I.D. projectile point fragments from Dunn County survey: (a) 32DU781 [1]; (b) 32DU672 [2].

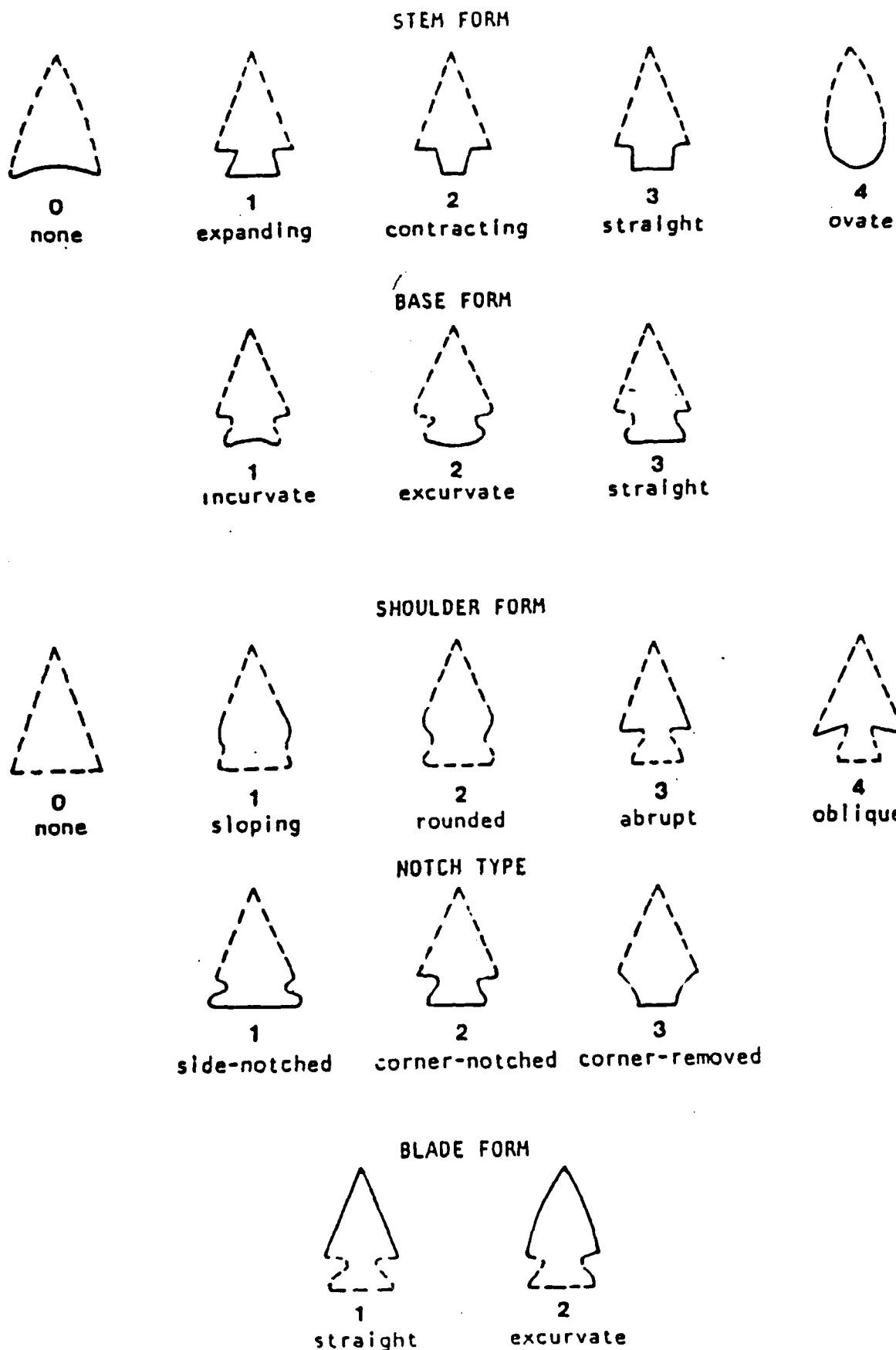
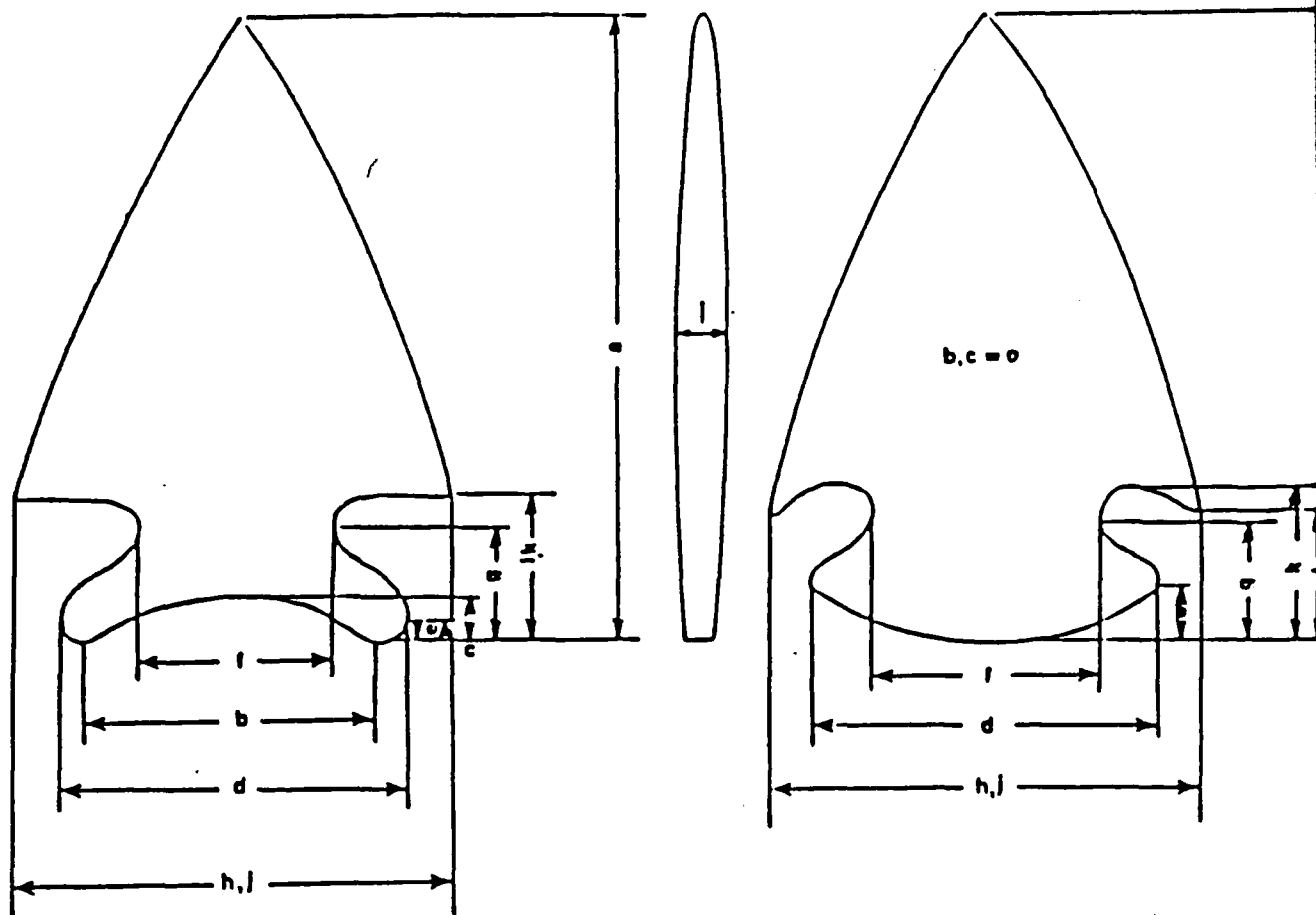


Figure 217. Graphic representation of the five nominal observations utilized in the projectile point analysis.



a. Total Length	g. Distal Haft Element Length
b. Basal Contact Width	h. Blade Base Width
c. Basal Center Point Length	i. Shoulder to Base Length
d. Proximal Haft Element Width	j. Maximum Width
e. Proximal Haft Element Length	k. Total Haft Element Length
f. Distal Haft Element Width	l. Maximum Thickness

Figure 218. Diagram of two generalized projectile point forms indicating the measurements taken in the projectile point analysis (adapted from Ahler 1971:23).

Table 4. Summary of Material Type and Form Observations:
Projectile Points - Dunn County, North Dakota.

SPECIMEN	STEM FORM	BASE FORM	SHOULDER FORM	NOTCH TYPE	BLADE FORM	MATERIAL TYPE	MUNSELL COLOR
32DU3{1}	-	3	2	1	-	KRF	5YR-4/2
32DU132{1}	(1)	-	3	1	2	KRF Heavy patination	10YR-2/2
32DU132{2}	(1)	2	3	1	1	KRF Unpatinated	5YR-3/2
32DU132{3}	1	1	3	3	-	KRF Patinated	5YR-2.5/2
32DU412{1}	1	1	4	3	1	KRF Patinated	5YR-2.5/2
32DU418{1}	1	3	4	2	2	KRF Slight patination	5YR-3/2
32DU633{1}	1	1	-	-	2	KRF Heavy Patination	5YR-3/2
32DU662{2}	0	-	0	-	1	KRF Moderate Patination	7.5YR-3/2
32DU664{1}	1	2	3	1	1	KRF Moderate Patination	5YR-3/3
32DU664{2}	1	3	4	2	2	KRF Slight Patination	5YR-3/2
32DU669{1}	1	3	4	2	1	Grey TRS	10YR-5/1
32DU672{2}	-	-	-	-	-	KRF Heavy Patination	7.5YR-3/2

Table 4. (cont.)

SPECIMEN	STEM FORM	BASE FORM	SHOULDER FORM	NOTCH TYPE	BLADE FORM	MATERIAL TYPE	MUNSELL COLOR
32DU724[1]	1	1	2	2	1	KRF Heavy patination	5YR-3/3
32DU769[1]	1	1	1	1	2	KRF Moderate patination	7.5YR-3/4
32DU781[1]	1	2	2	2	2	KRF Heavy patination	5YR-3/3
IF 2	-	-	4	-	1	KRF Slight patination	5YR-3/3
IF 110	1	1	3	2	1	KRF Slight patination	5YR-3/2
IF 120	1	3	4	1	-	KRF	5YR-3/3
IF 134	1	3	4	2	1	KRF Heavy patination	5YR-3/3
IF 158	1	1	4	2	1	KRF Moderate patination	5YR-2.5/2
IF 161	-	-	0	-	1	KRF Heavy patination	5YR-2.5/2

() = The specimen is incomplete along this dimension.

Table 5. Summary of Measurements and Cultural/Techno Complex:
Projectile Points - Dunn County, North Dakota.

SPECIMEN	MEASUREMENTS (mm)											L	CULTURAL/TECHNO COMPLEX
	A	B	C	D	E	F	G	H	I	J	K		
32DU3[1]	(13.8)	18.0	-	20.6	2.0	12.0	7.0	22.3	-	(22.3)	13.5	4.5	Besant(?), heavy basal grinding (basal portion).
32DU132[1]	(57.6)	-	-	-	-	11.1	-	20.3	-	20.3	-	5.8	Late Prehistoric side-notched, broken base.
32DU132[2]	(23.3)	0	0	17.3	2.0	11.4	5.0	20.3	8.1	20.3	8.1	4.6	Besant side-notched, midsection and base.
32DU132[3]	(16.0)	12.2	1.5	16.6	2.0	13.6	8.7	24.7	11.0	24.7	11.0	5.3	Pelican Lake corner-notched, basal portion.
32DU412[1]	46.8	10.4	0.5	13.1	1.2	8.3	5.7	21.4	9.1	21.4	9.6	5.6	Pelican Lake corner-notched, late.
32DU418[1]	(24.0)	12.0	6.9	15.5	-	13.4	6.0	26.5	-	27.0	7.5	4.1	Pelican Lake midsection and base.
32DU633[1]	37.8	16.7	4.5	20.1	2.1	18.1	6.7	18.8	(6.7)	20.1	6.7	4.9	Yonkee-like (Mid-Late Plains Archaic Tradition).
32DU662[2]	(32.2)	-	-	-	-	-	-	-	-	(23.2)	-	6.2	Basal portion, Agate Basin point.
32DU664[1]	(41.1)	-	-	-	3.0	14.6	11.5	22.4	11.5	22.4	11.5	5.9	Besant, heavy basal grinding.
32DU664[2]	(34.8)	-	-	17.7	8.5	14.9	6.8	26.7	6.7	26.7	6.7	4.2	Pelican Lake midsection and base. Distal tip removed by impact fracture.
32DU669[1]	(29.8)	-	-	24.8	-	18.8	8.8	33.6	8.5	33.6	8.5	5.1	Pelican Lake midsection and base.

Table 5. (cont.)

SPECIMEN	MEASUREMENTS (mm)											CULTURAL/TECHNO COMPLEX
	A	B	C	D	E	F	G	H	I	J	K	L
32DU672[2]	(16.2)	-	-	-	-	-	-	-	-	(11.0)	-	(3.4)
												Distal (tip), unknown. Incomplete specimen.
32DU724{1}	(26.0)	11.7	2.9	18.8	2.9	16.0	7.1	24.0	13.0	24.0	13.0	6.1
												Midsection and base - McKean Complex.
32DU769{1}	31.9	11.7	2.6	15.4	2.6	15.9	7.0	20.9	10.6	20.9	10.6	4.7
												Oxbow.
32DU781{1}	40.3	-	-	-	-	-	-	-	-	24.1	-	5.5
												Unfinished point, unknown. Striking platform and bulb of percussion present on distal end.
IF 2	(49.3)	-	-	-	-	12.6	-	23.1	-	23.1	-	5.0
												Pelican Lake (Late). Base missing, broken in half.
IF 110	(52.2)	10.0	1.4	12.5	-	8.7	5.9	17.9	6.8	17.9	6.8	4.6
												Late Prehistoric.
IF 120	(23.5)	-	-	-	-	13.5	-	-	8.6	(19.9)	8.6	4.2
												Incomplete. Late Prehistoric?
IF 134	(34.4)	-	-	14.7	-	13.4	5.8	24.1	6.4	24.1	6.4	4.0
												Pelican Lake transition. Distal tip missing.
IF 158	46.7	8.1	2.0	11.8	2.0	10.6	6.9	24.0	7.1	24.0	7.1	5.2
												Late Prehistoric.
IF 161	(23.9)	-	-	-	-	-	-	-	-	(19.8)	-	5.0
												Midsection - McKean Complex.

() = The specimen is incomplete along this dimension.

Scrapers

Transverse scrapers, like projectile points, are a class of tools that are consistently patterned and bilaterally symmetrical, thus lending themselves to more detailed metric analysis and typology. Following a typology similar to that utilized by Lee and Lovick (1979) and Nowak (1981), all of the transverse scrapers recovered from the sites identified during the survey were measured and morphologically grouped according to overall shape, dorsal flaking treatment, distal margin shape, and treatment of the lateral margins. The dimensions measured are graphically illustrated in Figure 219. These measurements include total length (A), maximum width (B), maximum thickness (C), transverse chord distance (D) and distal transverse width (E). The columns in Table 6 present the color (Munsell), lithic raw material/patination, and measurements for each specimen. Similar data for the two lateral scrapers, recovered from sites 32DU650 and 32DU670, are also included in Table 6. By providing information in standardized formats it is hoped that comparative studies will be made easier and more reliable.

Transverse Scrapers

Type A (Figure 220). These scrapers are generally oval to slightly triangular in shape with a convex distal margin. They are commonly dome-shaped in cross-section with numerous dorsal flake scars occurring both perpendicular and oblique to the longitudinal axis. They are continuously unifacially retouched on all margins. Four Type A transverse scrapers were recovered from the Dunn County survey.

Type B (Figure 221). Scrapers in this category are triangular in shape with a straight to slightly convex distal margin. One lateral margin is formed by removing a single long flake from the dorsal surface along the longitudinal axis, leaving a ridge or arris. This technique always produces a triangular cross-section. The opposite lateral margin is beveled by removal of numerous dorsal flakes perpendicular to the arris. Secondary retouch occurs only on the lateral and distal margins; the proximal end normally retains a remnant striking platform. Five Type B transverse scrapers were recovered from the current survey.

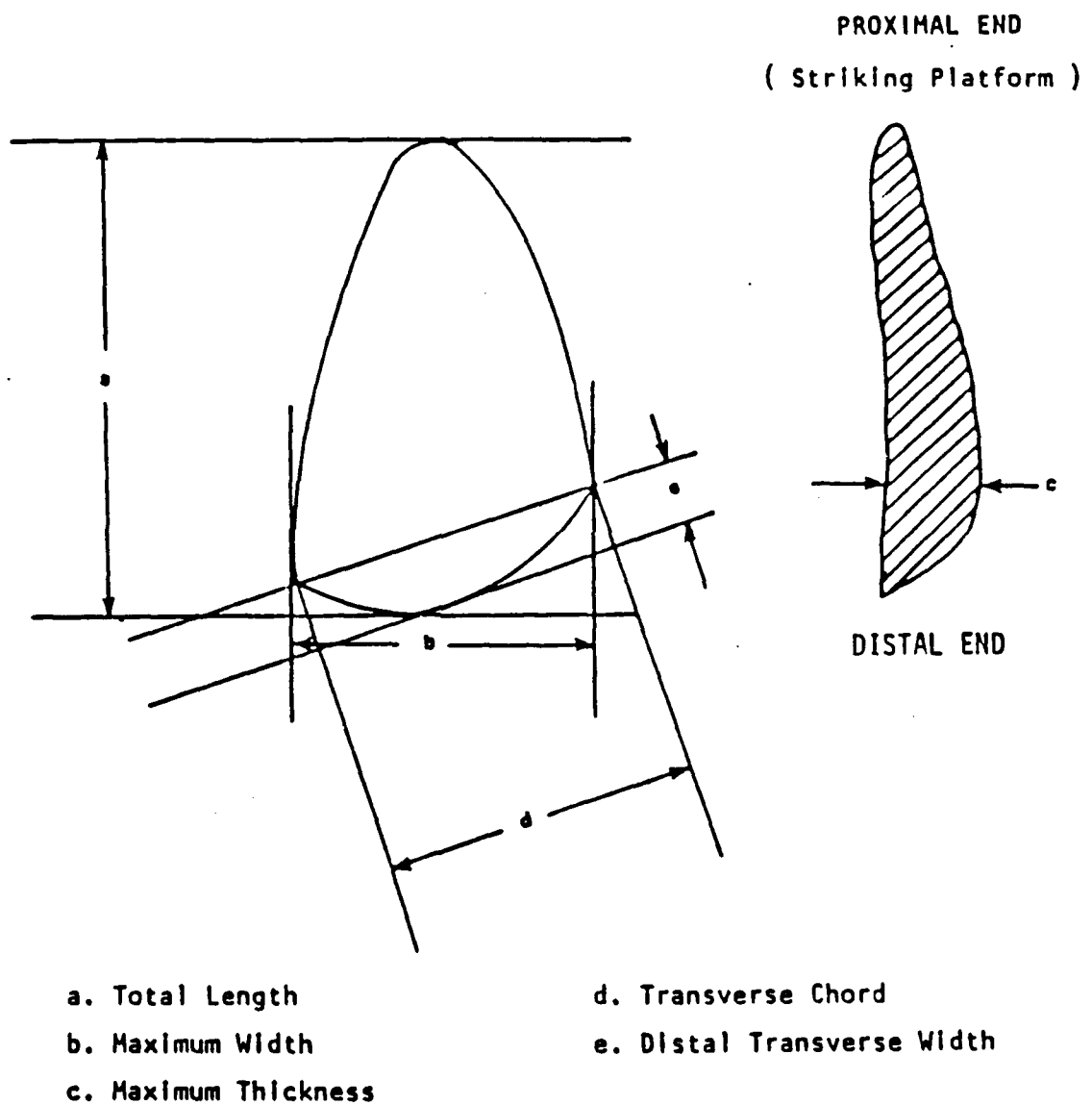


Figure 219. Diagram of a generalized transverse scraper indicating the five measurements taken (adapted from Lee and Lovick 1979).

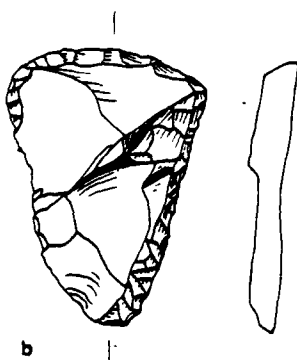
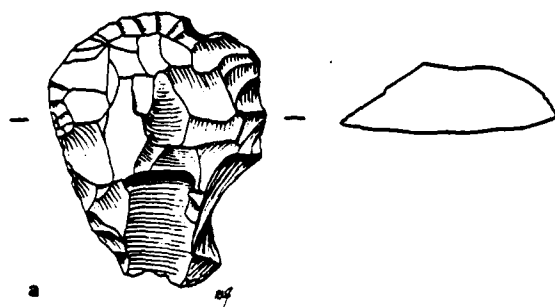
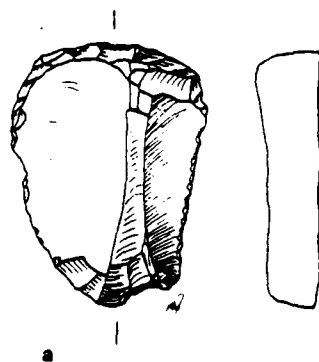
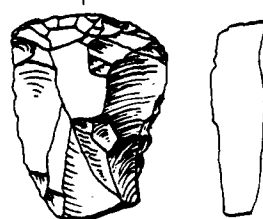


Figure 220. Selected examples of Type A transverse scrapers from Dunn County survey: (a) 32DU670 [1]; (b) 32DU132 [4].



a



b



Figure 221. Selected examples of Type B transverse scrapers from Dunn County survey: (a) 32DU132 [5]; (b) IF 28.

Type C (Figure 222). Scrapers identified in this category characteristically are oval to slightly rectangular in shape with a wide, slightly convex distal margin. One or two large flakes are removed from the dorsal surface perpendicular to the longitudinal axis, usually leaving a concave depression. The cross-section is thin and tabular to slightly concave. Unifacial retouch occurs primarily on the lateral and distal margins with a remnant striking platform retained on the proximal end. These scrapers are frequently broken transversely across the middle, leaving a hinge fracture where the proximal end had been attached. Three Type C transverse scrapers were recovered from the Dunn County survey.

Type D (Figure 223). This category consists of transverse scrapers made from an expanding decortication flake. Shape is irregularly triangular with both convex and straight distal margins. No flakes are removed from the dorsal side with the exception of the margins, thereby retaining cortex on the entire dorsal surface. Secondary retouch may occur on the lateral margins but often there is no marginal retouch except on the distal edge. A single Type D specimen was recovered from IF 121.

Lateral Scrapers

Type E (Figure 224). This category consists of all lateral scrapers. These are quite variable and not easily classified. Two Type E lateral scrapers were recovered during this survey.

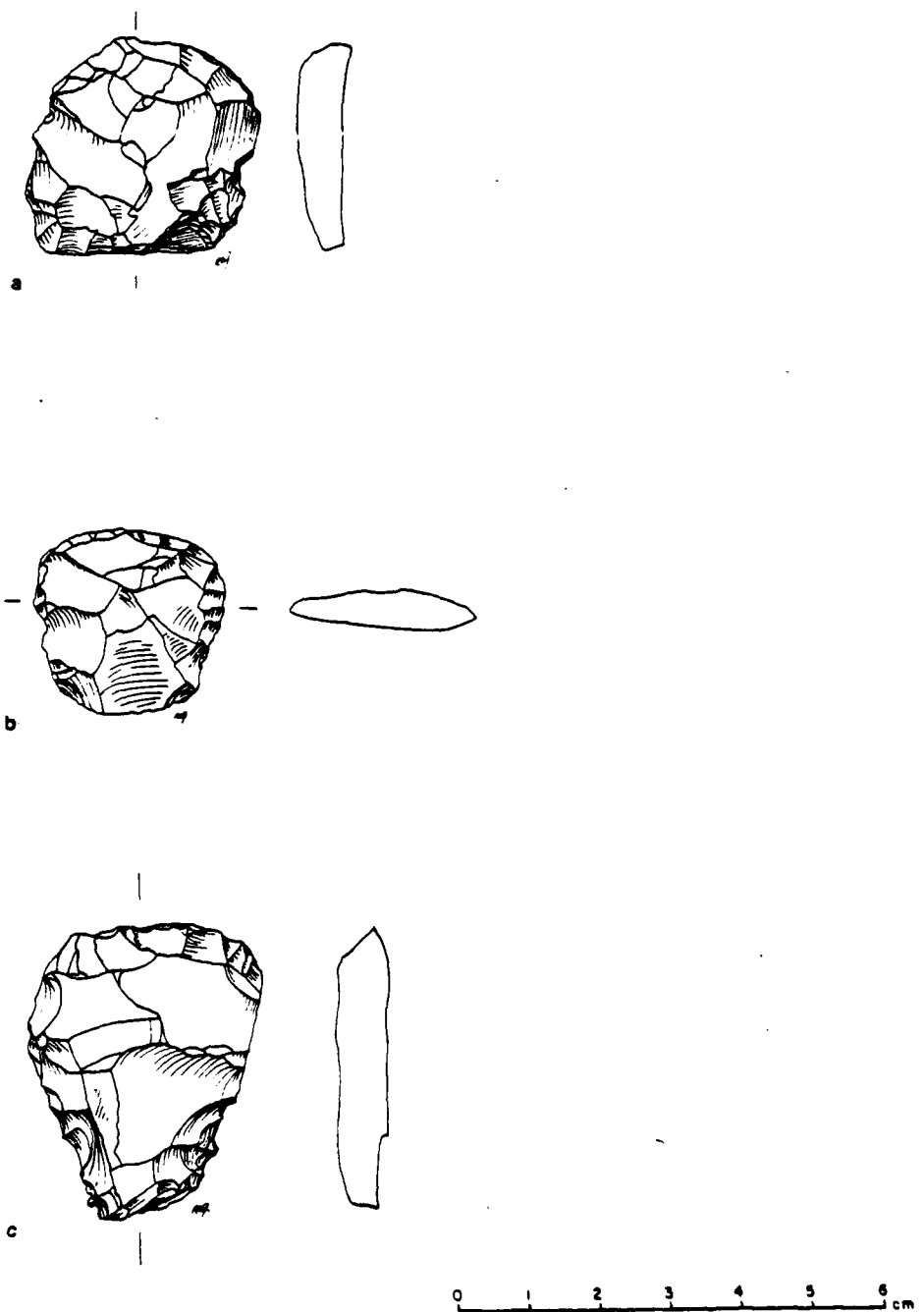


Figure 222. Selected examples of Type C transverse scrapers from Dunn County survey: (a) 32DU640 [1]; (b) 32DU724 [2]; (c) 32DU410 [1].

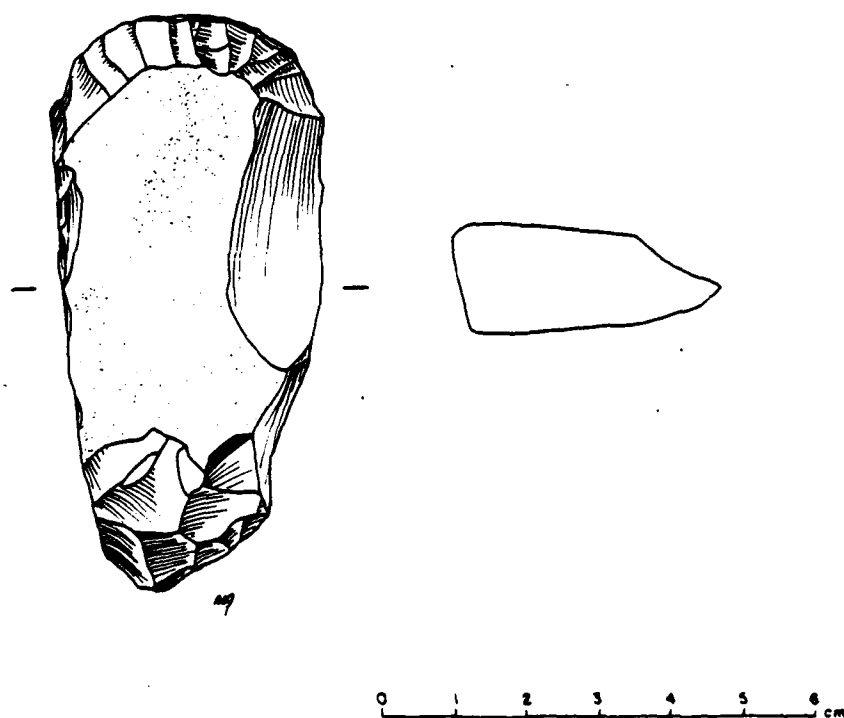


Figure 223. Selected example of a Type D transverse scraper from Dunn
County survey: (a) IF 121.

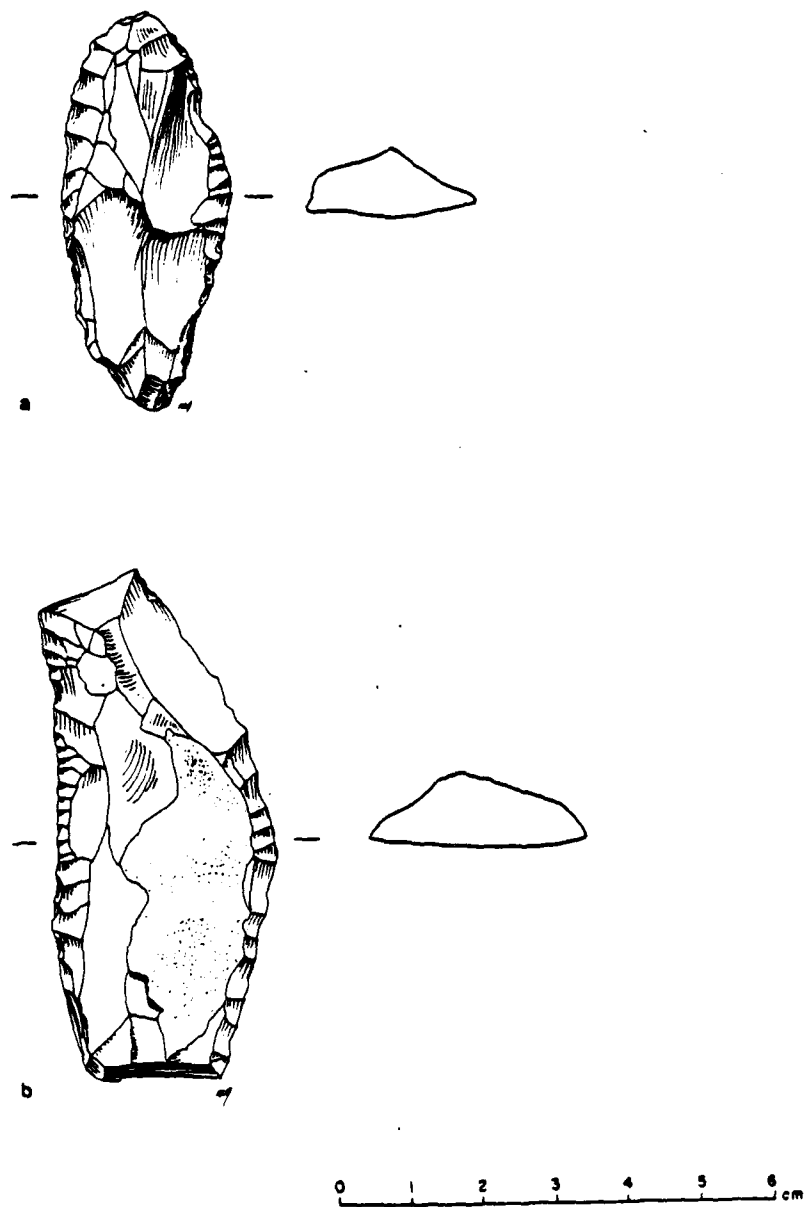


Figure 224. Selected examples of Type E lateral scrapers from Dunn County survey: (a) 32DU650 [1]; (b) 32DU670 [2].

Table 6. Raw Material and Measurement Summary: Scrapers - Dunn County, North Dakota.

SCRAPER TYPES SITE/SPECIMEN	MUNSELL COLOR	RAW MATERIAL	MEASUREMENT DATA (mm)				
			A	B	C	D	E
Transverse Scrapers							
Type A (N = 4)							
32DU132[4]	5YR-2.5/2	KRF (Mod. patination)	38.16	27.8	5.3	27.7	6.3
32DU670[1]	5YR-3/3	KRF (Unpatinated)	33.1	30.8	10.6	28.8	8.3
IF 19	5YR-2.5/1	KRF (Unpatinated)	30.65	27.2	5.7	26.6	5.7
IF 82	5YR-2.5/2	KRF (Heavy patination)	32.2	20.6	6.3	20.5	6.1
Type B (N = 5)							
32DU132[5]	5YR-3/2	KRF (Light patination)	36.4	27.6	9.4	25.2	9.7
32DU675[1]	5YR-2.5/2	KRF (Mod. patination)	27.7	25.9	10.5	25.9	13.7
32DU770[1]	5YR-3/3	KRF (Heavy patination)	42.7	19.2	5.0	18.1	5.8
IF 28	5YR-2.5/2	KRF (Heavy patination)	28.6	21.6	7.9	21.1	7.5
IF 159	7.5YR-3/2	KRF (Light patination)	68.2	41.9	20.3	40.9	19.8
Type C (N = 3)							
32DU410[1]	5YR-3/3	KRF (Light patination)	41.7	33.1	8.2	30.9	7.6
32DU640[1]	5YR-2.5/2	KRF (Heavy patination)	31.3	31.2	7.5	23.3	7.8
32DU724[2]	5YR-3/4	KRF (Light patination)	26.6	26.5	5.5	24.9	4.2
Type D (N = 1)							
IF 121	5YR-2.5/2	KRF (Heavy patination)	80.2	37.9	16.9	35.8	11.4
Lateral Scrapers							
Type E (N = 2)							
32DU650[1]	5YR-3/2	KRF (Unpatinated)	55.1	23.2	9.9	53.5	8.3
32DU670[2]	5YR-3/3	KRF (Light patination)	(71.3)	30.8	10.5	47.9	6.2

For explanation of measurement data refer to Figure 219.

() = Specimen is incomplete along this dimension.

Bifaces and Other Lithic Artifacts

Apart from projectile points and scrapers, the most common categories of lithic items observed or collected were preform reduction blanks (n=15) (Figures 225 and 226) and bifaces (n=27) (Figure 227). Other bifacially reduced lithic items recovered include expended cores and broken tips of unidentifiable items (points/knives?). A number of flakes with steep unifacial flaking on one or both lateral margins were recorded, as well as a grooved maul (Figure 228). Tables 7 and 8 provide the Munsell color, raw material, and index measurements for the preform reduction blanks and bifaces respectively.

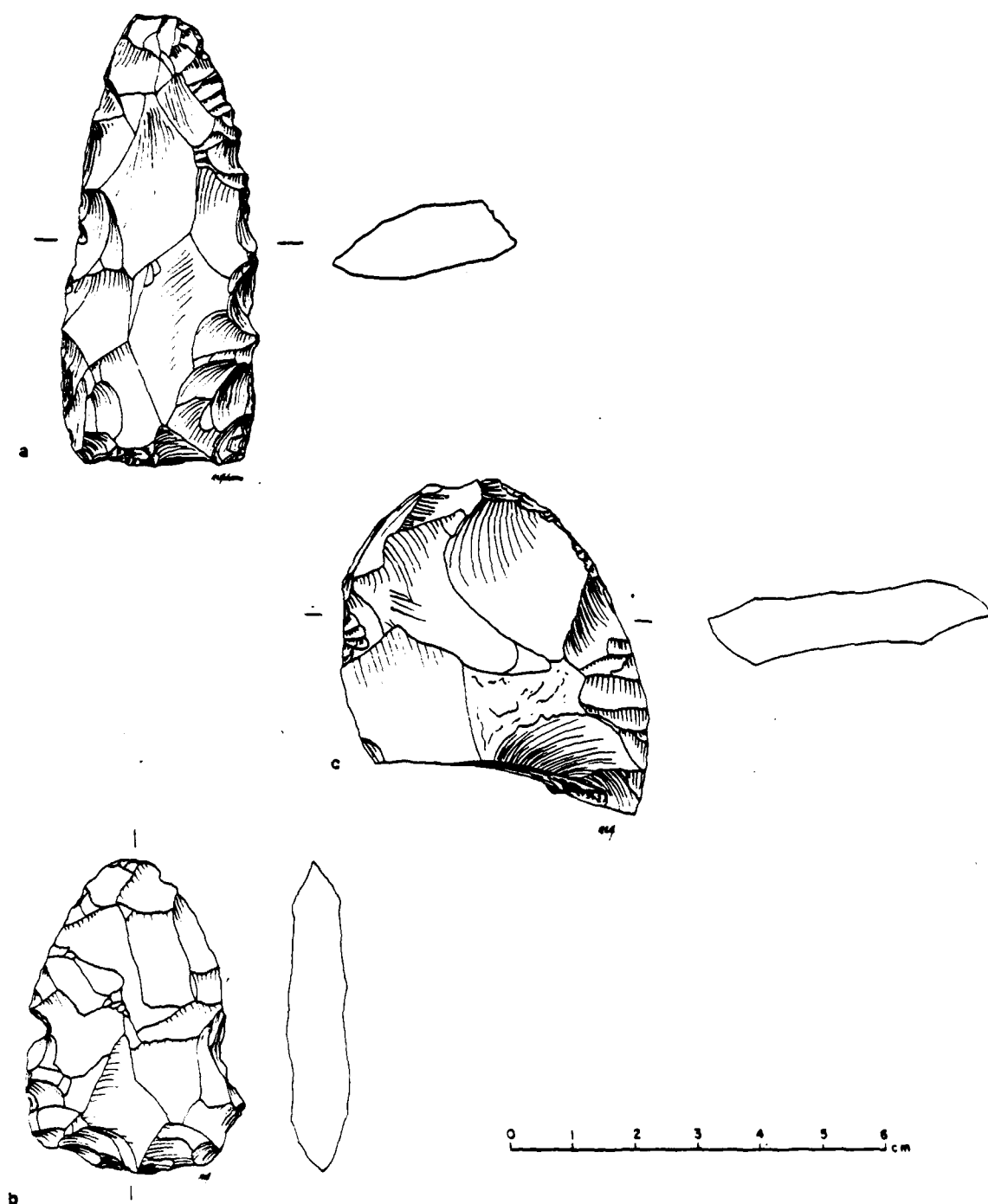


Figure 225. Selected examples of preform reduction blanks from Dunn County survey: (a) IF 126; (b) 32DU132 [6]; (c) 32DU1 [3].

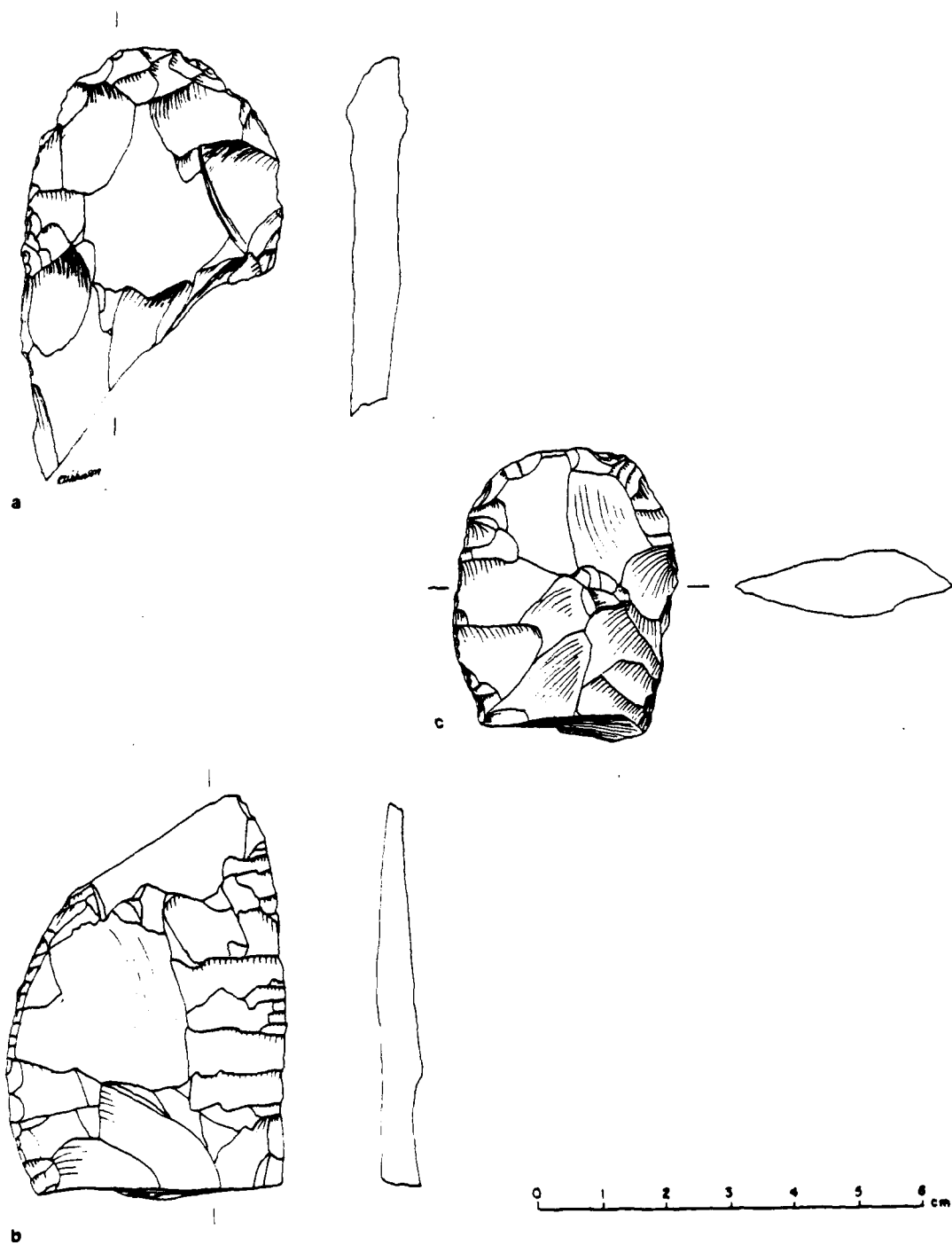


Figure 226. Selected examples of preform reduction blanks from Dunn County survey: (a) 32DU630 [1]; (b) 32DU413 [1]; (c) 32DU769 [2].

Table 7. Raw Material and Measurement Summary:
Preform Reduction Blanks - Dunn County, North Dakota.

SITE/SPECIMEN	MUNSELL COLOR	RAW MATERIAL	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)
32DU1[3]	5YR-2.5/2	KRF	(62.5)	46.4	11.4
32DU132[6]	5YR-3/3	KRF (Slight patination)	51.1	34.5	9.7
32DU413[1]	5YR-3/3	KRF (Unpatinated)	(62.2)	45.2	5.8
32DU630[1]	5YR-5/3	KRF (Unpatinated)	68.0	41.0	9.8
32DU656[1]	5YR-2.5/2	KRF (Heavy patination)	(51.6)	34.1	10.8
32DU661[1]	5YR-4/2	KRF (Light patination)	(64.7)	43.2	12.9
32DU662[1]	5YR-3/4	KRF	(40.1)	(29.2)	6.4
32DU670[4]	5YR-2.5/2	KRF	59.3	40.1	9.7
32DU670[5]	5YR-3/3	KRF	(59.9)	(45.2)	8.7
32DU737[1]	5YR-2.5/2	KRF (Heavy patination)	(74.6)	48.3	11.0
32DU769[2]	5YR-2.5/2	KRF (Moderate patination)	(45.6)	34.8	11.1
32DU773[1]	5YR-3/3	KRF	58.6	59.1	10.2
32DU784[1]	5YR-3/2	KRF	54.2	(35.5)	9.7
IF 80	5YR-4/1	KRF (Heavy patination)	63.7	45.3	7.5
IF 126	5YR-2.5/2	KRF (Unpatinated)	72.9	31.6	12.6

() = Specimen is incomplete along this dimension.

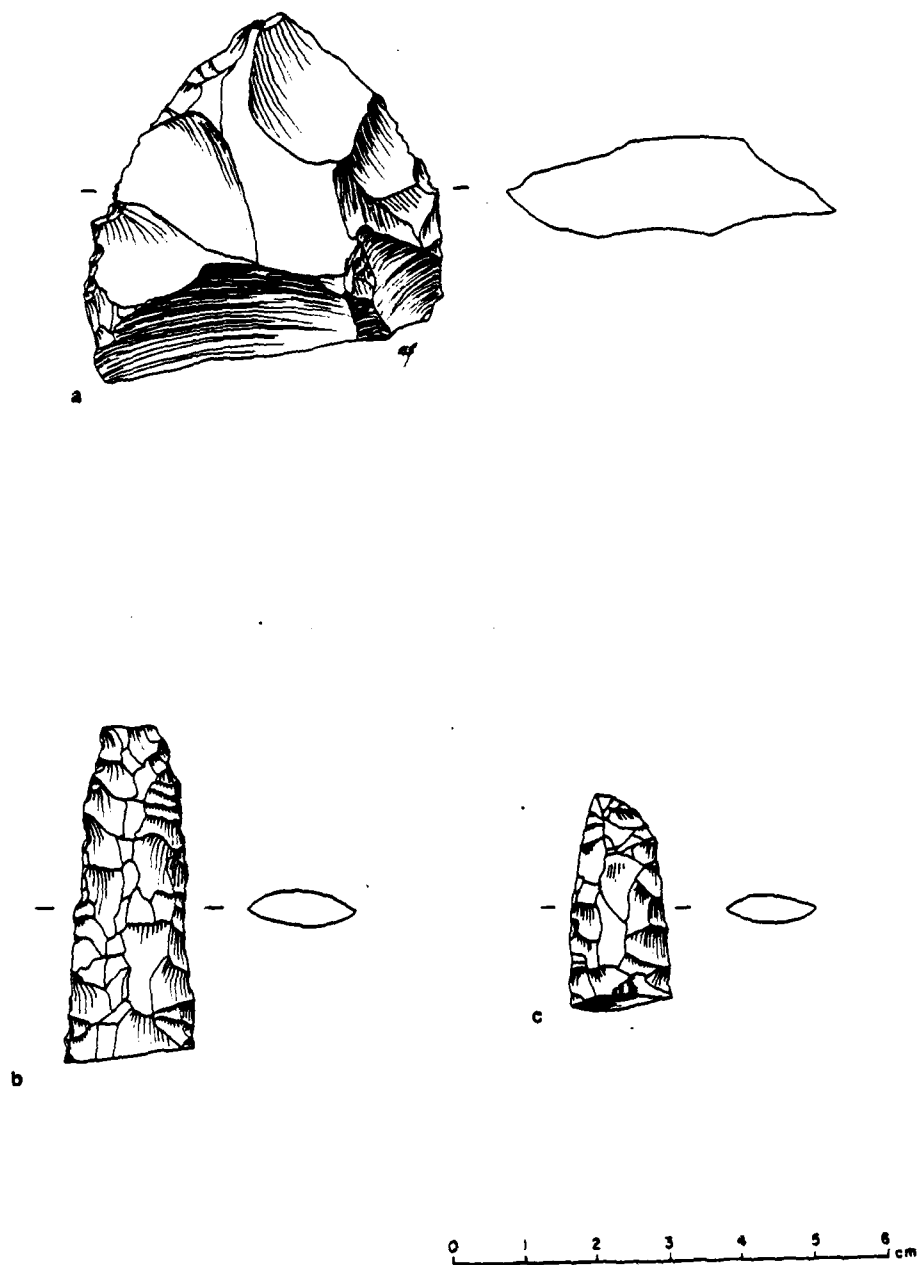


Figure 227. Selected examples of bifaces from Dunn County survey:
(a) 32DU1 [5]; (b) 32DU672 [1]; (c) 32DU665 [1].

Table 8. Raw Material and Measurement Summary:
Bifaces - Dunn County, North Dakota.

SITE/SPECIMEN	MUNSELL COLOR	RAW MATERIAL	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)
32DU1[4]	5YR-2.5/2	KRF	(47.8)	54.7	22.5
32DU1[5]	5YR-3/2	KRF	(41.8)	50.5	13.9
32DU2[1]	7.5YR-N7/	Light grey shale	(31.6)	27.0	7.0
32DU634[1]	5YR-3/4	KRF (Slight patination)	25.0	29.0	4.1
32DU650[2]	5YR-2.5/2	KRF	(45.7)	79.5	19.4
32DU650[3]	5YR-2.5.2	KRF	91.8	50.0	16.7
32DU650[4]	5YR-3/3	KRF	54.9	58.1	18.5
32DU652[1]	5YR-2.5/2	KRF	97.1	63.9	25.0
32DU652[2]	5YR-3/3	KRF	93.7	75.7	22.2
32DU665[1]	5YR-3/4	KRF	(30.2)	14.1	5.7
32DU669[4]	5YR-2.5/2	KRF	(95.3)	(64.2)	21.2
32DU669[5]	5YR-2.5/2	KRF	(44.7)	72.5	18.1
32DU669[6]	5YR-3/2	KRF	(60.7)	55.8	12.2
32DU669[7]	5YR-3/4	KRF	(42.8)	(37.8)	11.5
32DU669[8]	5YR-3/2	KRF	(36.0)	(39.0)	12.8
32DU670[3]	5YR-2.5/2	KRF	(32.3)	28.6	5.7
32DU670[7]	5YR-2.5/2	KRF	54.5	42.3	12.3
32DU670[8]	5YR-2.5/2	KRF	60.8	45.1	16.3
32DU670[9]	5YR-2.5/2	KRF	(67.7)	(56.8)	16.9
32DU670[10]	5YR-2.5/2	KRF (Heavy patination)	(47.6)	39.9	8.0
32DU670[11]	5YR-2.5/2	KRF	(35.0)	38.6	10.5
32DU672[1]	5YR-2.5/1	Petrified wood	(46.8)	(18.0)	5.3
32DU724[3]	5YR-3/3	KRF	(34.2)	(23.4)	6.5
32DU724[4]	5YR-2.5/2	KRF	(16.7)	(18.1)	5.2
IF 63	5YR-3/2	KRF (Light patination)	57.5	45.5	14.3
IF 83	5YR-2.5/2	KRF (Moderate patination)	93.8	58.2	20.6
IF 123	5YR-2.5/2	KRF (Moderate patination)	39.7	32.2	7.9

() = Specimen is incomplete along this dimension

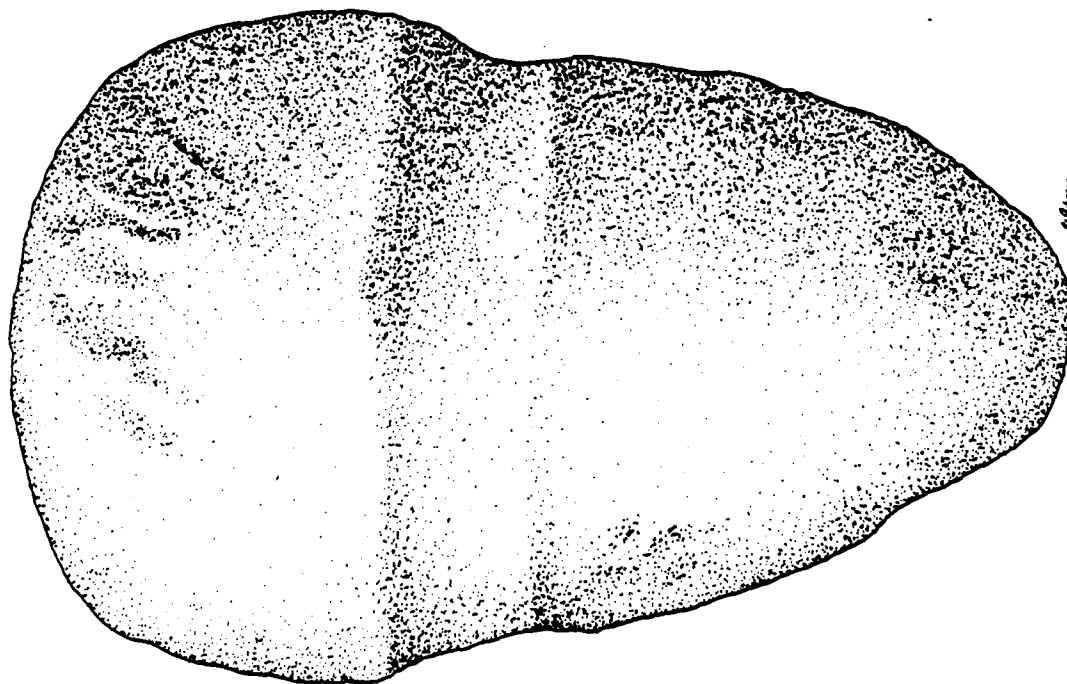
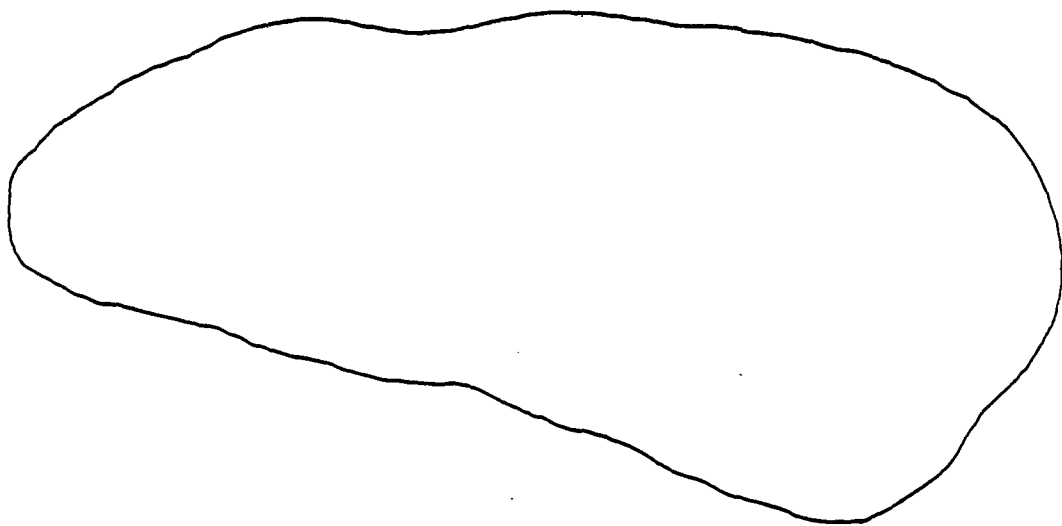


Figure 228. Ground stone/grooved maul from Dunn County survey, 1F 117.

Prehistoric Ceramics

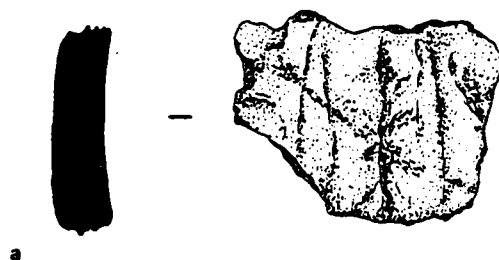
Prehistoric ceramic material was collected from one site, 32DU1, and from one isolated find (IF 9) (Figure 229). A ceramic sherd was noted at site 32DU403, a Mandan-Hidatsa trunk burial site, but was not collected.

Site 32DU1 is reported to be a Hidatsa Earthlodge Village site, probably dating to the later eighteenth century. During the current survey, two sherds were collected from this site. The first (Plot D) measures 36.4mm x 27.2mm x 8.4mm, is reddish-brown in color, and is fairly hard with a somewhat soapy feel. The fractures are conchoidal and laminated. Sparse angular quartz inclusions are present as temper. The interior and exterior surfaces show cord and grass impressions.

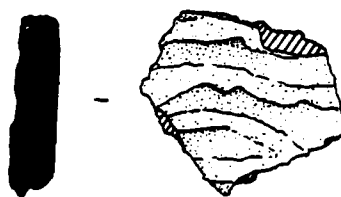
The second prehistoric ceramic sherd (Plot E) measures 28.2mm x 24.3mm x 16.5mm. It is hard and smooth to the touch, with fracturing that is hackly. There are sparse to moderate densities of angular quartz inclusions as temper. It is a light to dark grey color. The exterior surface is decorated with horizontal, parallel grooving that has been obliterated or wiped, and there is evidence of burnishing.

Isolated find 9 consists of three bodysherds, all probably from the same vessel. Two of the sherds are very small and plain. The third measures 31mm x 34mm x 4mm and has a dark grey interior and a light greyish-brown exterior. It is hard, the surface is smooth to the touch, and the fractures are hackly. There is a moderate density of well-sorted angular quartz sand inclusions as temper. The exterior exhibits the following decoration: a simple stamped and obliterated rectilinear design overlain by a single incised line running horizontally across the stamping. Dentate stamping which has created slight internal bossing is also present. The interior and exterior show signs of burnishing on the raised segments of the design.

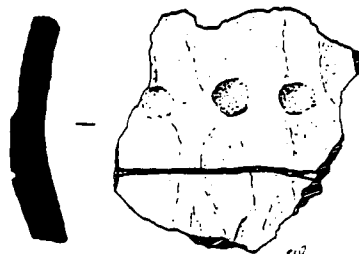
The sherd noted at site 32DU403 was a plain, grit tempered body fragment measuring 5mm in thickness. Site records report small sherds from site 32DU3 and a sherd from site 32DU410. Previous excavations at Midipadi Butte recovered 28 rimsherds, representing 12 individual vessels, and 899 bodysherds. "Rims from the Coalescent tradition, Knife River phase represent 92.3% of the total while rims attributed to the Woodland tradition total 7.7%" (Kuehn, Falk and Drybred 1982:48). Pottery from the Knife River phase consisted of Knife River ware (80



a



b



c



Figure 229. Prehistoric ceramic materials from (a) 32DU1, Plot D; (b) 32DU1, Plot E; and (c) IF 9.

percent), Transitional S-Rim ware (10 percent), and Deapolis collared ware (10 percent). Temper in the Knife River phase rimsherds is exclusively crushed granite.

Historic Artifacts

The historic artifacts noted in the survey area were of limited utility in determining specific chronological placement or in addressing cultural patterns of activities. Most are of early to mid-twentieth century manufacture and consist of items which could be continued to be used over a long period of time. Only five of the fifteen historic sites recorded contained surface artifacts other than those relating to the site type (e.g. ranch, feeder shed, stock tanks, etc). Most of the materials at these five sites were related to buildings (logs, milled lumber, flat [window] glass), ranching (barbed wire), furnishings (stoves, beds), transportation (automobile parts) or subsistence (metal and glass containers).

Only one historic artifact was collected. This item, from site 32DU13, is a length of barbed wire, twist stretch, measuring 6 inches between double-wrapped, four-prong barbs. The artifact is similar to the M.C. Shinn patent, 1 March 1881; the W.H. Wagor patent, 8 April 1879; and the John Curtis patent, 28 March 1893. It also bears a slight resemblance to the A.S. Burnell patent, 19 June 1877. It is impossible to decide exactly which model this sample represents, as the general similarities between and among such types is so close (Horton 1986).

Summary of Occurrence of Knife River Flint

The 1985/1986 survey recorded 84 sites at which five or more lithic (chipped stone) items were recovered. These sites were evaluated for the presence of Knife River Flint [KRF]; the tabulations are shown in Table 9, below. A date in brackets after an entry indicates the year of the investigation from which the data are taken, if it is other than 1985/1986. Previously recorded sites which lack specific information concerning the numbers and types of materials present have been omitted from the analysis.

Table 9. Analysis of the Occurrence of Knife River Flint at Sites in the Dunn County Survey Area.

SITE	# DEBITAGE	%KRF	#TOOLS ¹	%KRF
32DU1	4+	57	3	100
32DU2	1565	96	26	96 [1982 Excavation]
32DU3	12	92	1	100
32DU8	8	100	0	0
32DU113	50+	100	0	0
32DU132	300+	92	26+	100
32DU133	8	63	0	0
32DU134	5	100	0	0
32DU177	26	89	2	100
32DU404	85+	100	0	0
32DU405	30+	100	0	0
32DU406	91+	91	6	100
32DU407	200+	88	4	75
32DU408	200+	100	0	0
32DU409	180+	100	1	100
32DU410	478+	96	22+	100
32DU412	144+	99	6	83
32DU413	27+	89	1	100
32DU415	12+	92	1	100
32DU628	33	91	0	0
32DU629	90+	89	8	100
32DU630	34+	94	2	100
32DU632	28+	96	2	100
32DU633	195+	96	5+	100
32DU634	300+	97	2+	100
32DU635	25	100	0	0
32DU637	8	100	0	0
32DU639	55+	92	5	100
32DU640	16	89	2	100
32DU641	8	100	0	0
32DU642	7	100	0	0
32DU643	9	90	1	100
32DU644	31	74	3	100
32DU645	9	82	2	100
32DU647	5	100	0	0
32DU649	75+	100	0	0

Table 9. (cont.)

SITE	# DEBITAGE	%KRF	#TOOLS ¹	%KRF
32DU650	760+	96	5	80
32DU651	5	100	0	0
32DU652	150+	100	2	100
32DU653	35+	100	0	0
32DU654	800+	100	2	100
32DU655	30	100	0	0
32DU656	102+	99	1	100
32DU657	10	91	1	100
32DU658	214+	99	3	100
32DU659	749+	100	1	100
32DU660	23+	100	0	0
32DU661	146+	98	4	75
32DU662	43	91	5	100
32DU663	11	100	0	0
32DU664	400+	99	3	100
32DU665	195+	99	1	100
32DU666	28	89	0	0
32DU667	200+	100	0	0
32DU669	100s	100	13	92
32DU670	100s	100	10	100
32DU671	100s	100	3	100
32DU672	3	50	3	100
32DU673	36	67	0	0
32DU675	26	87	4	100
32DU680	136	98	0	0
32DU685	21	100	0	0
32DU710	5	80	0	0
32DU724	50	93	4	100
32DU729	31	94	1	100
32DU735	22	95	0	0
32DU736	16	94	1	100
32DU737	12	92	1	100
32DU738	15	100	0	0
32DU745	5	100	0	0
32DU760	9	100	0	0
32DU761	11	100	0	0
32DU762	14	100	0	0
32DU763	19	45	3	0
32DU764	200+	100	0	0
32DU765	100+	93	7	100
32DU766	15	94	1	100
32DU769	250+	99	3	100
32DU770	1000s	99.9	1	100
32DU771	49+	98	0	0
32DU772	1000s	100	0	0
32DU773	100s	100	3+	100
32DU781	155+	99	4	100
32DU784	55	86	1	100

¹ The term 'tools' is used here to include such items as utilized flakes and preforms as well as specific finished tools, such as projectile points.

The number of chipped stone items observed at these 84 sites ranges from the minimum of five items to a high of several thousand. Thirty sites contain over 100 items. These numbers are determined generally from surface collections which must be recognized to be potentially biased, but they enable certain general trends to be discussed.

Knife River Flint is present at all 84 sites. It accounts for 75 percent or more of the lithic debitage at 78 of the 84 sites (93 percent), and over 50 percent of the debitage at the remaining six sites. Thirty-five sites have 100 percent KRF debitage. Where lithic tools are present KRF accounts for 90 percent or more of the tools at all but five of the 50 sites. At only one site (32DU763) are all the tools produced on materials other than KRF.

The data derived from this survey are inadequate to address specific hypotheses concerning KRF utilization in the area, but clearly indicate the dominance of this raw material type in the prehistoric lithic procurement activities of the region.

The survey also documented the occurrence of naturally occurring KRF cobbles and two or three possible quarrying pits. Several areas containing KRF cobbles showed extensive utilization as procurement sources and are recorded as sites in this report. Other KRF outcrop areas indicated either minimal evidence or no evidence of prehistoric utilization. The former are recorded as isolated finds; the latter were noted on field maps as natural outcrop exposures. A significant concentration of KRF outwash exposures occurs along Squaw Creek Bay and Moccasin Creek Bay. Figure 230 presents the distribution of sites, isolated finds and KRF cobble exposure areas located during this survey in the vicinity of the Squaw Creek and Moccasin Creek bays.

Locational Analyses

For comparative purposes, the following tabulations of site locational data are provided in the same format as those presenting the results of a recent survey in Mountrail County, North Dakota (Winham, Lippincott and Lueck 1987). The Dunn County survey, however, produced a very different site data set than the Mountrail County investigation. Whereas stone circle sites were common in Mountrail County, only nine such sites are documented in this report. The Dunn County survey documented several Native American (Mandan-Hidatsa) burial and cemetery

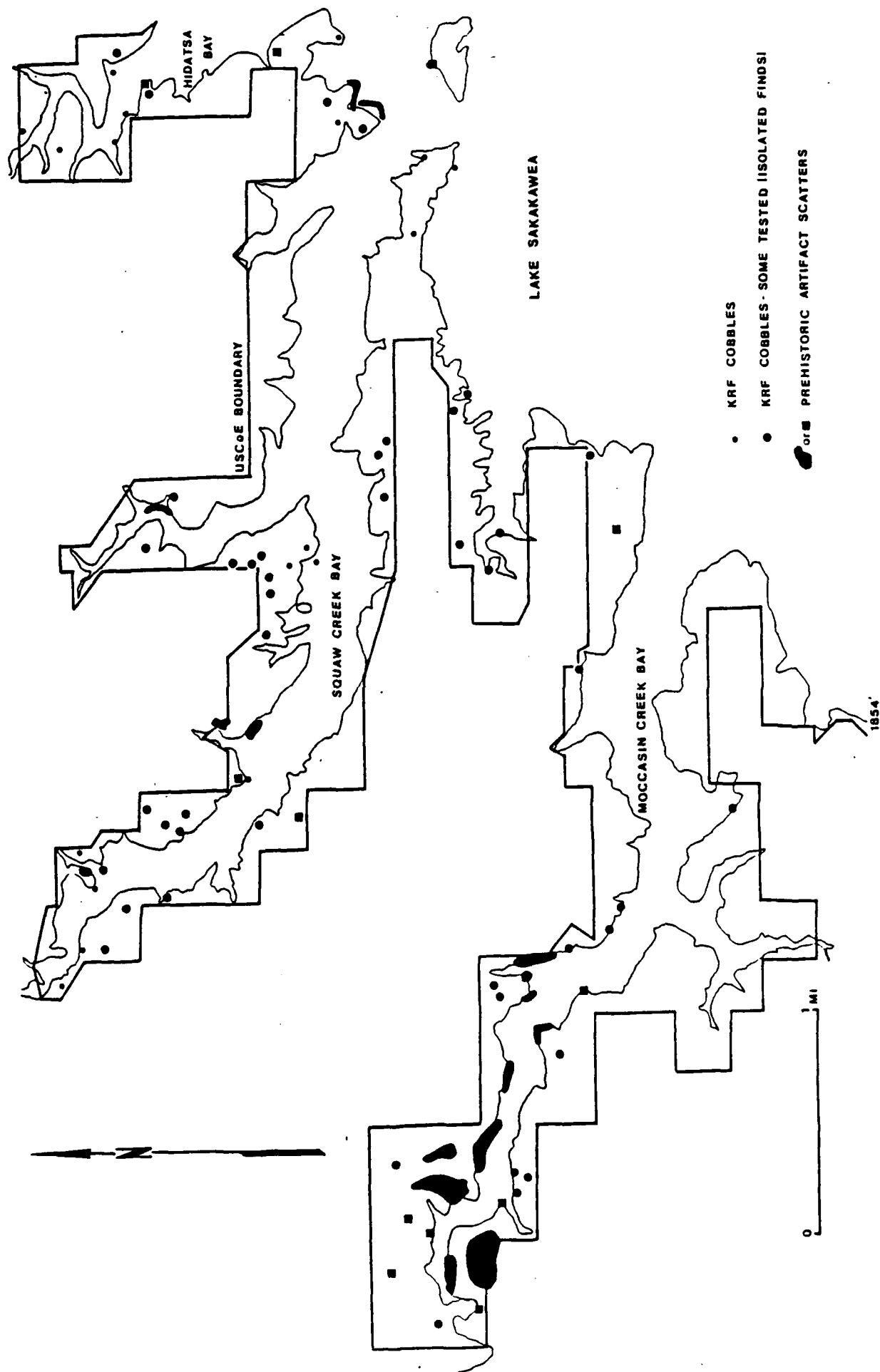


Figure 230. Distribution map showing the occurrence and utilization of Knife River Flint in the vicinity of Moccasin Creek and Squaw Creek bays, Dunn County, North Dakota.

sites and two earthlodge villages; these site types were not encountered during the Mountrail County survey. Small rock cairns were recorded frequently in the Dunn County survey area, but only occurred sporadically in the Mountrail County survey area. The only site types, therefore, that are readily comparable are artifact scatters and eagle trapping pits.

The numbers of sites identified in each defined site type are presented below in Table 10.

Table 10. Number of Sites by Site Type - Dunn County Survey Results.

SITE TYPE	NUMBER OF SITES
Artifact scatters	74 (+ 4 not relocated during this survey)
Cairns	54
Eagle trapping pits	18
Prehistoric depressions	4
Stone circle sites	9
Historic sites	14 (+ Lost Bridge)
Native American burials	10
Cemeteries	5
Earthlodge villages	2
Total	190 (+ 5)

Table 11 presents a tabulation of estimated site areas by site type. Apart from the earthlodge villages and artifact scatters, the site types located have a limited horizontal extent, averaging less than 50m². Conversely, artifact scatters constitute a wide range of site sizes; half are less than 3000m² and 30 percent are over 10,000m² (1ha).

Diagnostic projectile points were recovered during this survey from 10 prehistoric sites. The one Paleoindian point came from a site with an area of 3,000-4,000m². The eight sites containing Archaic projectile point types range in size from 200-300m² to 10,000-25,000m², while one multi-component site is over 50,000m² in area.

Table 11. Relationship of Site Area to Site Type.

SITE AREA (m ²)	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC	NUMBER OF BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
00-50	81 (42.6%)	1 (1.4%)	45 (83.3%)	17 (94.4%)	3 (75.0%)	5 (55.5%)	4 (28.5%)	6 (60.0%)	-	-
51-100	11 (5.8%)	4 (5.4%)	1 (1.8%)	-	-	1 (11.1%)	2 (14.3%)	1 (10.0%)	2 (40.0%)	-
101-200	12 (6.3%)	7 (9.5%)	3 (5.5%)	-	-	-	-	2 (20.0%)	-	-
201-300	9 (4.7%)	3 (4.1%)	1 (1.8%)	-	1 (35.0%)	1 (11.1%)	1 (7.1%)	1 (10.0%)	1 (20.0%)	-
301-400	1 (0.5%)	-	-	-	-	-	1 (7.1%)	-	-	-
401-500	6 (3.2%)	6 (8.1%)	-	-	-	-	-	-	-	-
501-1000	14 (7.4%)	6 (8.1%)	1 (1.8%)	-	-	1 (11.1%)	4 (28.5%)	-	2 (40.0%)	-
1001-2000	7 (3.7%)	7 (9.5%)	-	-	-	-	-	-	-	-
2001-3000	4 (2.1%)	2 (2.7%)	2 (3.7%)	-	-	-	-	-	-	-
3001-4000	5 (2.6%)	5 (6.8%)	-	-	-	-	-	-	-	-
4001-5000	2 (1.1%)	1 (1.4%)	1 (1.8%)	-	-	-	-	-	-	-
5001-7500	6 (3.2%)	6 (8.1%)	-	-	-	-	-	-	-	-
7501-10,000	4 (2.1%)	3 (4.1%)	-	-	-	-	-	-	-	1 (50.0%)
10,001-25,000	12 (6.3%)	10 (13.5%)	-	-	-	-	1 (7.1%)	-	-	1 (50.0%)
25,001-50,000	5 (2.6%)	4 (5.4%)	-	-	-	1 (11.1%)	-	-	-	-
50,000+	11 (5.8%)	9 (12.2%)	-	1 (5.5%)	-	-	1 (7.1%)	-	-	-

A summary of the basic characteristics of the physiographic location of the sites recorded during the survey is presented in Table 12. Here the minimum and maximum values are given, as well as the mean (average), median (central) and mode (most frequent) for site area, distance to water (permanent and seasonal), and land elevation.

Tables 13 through 18 present the relationships of the sites to the specific locational information recorded on the survey, including land forms, site exposure, parameters of visibility, ecosystem, elevation, and distance to water sources. Table 13 deals with landforms. While there are no figures indicating the relative percentage of the various landforms within the survey area, artifact scatters appear to be preferentially found on terraces and ridge and hilltop (overlook) locations. Currently, many of these sites are exposed on the wave cut beaches of Lake Sakakawea. Cairns are located on ridges, hilltops and upland areas, generally in prominent positions; eagle trapping pits are similarly located. Burials and cemetery sites are also found on hilltops and ridge tops. The two earthlodge villages in the survey area are located on isolated butte tops.

Table 14 deals with exposure. Cairns are the most exposed site type. Other site types exhibit no particular preference for shelter. Fifty percent of the eagle trapping pits are exposed to the west and northwest and 50 percent to the north and northeast. Perhaps unusually, more sites are exposed to the north than to the south.

Table 15 summarizes the information on degree of visibility from a site and distance of view, clearly interrelated with landform location and exposure. Table 16 addresses ecosystems; the dominant ecosystems in the survey area are badlands and upland grassland.

Table 17 summarizes information on elevation, with sites having elevations under 564 meters amsl being at or below high water level. Over 60 percent of all sites are situated below 590m amsl; the exceptions are eagle trapping pits (65 percent above 600m) and trunk burials (60 percent over 590m). Both earthlodge villages are above 600m amsl.

Table 18 presents the information on distances from sites to the nearest permanent and seasonal water. Eighty-five percent of all sites have a water source within 800m; 50 percent have a water source within 250m. Only two sites have no water source within 1000m. Considering

Table 12. Site Locational Characteristics.

<u>ALL SITES</u>	MINIMUM	MAXIMUM	MEAN	MEDIAN	MODE
SITE AREA (m ²)	1.0	250,000	9,646	150	1.0
DISTANCE TO PERMANENT WATER (m)	1.0	5,000	971.69	649.3	500
DISTANCE TO SEASONAL WATER (m)	0.0	1,150	305.80	250.3	300
ELEVATION (m)	561	713	584.6	578.9	579
<u>PREHISTORIC SITES ONLY</u>	MINIMUM	MAXIMUM	MEAN	MEDIAN	MODE
SITE AREA (m ²)	1.0	250,000	10,939.8	160.5	1.0
DISTANCE TO PERMANENT WATER (m)	1.0	5,000	933.6	550	500
DISTANCE TO SEASONAL WATER (m)	0.0	1,150	293.2	250.2	300
ELEVATION (m)	561	713	585.2	578.9	573
<u>HISTORIC SITES ONLY</u>	MINIMUM	MAXIMUM	MEAN	MEDIAN	MODE
SITE AREA (m ²)	3.0	60,000	2,745.9	100.2	100
DISTANCE TO PERMANENT WATER (m)	1.0	3,000	1,174	1,000	200
DISTANCE TO SEASONAL WATER (m)	1.0	1,100	372.5	297.7	200
ELEVATION (m)	567	640	581.4	579	567

Table 13. Relationship of Sites to Landforms.

LANDFORM	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
RIDGE TOP	49 (25.8%)	10 (13.5%)	21 (38.9%)	5 (27.8%)	2 (50.0%)	3 (33.3%)	3 (21.4%)	4 (40.0%)	1 (20.0%)
RIDGE SIDE	18 (9.5%)	9 (12.2%)	4 (7.4%)	-	-	-	4 (28.6%)	1 (10.0%)	-
HILLTOP	37 (19.5%)	10 (13.5%)	13 (24.0%)	4 (22.2%)	1 (25.0%)	2 (22.2%)	-	4 (40.0%)	3 (60.0%)
HILLSIDE	13 (6.8%)	9 (12.2%)	1 (1.8%)	-	1 (25.0%)	-	1 (7.1%)	1 (10.0%)	-
UPLAND FLAT	24 (12.6%)	1 (1.4%)	11 (20.4%)	8 (44.4%)	-	1 (11.1%)	2 (14.3%)	-	1 (20.0%)
TERRACE	19 (10.0%)	17 (23.0%)	1 (1.8%)	-	-	-	1 (7.1%)	-	-
SADDLE	4 (2.1%)	-	2 (3.7%)	1 (5.6%)	-	1 (11.1%)	-	-	-
BUTTE TOP	3 (1.6%)	-	1 (1.8%)	-	-	-	-	-	2 (100.0%)
BEACH	14 (7.4%)	13 (17.6%)	-	-	-	-	1 (7.1%)	-	-
SPUR	4 (2.1%)	3 (4.1%)	-	-	-	1 (11.1%)	-	-	-
DRAW	1 (0.5%)	-	-	-	-	1 (11.1%)	-	-	-
FLOODPLAIN	2 (1.1%)	1 (1.4%)	-	-	-	-	1 (7.1%)	-	-
BUTTE BOTTOM	1 (0.5%)	1 (1.4%)	-	-	-	-	-	-	-
ISLAND	1 (0.5%)	-	-	-	-	-	1 (7.1%)	-	-

Table 14. Relationship of Sites to Exposure.

EXPOSURE	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC	NUMBER OF BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
N	23 (12.12)	7 (9.52)	5 (9.22)	5 (27.82)	1 (25.02)	2 (22.22)	2 (14.32)	1 (10.02)	-	-
NE	21 (11.12)	8 (10.82)	6 (11.12)	3 (16.72)	-	2 (22.22)	2 (14.32)	-	-	-
E	27 (14.22)	15 (20.32)	6 (11.12)	-	1 (25.02)	1 (11.12)	1 (7.12)	1 (10.02)	2 (40.02)	-
SE	14 (7.42)	5 (6.82)	5 (9.22)	-	1 (25.02)	2 (22.22)	1 (7.12)	-	-	-
S	18 (8.42)	7 (9.52)	3 (5.52)	-	-	-	1 (7.12)	3 (30.02)	2 (40.02)	-
SW	21 (11.12)	10 (13.52)	6 (11.12)	-	-	1 (11.12)	2 (14.32)	2 (20.02)	-	-
W	12 (6.32)	4 (5.42)	2 (2.72)	3 (16.72)	-	1 (11.12)	1 (7.12)	1 (10.02)	-	-
NW	22 (11.62)	10 (13.52)	4 (7.42)	6 (33.32)	1 (25.02)	-	-	1 (10.02)	-	-
CLOSED	1 (0.52)	1 (1.42)	-	-	-	-	-	-	-	-
OPEN	33 (17.42)	7 (9.52)	17 (31.52)	1 (5.62)	-	-	4 (22.22)	1 (10.02)	1 (20.02)	2 (100.02)

Table 15. Relationship of Sites to Degree of Visibility and Distance of View.

DEGREE OF VISIBILITY	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC	NUMBER OF BURIALS	NUMBER OF CYPHERITIES	NUMBER OF EARTHLODGE VILLAGES
90	57 (30.0%)	29 (39.2%)	12 (22.2%)	1 (5.6%)	2 (50.0%)	4 (44.4%)	6 (42.9%)	3 (30.0%)	-	-
180	67 (35.3%)	27 (36.5%)	19 (35.2%)	10 (55.6%)	1 (25.0%)	2 (22.2%)	3 (21.4%)	-	5 (100.0%)	-
270	26 (13.7%)	7 (9.5%)	9 (16.7%)	4 (22.2%)	-	3 (33.3%)	-	3 (30.0%)	-	-
360	38 (20.0%)	9 (12.2%)	14 (25.9%)	3 (16.7%)	1 (25.0%)	-	5 (35.7%)	4 (40.0%)	-	2 (100.0%)
NO VIEW	2 (1.1%)	2 (2.7%)	-	-	-	-	-	-	-	-
DISTANCE OF VIEW										
EXCELLENT	31 (16.3%)	6 (8.1%)	9 (16.7%)	5 (27.8%)	2 (50.0%)	1 (11.1%)	3 (21.4%)	2 (20.0%)	2 (40.0%)	1 (50.0%)
GOOD	85 (44.7%)	25 (33.8%)	27 (50.0%)	11 (61.1%)	-	5 (55.5%)	8 (57.1%)	5 (50.0%)	3 (60.0%)	1 (50.0%)
FAIR	40 (21.1%)	21 (28.4%)	12 (22.2%)	2 (11.1%)	1 (25.0%)	1 (11.1%)	1 (7.1%)	2 (20.0%)	-	-
POOR	32 (16.8%)	20 (27.0%)	6 (11.1%)	-	1 (25.0%)	2 (22.2%)	2 (14.3%)	1 (10.0%)	-	-
NONE	2 (1.1%)	2 (2.7%)	-	-	-	-	-	-	-	-

Table 16. Relationship of Sites to Ecosystems.

ECOSYSTEM	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES
BOTTOMLAND	1 (0.5%)	-	-	-	-	-
TERRACES	1 (0.5%)	-	-	-	-	-
BADLAND	49 (25.8%)	37 (50.0%)	5 (9.3%)	2 (11.1%)	-	-
UPLAND GRASSLAND	139 (73.2%)	37 (50.0%)	49 (90.7%)	16 (88.9%)	4 (100.0%)	9 (100.0%)

ECOSYSTEM	NUMBER OF HISTORIC	NUMBER OF BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
BOTTOMLAND	1 (7.1%)	-	-	-
TERRACES	1 (7.1%)	-	-	-
BADLAND	3 (21.4%)	-	-	2 (100.0%)
UPLAND GRASSLAND	9 (64.3%)	10 (100.0%)	5 (100.0%)	-

Table 17. Relationship of Sites to Elevation.

ELEVATION (m)	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC BURIALS	NUMBER OF CEQUERIES	NUMBER OF PARTRIDGE VILLAGES
000-564	24 (12.62)	23 (31.12)	-	-	-	1 (11.12)	-	-	-
565-570	31 (16.32)	18 (24.32)	5 (9.252)	-	-	-	7 (50.02)	1 (20.02)	-
571-580	56 (29.52)	14 (18.92)	26 (48.12)	2 (11.12)	1 (25.02)	3 (33.32)	7 (50.02)	3 (30.02)	-
581-590	27 (14.22)	4 (5.42)	13 (24.02)	4 (22.22)	-	2 (22.22)	-	1 (10.02)	-
591-600	15 (7.92)	4 (5.42)	4 (7.42)	-	1 (25.02)	1 (11.12)	-	4 (40.02)	-
601-610	16 (8.42)	3 (4.12)	4 (7.42)	6 (33.32)	-	1 (11.12)	-	1 (10.02)	-
611-620	7 (3.72)	3 (4.12)	1 (1.82)	3 (16.72)	-	-	-	-	-
621-630	7 (3.72)	3 (4.12)	-	3 (16.72)	1 (25.02)	-	-	-	-
631-640	3 (1.62)	1 (1.42)	-	-	-	1 (11.12)	-	1 (10.02)	-
641-650	1 (0.52)	-	-	-	1 (25.02)	-	-	-	-
651+	3 (1.62)	1 (1.42)	1 (1.82)	-	-	-	-	-	1 (50.02)

Table 18. Relationship of Sites to Distance to Permanent and Seasonal Water.

PERMANENT WATER (m)	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	NUMBER OF CAIRNS	NUMBER OF EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	NUMBER OF HISTORIC BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
00-50	11 (5.82)	8 (10.82)	1 (1.82)	-	-	-	2 (14.32)	-	-
51-100	10 (5.32)	10 (13.52)	-	-	-	-	-	-	-
101-250	24 (12.62)	15 (20.32)	1 (1.82)	2 (11.12)	1 (25.02)	2 (22.22)	2 (14.32)	1 (10.02)	-
251-500	42 (22.12)	20 (27.02)	11 (20.42)	5 (27.82)	-	2 (22.22)	2 (14.32)	1 (20.02)	1 (50.02)
501-1000	38 (20.02)	11 (14.92)	11 (20.42)	7 (38.92)	2 (50.02)	-	2 (14.32)	2 (40.02)	1 (50.02)
1001-2500	48 (25.22)	8 (10.82)	21 (38.92)	4 (22.22)	1 (25.02)	2 (22.22)	4 (28.52)	2 (40.02)	-
2501+	17 (8.92)	2 (2.72)	9 (16.72)	-	-	3 (33.32)	2 (14.32)	1 (10.02)	-
SEASONAL WATER (m)									
00-50	28 (14.72)	21 (28.42)	2 (3.72)	-	-	1 (11.12)	4 (28.52)	-	-
51-100	20 (10.52)	11 (14.92)	6 (11.12)	2 (11.12)	-	-	1 (7.12)	-	-
101-250	49 (25.72)	17 (23.02)	16 (29.62)	3 (16.72)	1 (25.02)	4 (44.42)	5 (35.72)	3 (30.02)	-
251-500	64 (33.72)	16 (21.62)	22 (40.72)	9 (50.02)	2 (50.02)	4 (44.42)	3 (21.42)	4 (80.02)	1 (50.02)
501-1000	27 (14.22)	9 (12.72)	7 (12.92)	4 (22.22)	1 (25.02)	-	1 (7.12)	1 (20.02)	1 (50.02)
1001-2500	2 (1.12)	-	1 (1.82)	-	-	-	-	1 (10.02)	-

permanent water sources only, 46 percent of the sites are within 500m of permanent water and 24 percent are within 250m. Sixty-five sites have no permanent water within 1000m, including 28 percent of the artifact scatter sites.

/ A permanent water source is not an essential factor in site location, probably reflecting the types of sites involved, the lifestyle of the inhabitants of the area, and the seasonal use of the landscape.

Summary of Survey Results

The survey recorded 134 sites within the actual project area. An additional 24 sites were recorded at or below 1850 ft. (564m) amsl, and five sites were located on private land (while gaining access) outside the project area, giving a total of 163 newly recorded sites.

Thirty-two previously recorded sites were also revisited, two of which were outside the survey area. Figure 10 details the overall distribution of these sites.

In addition, 164 isolated finds were recorded during the survey (summarized in Table 29 and described in the text). Table 19 presents a list of all newly recorded sites located during the survey.

Table 19. Summary of Newly Recorded Sites Located During the Survey.

SITE NUMBER	SITE TYPE	QUADRANGLE MAP
32DU628	ARTIFACT SCATTER	MANDAREE SE
32DU629	ARTIFACT SCATTER	MANDAREE SE
32DU630	ARTIFACT SCATTER	LOST BRIDGE
32DU631	EAGLE PIT/LITHICS	MANDAREE SE
32DU632	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU633	ARTIFACT SCATTER	HAY FLAT
32DU634	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU635	ARTIFACT SCATTER	MANDAREE SW
32DU636	EAGLE PIT	MANDAREE SW
32DU637	ARTIFACT SCATTER	MANDAREE SW
32DU638	HISTORIC DEPRESSION	MANDAREE SW
32DU639	CAIRN/WOODEN POST/ LITHICS	SADDLE BUTTE SW
32DU640	ARTIFACT SCATTER	LOST BRIDGE
32DU641	ARTIFACT SCATTER	MANDAREE SW
32DU642	ARTIFACT SCATTER	MANDAREE SW
32DU643	ARTIFACT SCATTER	MANDAREE SW
32DU644	CAIRN/LITHICS	MANDAREE SE
32DU645	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU646	ARTIFACT SCATTER/ QUARRY PITS (PREHIST.)	SADDLE BUTTE SE
32DU647	CAIRN/LITHICS	SADDLE BUTTE SW
32DU648	CAIRN	SADDLE BUTTE SW
32DU649	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU650	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU651	CAIRN/LITHICS	MANDAREE SE
32DU652	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU653	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU654	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU655	STONE CIRCLE/LITHICS	MANDAREE SE
32DU656	ARTIFACT SCATTER	MANDAREE SE
32DU657	ARTIFACT SCATTER	MANDAREE SE

Table 19. (cont.)

SITE NUMBER	SITE TYPE	QUADRANGLE MAP
32DU658	ARTIFACT SCATTER	MANDAREE SE
32DU659	ARTIFACT SCATTER	MANDAREE SE
32DU660	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU661	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU662	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU663	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU664	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU665	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU666	ARTIFACT SCATTER	MANDAREE SE
32DU667	ARTIFACT SCATTER	MANDAREE SE
32DU668	CAIRN	MANDAREE SE
32DU669	ARTIFACT SCATTER	MANDAREE SE
32DU670	ARTIFACT SCATTER	MANDAREE SE
32DU671	ARTIFACT SCATTER	MANDAREE SE
32DU672	ARTIFACT SCATTER	MANDAREE SE
32DU673	ARTIFACT SCATTER	SANISH SE
32DU674	EAGLE PIT	SANISH SE
32DU675	ARTIFACT SCATTER	SANISH SE
32DU676	CAIRN	SANISH SE
32DU677	EAGLE PIT	SANISH SE
32DU678	DEPRESSION (PREHIST.)	SANISH SE
32DU679	EAGLE PITS	SANISH SE
32DU680	ARTIFACT SCATTER	SANISH SE
32DU681	EAGLE PIT	NEW TOWN SW
32DU682	EAGLE PIT	NEW TOWN SW
32DU683	CAIRN	STRING BUTTES
32DU684	CAIRN	STRING BUTTES
32DU685	ARTIFACT SCATTER	STRING BUTTES
32DU686	CAIRN/LITHICS	STRING BUTTES
32DU687	CAIRN	STRING BUTTES
32DU688	CAIRN	NEW TOWN SW
32DU689	EAGLE PIT	NEW TOWN SE
32DU690	EAGLE PIT	NEW TOWN SE
32DU691	BURIALS	NEW TOWN SE
32DU692	STONE CIRCLE	NEW TOWN SE
32DU693	STONE CIRCLE	NEW TOWN SE
32DU694	CAIRN	NEW TOWN SE
32DU695	FOUNDATION/HISTORIC	SADDLE BUTTE
32DU696	CAIRN	SADDLE BUTTE
32DU697	STONE CIRCLE	SADDLE BUTTE
32DU698	GRAVEL QUARRY (HISTORIC)	SADDLE BUTTE
32DU699	DEPRESSION (HISTORIC)	SADDLE BUTTE
32DU700	CAIRN	SADDLE BUTTE
32DU701	CAIRN	SADDLE BUTTE
32DU702	BURIAL/CAIRN	SADDLE BUTTE
32DU703	BURIAL	SADDLE BUTTE
32DU704	STONE CIRCLE	SADDLE BUTTE
32DU705	CAIRN	SADDLE BUTTE
32DU706	CAIRN	SADDLE BUTTE
32DU707	CAIRN	SADDLE BUTTE
32DU708	CAIRN	SADDLE BUTTE

Table 19. (cont.)

SITE NUMBER	SITE TYPE	QUADRANGLE MAP
32DU709	CAIRN	SADDLE BUTTE
32DU710	CAIRN/LITHICS	SADDLE BUTTE
32DU711	CAIRN	SADDLE BUTTE
32DU712	CAIRN	SADDLE BUTTE
32DU713	CAIRN	SADDLE BUTTE
32DU714	STONE CIRCLE	SADDLE BUTTE
32DU715	CAIRN	SADDLE BUTTE
32DU716	CAIRN(DEPRESSION)	SADDLE BUTTE
32DU717	CAIRN	SADDLE BUTTE
32DU718	CAIRN	SADDLE BUTTE
32DU719	BURIALS	SADDLE BUTTE
32DU720	BURIAL	SADDLE BUTTE
32DU721	CAIRN	SADDLE BUTTE
32DU722	CEMETERY	SADDLE BUTTE
32DU723	CAIRN	SADDLE BUTTE
32DU724	ARTIFACT SCATTER	SADDLE BUTTE
32DU725	CAIRN	SADDLE BUTTE
32DU726	CAIRN	SADDLE BUTTE
32DU727	CAIRN	SADDLE BUTTE
32DU728	CATTLE FEEDER	SADDLE BUTTE
32DU729	ARTIFACT SCATTER	HAY FLAT
32DU730	BURIALS	HAY FLAT
32DU731	BURIALS	HAY FLAT
32DU732	CAIRN	HAY FLAT
32DU733	EAGLE PITS (HISTORIC)	SADDLE BUTTE SW
32DU734	CAIRN	TWIN BUTTES
32DU735	ARTIFACT SCATTER	HALLIDAY NW
32DU736	ARTIFACT SCATTER	HALLIDAY NW
32DU737	ARTIFACT SCATTER/ DEPRESSIONS	HALLIDAY NW
32DU738	ARTIFACT SCATTER	HALLIDAY NW
32DU739	EAGLE PIT	SADDLE BUTTE SW
32DU740	BURIAL	HAY FLAT
32DU741	EAGLE PIT	HAY FLAT
32DU742	EAGLE PIT	HAY FLAT
32DU743	EAGLE PIT	HAY FLAT
32DU744	DEPRESSIONS (HISTORIC)	HAY FLAT
32DU745	CAIRN	HAY FLAT
32DU746	EAGLE PIT	HAY FLAT
32DU747	STONE OVAL	HAY FLAT
32DU748	CAIRN	HAY FLAT
32DU749	CAIRN	HAY FLAT
32DU750	ROCK ALIGNMENT	HAY FLAT
32DU751	QUARRY PITS (PREHISTORIC)	TWIN BUTTES
32DU752	CAIRN/LITHICS	HAY FLAT
32DU753	CAIRN	HAY FLAT
32DU754	CAIRN	HAY FLAT
32DU755	CAIRN	HAY FLAT
32DU756	STONE CIRCLE/CAIRN	HAY FLAT
32DU757	CEMETERY	HAY FLAT
32DU758	ROCK ALIGNMENT	HAY FLAT

Table 19. (cont.)

SITE NUMBER	SITE TYPE	QUADRANGLE MAP
32DU759	CEMETERY	TWIN BUTTES
32DU760	ARTIFACT SCATTER	SANISH SE
32DU761	ARTIFACT SCATTER	TWIN BUTTES
32DU762	ARTIFACT SCATTER	MANDAREE SW
32DU763	CAIRN/LITHICS	MANDAREE SE
32DU764	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU765	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU766	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU767	DEPRESSION (PREHIST.)	SADDLE BUTTE SW
32DU768	CAIRN/LITHICS	SADDLE BUTTE SW
32DU769	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU770	ARTIFACT SCATTER	MANDAREE SW
32DU771	ARTIFACT SCATTER	MANDAREE SW
32DU772	ARTIFACT SCATTER	MANDAREE SW
32DU773	ARTIFACT SCATTER	MANDAREE SE
32DU774	EAGLE PIT	SANISH SE
32DU775	EAGLE PIT	NEW TOWN SE
32DU776	CAIRN	NEW TOWN SE
32DU777	HISTORIC-RECENT LIVE- STOCK WATERING TANKS	NEW TOWN SE
32DU778	CAIRNS	SADDLE BUTTE
32DU779	SMALL STONE CIRCLE AND TWO ALIGNMENTS	SADDLE BUTTE
32DU780	BURIAL	SADDLE BUTTE
32DU781	ARTIFACT SCATTER	SADDLE BUTTE SW
32DU782	BURIAL/CEMETERY	HAY FLAT
32DU783	CAIRN	HAY FLAT
32DU784	ARTIFACT SCATTER	HALLIDAY NW
32DU785	EAGLE PITS	HAY FLAT
32DU786	CEMETERY	HAY FLAT
32DU787	CAIRN (DEPRESSION)	HAY FLAT
32DU788	CAIRN	HAY FLAT
32DU789	HISTORIC-RECENT RECREATION AREA WITH OUTHOUSE	TWIN BUTTES
32DU790	STONE CIRCLE	STRING BUTTES

Background research, discussed earlier, documented 30 previously recorded sites that probably existed within the project area. Table 20 lists these previously recorded sites, as well as sites 32DU8 and 32DU403, both of which are just outside the project area. This list does not include sites 32DU295, 32DU296 and 32DU297 which are located within the McKenzie Bay Recreation Area or site 32DU298 located within the Charging Eagle Bay Recreation Area; these areas were excluded from the present survey. Several other previously recorded sites which are located near the survey area are either inundated or further inland, and are not listed here. [Note: sites 32DU623 through 32DU626 were recorded subsequent to this survey and are discussed in Appendix M].

Table 20. Previously Recorded Sites in Dunn County Project Area.

SITE NUMBER	QUADRANGLE MAP	SITE TYPE	STATUS
32DU1/18	MANDAREE SE	EARTHLODGE VILLAGE	EXTANT/VANDALISM PRESENT
32DU2	TWIN BUTTES	OCCUPATION/VILLAGE	UP TO 4m ERODED AWAY SINCE 1982
32DU3	TWIN BUTTES	OCCUPATION	INUNDATED
32DU7	SADDLE BUTTE SW	OCCUPATION	DESTROYED
32DU8	SANISH SE	TIPI RINGS	EXTANT/MAPPED
32DU13	NEW TOWN SE	COMMUNITY OF INDEPENDENCE	RUINS
32DU22	SADDLE BUTTE	BONE/CABIN/LITHICS	AS IS*
32DU113	STRING BUTTES	LITHICS/QUARRY	AS IS
32DU131	LOST BRIDGE	RANCH HOUSE	AS IS/NEW MAP
32DU132	MANDAREE SW	ARTIFACT SCATTER	INCREASE AREA
32DU133	MANDAREE SW	ARTIFACT SCATTER	AS IS
32DU134	MANDAREE SW	ARTIFACT SCATTER	AS IS
32DU160	SADDLE BUTTE	ARTIFACT SCATTER	NO CULTURAL MATERIAL/ALL COLLECTED?
32DU161	SADDLE BUTTE	LOG-COVERED DUGOUT	AS IS
32DU177	LOST BRIDGE	LITHIC/HISTORIC SCATTER/TRAIL	ADD RECTANGULAR DITCHED ENCLOSURE
32DU180	LOST BRIDGE	BRIDGE	AS IS
32DU403	SADDLE BUTTE	BURIALS	SLIGHT LOCATION CHANGE, ADDITION OF MATERIAL AND NEW MAP
32DU404	MANDAREE SW	ARTIFACT SCATTER	MORE EXTENSIVE
32DU405	MANDAREE SW	ARTIFACT SCATTER	AS IS
32DU406	MANDAREE SW	ARTIFACT SCATTER	MORE EXTENSIVE
32DU407	MANDAREE SE	ARTIFACT SCATTER	AS IS
32DU408	MANDAREE SE	ARTIFACT SCATTER	AS IS
32DU409	MANDAREE SE	ARTIFACT SCATTER	AS IS
32DU410	MANDAREE SE	ARTIFACT SCATTER	AS IS
32DU412	MANDAREE SE	ARTIFACT SCATTER	AS IS
32DU413	MANDAREE SE AND SADDLE BUTTE SW	ARTIFACT SCATTER	SPARSE
32DU414	HALLIDAY NW	ARTIFACT SCATTER	NOT RELOCATED
32DU415	HALLIDAY NW	ARTIFACT SCATTER	SPARSE ON BEACH
32DU416	HALLIDAY NW	FLINT CACHE	NOT FOUND/ALL COLLECTED?
32DU417	HALLIDAY NW	LOG CABIN	DEBRIS ONLY
32DU418	SADDLE BUTTE SW	ARTIFACT SCATTER	SPARSE
32DU419	SADDLE BUTTE SW	LOG CABIN	MORE DILAPIDATED

* AS IS = AS PREVIOUSLY RECORDED

Analyses of Sites by Type

Artifact scatters. The term 'artifact scatter' can be applied as a generic designation for the characterization of surface materials (discards) resulting from human utilization at a particular locality. The manifestation of surface materials in the archeological context reflects a complexity of relationships between natural and non-natural (cultural) factors--beginning with the depositional circumstance, extending through burial, decomposition and ultimately re-exposure. Climatic and geomorphological processes, along with other more subtle factors, serve to affect the course of preservation. The specific physiographic and environmental parameters affecting the present study area limit the long-term preservation of organic material, frequently presenting an assemblage of lithic materials as the surviving evidence of past human activity. Protohistoric and historic sites exhibit greater preservation of organic (floral and faunal) remains. The inorganic category also expands to include metals and glass.

Interpretation of surficially exposed materials is further complicated by agricultural disturbance, construction activities and vandalism affecting the archeological localities. The long and unremitting removal of materials by collectors continues to present the field archeologist with samples lacking in reliability.

The more complex a site is, the greater permanence and/or importance it probably had to the society. Complexity can be measured in terms of the number and types of formed tools at a site - illustrating different activities; the stages of tool making represented; the variety of lithic raw materials utilized; the range of associated non-lithic material; the presence of hearths or indications of the use of fire; and other features such as depressions and rock alignments.

The current survey located 70 prehistoric sites with lithic materials present, and 25 previously recorded sites in the survey area which also contained lithic material. One of the newly recorded sites is associated with a stone circle, one with a quarry pit, one with an eagle trapping pit and 10 with rock cairns. Of the previously recorded sites, two are earthlodge villages, one is associated with a stone circle and one is part of a multicomponent site (the other component is historic). Of the 95 sites with lithic material, 78 are not associated

with any features. The prehistoric artifact assemblages recorded by this investigation and previous surveys at these 95 sites are summarized in Tables 21 and 22.

Table 21. Summary of Artifact Scatter Sites not Associated with any Surface Features.

(Codes for Raw Materials: K = Knife River Flint; T = Tongue River Silica; P = Porcelanite; C = Various Colored Cherts; J = Jasper; A = Agate; O = Obsidian; Q = Quartzite; L = Chalcedony; G = Granite; W = Petrified Wood; S = Sandstone; Sh = Shale; B = Basalt; Qz = Quartz) (FCR = Fire-Cracked Rock)

SITE NUMBER	# LITHICS OBSERVED	RAW MATERIAL TYPES PRESENT	PRESENCE OF			
			FCR/ CHARCOAL	SHELL/ BONE	CERAMICS	STONE TOOLS
32DU3	13	K		B	X	X
32DU7	"scanty"	?		S		
32DU22	4+	K		B		
32DU113	50+	K				
32DU132	300+	K, P, O	FCR			X
32DU133	8	K, P, Q, L				
32DU134	5	K				
32DU160	3	K				X
32DU404	85+	K, L				
32DU405	30+	K				
32DU406	91+	K, Qz, Q, C, L				X
32DU407	200+	K, J, P, Q, Qz, C, W	FCR			X
32DU408	200+	K, Qz				
32DU409	180+	K, G	FCR			X
32DU410	500+	K, Qz, Q, P, S, W, J, B, A, C, G	FCR		X	X
32DU412	150+	K, P, Qz, C, L				X
32DU413	28+	K, P				X
32DU414	95	K, J				
32DU415	13+	K, Qz	FCR			X
32DU416	12	K, Qz				
32DU418	9	K				
32DU628	33	K, P				
32DU629	98+	K, P, W				X
32DU630	36+	K				X
32DU632	30+	K, C				X
32DU633	200+	K, C, L				X
32DU634	302+	K, C, L				X
32DU635	25	K				
32DU637	8	K				
32DU640	18	K				X
32DU641	8	K				
32DU642	7	K				
32DU643	10	K				X
32DU645	11	K				X

Table 21. (cont.)

SITE NUMBER	# LITHICS OBSERVED	RAW MATERIAL TYPES PRESENT	PRESENCE OF			STONE TOOLS
			FCR/ CHARCOAL	SHELL/ BONE	CERAMICS	
32DU649	75+	K				
32DU650	765	K, C, L, P, Q, G	FCR			X
32DU652	152+	K, Q				X
32DU653	35+	K				
32DU654	802+	K		B		X
32DU656	103+	K				X
32DU657	11	K				X
32DU658	217+	K				X
32DU659	750+	K				X
32DU660	23+	K				
32DU661	149+	K, Q				X
32DU662	48	K		B		X
32DU663	11	K, G				
32DU664	403+	K				X
32DU665	196+	K, L		B		X
32DU666	28	K, L, G				
32DU667	200+	K				
32DU669	100s	K, P, O		B		X
32DU670	100s	K, P, O		B		X
32DU671	100s	K				X
32DU672	6	K				X
32DU673	36	K, L				
32DU675	30	K				X
32DU680	138	K, L, P		B		X
32DU685	21	K, L				
32DU724	54	K				X
32DU729	32	K, W				X
32DU735	22	K, L				
32DU736	17	K				X
32DU737	13	K				X
32DU738	15	K				
32DU760	9	K				
32DU761	11	K				
32DU762	14	K				
32DU764	200+	K				
32DU765	107+	K, Q				X
32DU766	16	K				X
32DU769	253+	K				X
32DU770	1000s	K, L		B		X
32DU771	49+	K, P				
32DU772	1000s	K				
32DU773	100s	K				X
32DU781	159+	K, Sh	FCR	B		X
32DU784	56	K, L, C				X

Table 22. Summary of Artifact Scatter Sites Associated with Other Features.

(Codes for Raw Materials: K = Knife River Flint; T = Tongue River Silica; P = Porcelanite; C = Various Colored Cherts; Q = Quartzite; L = Chalcedony; G = Granite; W = Petrified Wood; S = Sandstone)
(FCR = Fire-Cracked Rock)

SITE NUMBER	# LITHICS OBSERVED	RAW MATERIAL TYPES PRESENT	PRESENCE OF			
			FCR/ CHARCOAL	SHELL/ BONE	CERAMICS	STONE TOOLS
32DU1	Several	K, G, S	FCR/ASH	B	X	X
32DU2	1000s	K, L, P, C, Q, T	FCR/ CHARCOAL	B	X	X
32DU8	8	K				
32DU177	28	K, L				X
32DU631	340+	K				
32DU639	60+	K				X
32DU644	34	K, L, W				X
32DU646	2	K				
32DU647	5	K				
32DU651	5	K				
32DU655	30	K				
32DU686	5	K				
32DU710	5	K, L				
32DU745	5	K				
32DU752	2	K				
32DU763	22	K, L				X
32DU768	3	K				

Management priorities (artifact scatters - excluding scatters associated with other features).

While the majority of artifact scatter sites that have the potential for subsurface cultural deposits are considered to warrant further evaluation, those sites which are more extensive and have a greater complexity of artifacts/material types present have greater (broader) research potential than smaller sites with limited artifact assemblages. Although exceptions will arise, and the data available to evaluate these sites are extremely limited, it is necessary to make a determination of the relative importance of the sites to provide a framework within which to discuss further evaluation and management.

Based on the data summarized in Table 21 and additional information derived from the site reports (Appendix B), the following categories of sites are presented. These categories are based primarily on site size.

(1) Good research potential:

a) Sites over 3000m², with three or more raw material types present, which have the potential for buried deposits.

SITES: 32DU132, 32DU406 (Plate 10), 32DU650, 32DU669, 32DU670,
32DU784

b) Sites over 3000m², with two raw material types noted, which have the potential for buried deposits.

SITES: 32DU652, 32DU729, 32DU765, 32DU770, 32DU781.

c) Sites over 3000m², with one raw material type noted, which have the potential for buried deposits.

SITES: 32DU113, 32DU637, 32DU645, 32DU658, 32DU659, 32DU662,
32DU664, 32DU671, 32DU764, 32DU769, 32DU773

d) Sites less than 3000m², with two raw material types noted and with the potential for buried deposits.

SITES: 32DU661, 32DU663, 32DU665, 32DU666, 32DU673, 32DU680,
32DU685, 32DU735, 32DU771

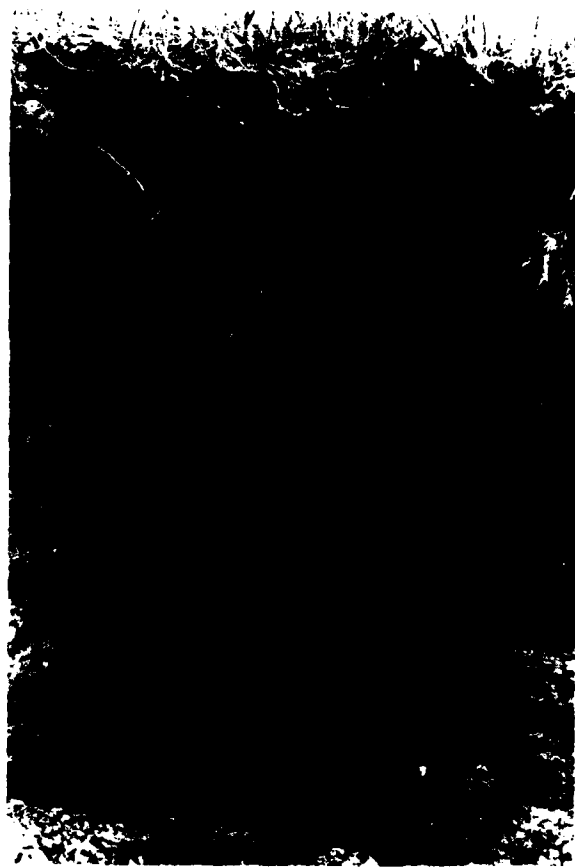


Plate 10. Cutbank profile (KRF flake in situ), at site 32DU406.

(2) Fair research potential:

Sites less than 3000m², with one raw material type noted and with the potential for buried deposits.

SITES: 32DU22 (Plate 11), 32DU643, 32DU654, 32DU657, 32DU667,
32DU672, 32DU675, 32DU724, 32DU736, 32DU737, 32DU738,
32DU760, 32DU761, 32DU766, 32DU772

(3) Poor to no research potential:

Sites which are considered to be only surface scatters with very little or no potential for buried deposits (other than features cut into subsoil) because of evidence for a very shallow soil depth.

SITES: 32DU134, 32DU407, 32DU408 (Plate 12), 32DU418, 32DU628,
32DU629, 32DU630, 32DU632, 32DU635, 32DU640, 32DU641,
32DU642, 32DU649, 32DU653, 32DU656, 32DU762

(4) Sites totally outwashed (destroyed) and/or inundated:

SITES: 32DU3, 32DU133, 32DU404, 32DU405, 32DU409, 32DU410, 32DU412,
32DU413, 32DU415, 32DU633, 32DU634, 32DU660

(5) Sites not relocated by this survey which are presumed destroyed:

SITES: 32DU7, 32DU160, 32DU414, 32DU416.



Plate 11. Material exposed in artificial cut through hillside at site 32DU22, facing S.



Plate 12. View of site 32DU408, facing NW - outwashed on beach below knoll.

Cairns, rock alignments and small stone settings. Analyses of the Mountrail County survey data suggest that rock piles or cairns are frequently associated with stone circle sites (Winham et al. 1987). Enigmatic as features, some mark burials and others serve as directional markers. Similarly, rock alignments are found in association with stone circle sites. Both cairns and alignments also occur as isolated features. This survey recorded only nine stone circle sites. Of these nine sites, only two, 32DU8 and 32DU756, had associated rock cairns.

Fifty-four sites were recorded at which prehistoric cairns or alignments were not in association with stone circles. Hence, the Dunn County survey data for cairns are anomalous when viewed against the Mountrail County example. Table 23 summarizes the information on cairns, alignments and stone settings.

Management considerations

The research potential of rock cairns is clearly limited unless they are associated with a larger site. The presence of some lithic material at sites 32DU639 (Plate 13), 32DU644, 32DU647 (Plate 14), 32DU651, 32DU686, 32DU710, 32DU745, 32DU752, 32DU763 and 32DU768 may indicate that these sites merit more attention. Site 32DU716 is located near a depression or natural slump and site 32DU778 has an associated "stone pavement." One site, 32DU787, is considered to be associated with a recent survey brass cap and depression. The cairns associated with stone circles should be investigated as part of those sites, while the sites classified as small stone settings and alignments (Table 23, Category C) appear to be more unusual.

Overall, rock cairns are assigned a lower priority in regard to further work than most other site types. Nevertheless, if such sites are threatened, further evaluation should be undertaken. Potentially these cairns may either cover or mark some other feature, and material indicating temporality could be encountered among or beneath the stones.

Some cairns have been documented to mark burials, and such possible cairns have been recorded in relation to trunk burials during this survey (see Plate 20). However, it is not very likely that the cairns listed below in Table 23 conceal burials. They may once have marked a scaffold burial and several may represent alignments conveying directional information, i.e., trail markers.

Table 23. Summary of Cairns, Rock Alignments and Stone Settings
Located During the Survey.

A) ASSOCIATED WITH STONE CIRCLE SITES:		
SITE	CAIRN	
NUMBER	DIAMETERS	OTHER INFORMATION
32DU8	a) 0.45m	7 stones.
	b) 0.58m	12 stones.
	c) 0.78m	9 stones.
32DU756	1.15m x 2.25m	30 stones set around a larger rock. One stone circle nearby.
B) NOT ASSOCIATED WITH ANY OTHER FEATURES:		
SITE	CAIRN	
NUMBER	DIAMETERS	OTHER INFORMATION
32DU639	1.5m x 1.2m	Flat sandstone slabs.
32DU644	0.85m x 0.65m	Amorphous six-stone setting amid lithic scatter.
32DU647	2-3m	20+ stones.
32DU648	1-1.5m	Tabular sandstone, 1m high.
32DU651	0.4m x 0.5m	8 stones, lithics present.
32DU668	1.1m	10 stones, 0.2m high.
32DU676	2.0m x 1.75m	24+ stones and cobbles.
32DU683	1.0m x 0.75m	25 stones and cobbles.
32DU684	1.2m	40 stones and cobbles, 0.2m high.
32DU686	0.85m	12 stones, 0.15m high; lithics and bone present nearby.
32DU687	0.65m	15 stones, 5cm high.
32DU688	2.5m x 1.25m	15 large stones.
32DU694	1.0m x 0.7m	4 large and 5 small stones.
32DU696	0.6m	5 cobbles.
32DU700	1.08m x 0.7m	8 stones.
32DU701	0.5m	6 stones.
32DU705	1.45m x 0.94m	13 large stones.
32DU706	1.15m x 0.8m	16 limestone slabs.
32DU707	1.54m x 1.05m	11 granite cobbles, 1 limestone slab.
32DU708	0.58m x 0.49m	5 stones.
32DU709	0.6m	8 stones.
32DU710	1.0m x 1.17m	50 cobbles around a large boulder.
32DU711	0.47m x 0.6m	6 stones.
32DU712	1.29m x 0.98m	22 stones.
32DU713	1.14m x 0.84m	5 large and 5 small stones.
32DU715	1.35m	10 sandstone slabs.
32DU716	0.9m x 1.1m	Near a depression or natural slump.
32DU717	1.08m x 0.63m	12 stones.
32DU718	1.0m	6 large stones.
32DU721	2.4m	23 large stones.
32DU723	1.2m x 0.9m	15 stones.
32DU725	0.75m	4 large and 5 small stones.
32DU726	1.55m x 0.87m	17 stones.

Table 23. (cont.).

B) NOT ASSOCIATED WITH ANY OTHER FEATURES (cont.):		
SITE NUMBER	CAIRN DIAMETERS	OTHER INFORMATION
32DU727	1.34m x 0.95m	30 stones.
32DU732	0.85m x 0.94m	7 sandstone slabs.
32DU734	2.38m x 1.8m	13 stones.
32DU745	1.35m x 0.5m	4 large and 1 small stone; lithics nearby.
32DU748	0.7m x 0.6m	10 stones.
32DU749	0.55m x 0.55m	4 stones.
32DU752	1.65m	75 stones, many large.
32DU753	1.8m x 2.4m	Sandstone and granite rocks on sandstone slab outcrop.
32DU754	2.0m	50+ cobbles.
32DU755	0.75m	25+ cobbles.
32DU763	?	Diffuse stone scatter, possible cairn remnant.
32DU768	0.75m	12 stones, 0.25m high.
32DU776	1.0m x 0.6m	9 stones.
32DU778	a) 0.85m	9 stones.
	b) 0.75m	4 stones.
	c) 1.22m	7 stones - also a stone pavement 2.88m x 1.55m.
32DU783	1.1m x 0.7m	7 granite stones and a large sandstone slab.
32DU787	1.4m x 1.1m	20 stones, near a shallow depression and a brass cap allotment marker.
32DU788	1.45m x 1.0m	20 large stones.
C) SMALL CIRCULAR STONE SETTINGS AND ROCK ALIGNMENTS:		
SITE NUMBER	DESCRIPTION	
32DU747	Stone oval - 3m E-W x 1.75m N-S, comprised of 25 stones.	
32DU750	Rock alignment with two "arms." The north arm is 8.2m long and the east arm is 13.35m long. At the junction of the arms is an area of cobble paving 2.0m in diameter.	
32DU758	A cruciform stone alignment with overall length of 2.15m. The main body is 1.65m long and 1.30m wide.	
32DU779	Three features - 1) an oblong to circular configuration of 10 stones, 1.44m N-S x 0.86m E-W; 2) an alignment of 5 stones, 1.55m E-W; 3) an alignment of 4 stones, 1.2m N-S.	



Plate 13. Sandstone slab cairn on top of high butte at site 32DU639, facing SE.



Plate 14. View of cairn at site 32DU647, facing S.

Eagle trapping pits. Eighteen newly recorded sites contained one or more "pits" or depressions. The size and location of these pits are appropriate for eagle trapping pits. These sites are summarized below (Table 24).

Table 24. Summary of Probable Eagle Trapping Pits Located During the Survey.

SITE NUMBER	PIT DIMENSIONS	DEPTH OF DEPRESSION
32DU631	1.50m diameter	25cm
32DU636	2.25m x 1.7m	50cm
32DU674	3.00m x 2.1m	70cm
32DU677	1.75m x 1.5m	35cm
32DU679	1.70m diameter	20cm
	1.25m diameter	25cm
32DU681	1.90m x 1.6m	20cm
32DU682	1.50m diameter	20cm
32DU689	2.31m x 2.21m	55cm
32DU690	2.37m x 1.65m	56cm
32DU733	2.00m x 1.6m	30cm
	1.66m x 1.65m	30cm
32DU739	2.80m x 2.55m	60cm
32DU741	1.75m diameter	20cm
32DU742	1.57m x 1.3m	28cm
32DU743	2.00m x 2.0m	165cm
32DU746	1.75m x 1.6m	47cm
32DU774	2.00m diameter	15cm
32DU775	2.18m x 2.07m	25cm
32DU785	1.45m x 1.6m	30cm
	1.28m x 1.2m	20cm

Management considerations

One of these sites, 32DU631 (Plate 15), is located within an artifact scatter complex; the other sites gave no surficial indication of being associated with other cultural materials. The research potential is limited to the context of the site type - namely eagle trapping. A first priority at these sites is to determine that they are, indeed, eagle trapping pits. None of the sites are immediately threatened, although surface erosion is noticeable at 32DU631. Since site 32DU631 is associated (spatially) with an artifact scatter, it might be considered the highest priority for future evaluation. [Note: site 32DU678 may also have been an eagle trapping pit; see below].



Plate 15. View of probable eagle trapping pit, site 32DU631, facing N.

Unassigned prehistoric depressions. Four sites located during this survey are listed in this category. A brief description of each is given below.

32DU646: This site is comprised of two small cuts/depressions in the side of a knoll. One cut/depression measures 3.5m x 2.0m; the other is 2.0m x 1.0m. The site may represent a possible quarry area for Knife River Flint nodules. Two Knife River Flint flakes were recorded nearby.

32DU678: This depression is 2.25m N-S x 1.65m E-W and 0.5 m deep. It is located 4 meters away from a U.S. Army Corps of Engineers brass cap marking the elevation at 2013 feet. The depression and the brass cap are likely associated, although the size and location of the depression are also consistent with a function as an eagle trapping pit.

32DU751: This site consists of two shallow pits; one is 1.0m in diameter and the other is 1.45m in diameter. The pits are possible quarries for Knife River Flint nodules.

32DU767: This site is a pit measuring 3.0m x 3.0m, with an extension (possible erosional) of ca. 3.0m. It is located at the edge of a ridge. The pit is 35cm deep.

Management considerations

All of these sites appear to offer only a very limited research potential. However, if impacts threaten the sites, they should be examined to determine their nature, if possible.

Stone circles. A total of nine sites are classified as "stone circles/tipi rings" in this report. Three of these sites (32DU8, 32DU704 and 32DU790) were recorded outside the specific survey area (located while obtaining access to the survey area). Site 32DU8 was previously recorded. These nine sites are summarized in Table 25.

Table 25. Summary of Stone Circle Sites.

SITE #	# OF CIRCLES	SIZE AND OTHER INFORMATION
32DU8	12	3.55m to 7.05m inside diameter. Average diameter 5.64m. Site also contains three cairns.
32DU655	1	Too disturbed to measure.
32DU692	2	One is 8.18m in diameter; one is a partial circle, 6.47m in diameter.
32DU693	1	7.13m diameter.
32DU697	1	Partial circle, 4.35m in diameter.
32DU704	1	8.31m diameter, with an inner stone circle 3.45m in diameter that is off-center to the outer circle.
32DU714	1	6.12m diameter.
32DU756	1	4.45m by 4.20m with cairn.
32DU790	1	6.6m diameter.

Management considerations

Of the sites located within the Corps boundaries, 32DU655 has been significantly disturbed. The site is in a distinct location, on an isolated knoll. If it is determined that adverse effects (i.e., cattle) will be allowed to continue to destroy the site, its research potential should be determined. Site 32DU714 is inundated during high water levels and testing should be conducted to determine its research potential before it is completely outwashed. The remaining sites are not immediately threatened and appear to be in stable condition. All of these sites are felt to contain some research potential. The number of stone circle/tipi ring sites encountered within the current survey area appears quite limited when contrasted with the numerous stone circle/tipi ring sites on the upland plain away from the badlands/river breaks area. Therefore, based on their limited number, if the stone circle/tipi ring sites identified in the current survey area are threatened, they should be further evaluated.

Human interments: trunk burials. Ten of these sites were recorded during the current survey; they are briefly described below. In addition, site 32DU740 probably represents a variation on the trunk burial, utilizing a natural crevice as a burial chamber. A records search for each locality was undertaken at the Bureau of Indian Affairs office in New Town, ND. Recorded allotment information is given after each site description. [Note - the first date given is for the allotment approval; the second date refers to when the Trust was patented].

Site 32DU403 was reported as part of a previous shoreline survey of the area (Haberman and Schneider 1975). A round-topped trunk and a milled lumber box (Plate 16) are placed underneath the overhang of a sandstone outcrop with the trunk at the end and the box along one side. The sandstone ledge outcrops on the side slope of a minor drainage, so rather than having an extensive view of the surroundings, it provides a very restricted view of the present Saddle Butte Bay. Within the milled lumber box, which has filled up with soil, the occipital or frontal portion of a human skull is partially visible. The metal-covered curved-topped trunk measures 68cm x 38cm. In a separate, but nearby crevice in a sandstone block, a large prehistoric ceramic fragment [plain bodysherd, grit tempered, 5mm thick] has been concealed. It may represent a kind of heirloom offering or it may be a fortuitous combination of disparate materials.

Records Search Data

Allotment # 379	Young Bear	7-10-1900	12-31-1900

Site 32DU691 (Plates 17 and 18) is located on a prominent hilltop with a sandstone outcrop overlooking a nearby artesian well with a vista of Independence Point to the north. Around the linear outcrop there are three or four (depending on interpretation) sandstone slab outliers or cairns. It appears that burial boxes or trunks were placed on both sides of the outcrop and then encircled and possibly covered over with tabular sandstone slabs. Elements of the recognizable remains of curved or round-topped, metal-covered wood trunks are visible at one burial locus but not at all of them. A series of large sandstone blocks have been placed on the exposed outcrop directly above one of the burial loci



Plate 16. Remains of milled lumber box at Locus 1, site 32DU403,
facing E.



Plate 17. View of Feature 1, site 32DU691, facing N.



Plate 18. View of Feature 2, site 32DU691, facing S.

as an additional marker. A non-contemporaneous stone slab cairn is located nearby. Apart from elements of the trunks and boxes, no other artifactual material is identifiable.

Records Search Data

Allotment #	1570	NW SW	Isabel Goodbird	11-29-1915	7-3-1918
	1572	S SW	John Goodbird	11-29-1915	7-3-1918
	1190	NE SW	Brown Woman	8-15-1910	12-19-1910

Site 32DU702 consists of a single curved-topped, metal-covered trunk partially exposed at the top of a prominent, isolated bluff remnant overlooking the Missouri River valley. This trunk measures 73cm x 39cm. A small cairn which consists of six sandstone slabs is located within eight meters of this trunk.

Records Search Data

Allotment #	1742	N $\frac{1}{2}$ NE	Justine Rose Baker	5-19-1924	8-29-1937
	1430	S $\frac{1}{2}$ NE	Edna Grow	8-15-1910	12-19-1910

Site 32DU703 (Plate 19), located on a sandstone ridge that juts out like a knife edge, is comprised of a small group of four burials. Large sandstone blocks are jumbled across the surface. The burials are placed at the base of these blocks. A large solitary block has a semi-circular slab cairn at its base and a series of about half a dozen small blocks piled on top of the large block. Deeply inscribed into this block are the name "TOM BOLMAN" and an inclined arrow [the Bolman family owns property adjacent to the Corps boundary]. The remaining burials surround a separate block. One involves a round-topped trunk, while the others are outlined in sandstone slabs. Sub-adult human osteologic remains are present within one of these crevices. Also present are a large white bone bead, a large green glass bead and a glass bottle neck. The glass bottle neck is color-shifted lavender due to manganese having been used in the manufacturing process.



Plate 19. View of area of Burial 2, site 32DU703, facing NE.

Records Search Data

Allotment #	565	N ¹ / ₂ SE	James Baker	7-10-1900	12-31-1900
			Fee patent #611276		12-16-1917
	376	SW SE	Black Medicine	7-10-1900	12-31-1900
	1605	SE SE	Hester Yellow Wolf		7-3-1918

At site 32DU719 (Plates 20 and 21) two round-topped, metal-covered trunks are placed along the side and underneath of a slight overhang of a sandstone outcrop. Slabs of sandstone have been piled around and on top of the trunks. One trunk is 92cm x 49cm and the other is 62cm x 40cm. Several blue, white and yellow glass pony beads, a piece of metallic braid, and a swatch of blue cloth are visible within the smaller trunk.

Records Search data

Allotment #	379		Young Bear	7-10-1900	12-31-1900

Site 32DU720 (Plate 22) is on the next ridge south of site 32DU719. These two ridges now form Saddle Butte Bay. At this site the interment is contained in a milled lumber box rather than a trunk. This box is 1.7m long and 0.5m wide, much larger than any available trunk. A human adult long bone fragment is visible at the southeast end of the box. This box is surrounded by a large number of sandstone slabs. Two shallow depressions about 1.5m in diameter are located 3m to the west.

Records Search Data

Allotment #	543	SE SE	Orphan Mouse	7-10-1900	12-31-1900
	380	NW SE	Two Otters	7-10-1900	12-31-1900
	381	NE SE	Helen Bear	7-10-1900	12-31-1900
	1708	SW SE	Nellie Old Mouse	11-29-1915	7-3-1918

Site 32DU730, rather than being situated along the bluffs of the Missouri River, overlooks McKenzie Bay in a tributary of the Little Missouri River. One metal-covered, round-topped trunk is placed on top of a sandstone ledge and is surrounded by several sandstone slabs.



Plate 20. View of rock pile at site 32DU719, facing ESE.



Plate 21. View of Burial 2, site 32DU719, facing NNE.

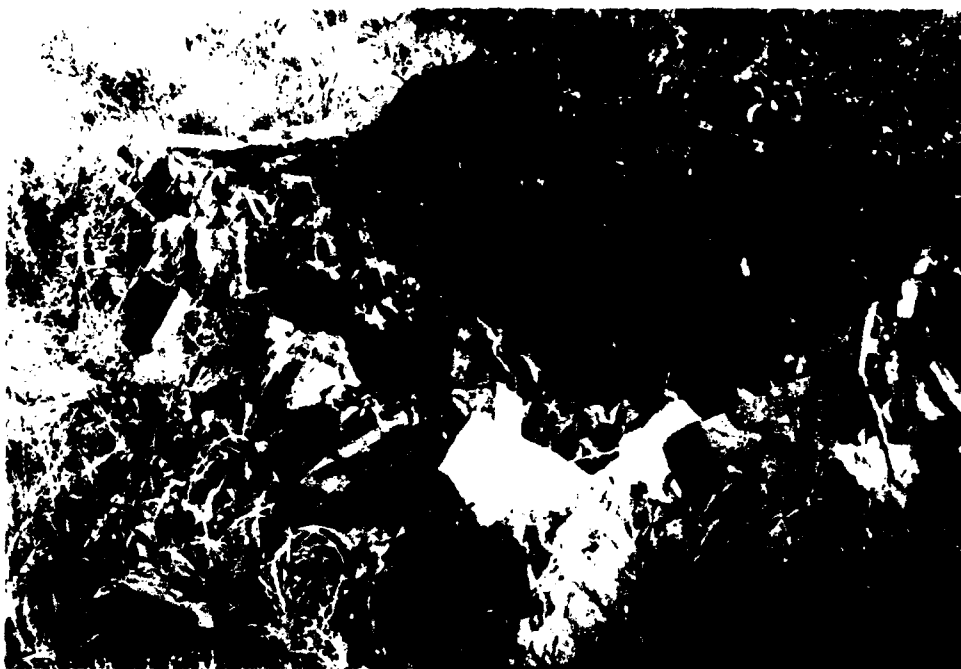


Plate 22. View of burial at site 32DU720, facing N.

The trunk measures 84cm x 47cm. In the vicinity of the trunk (but outside of it), are several dentalium shells, cowrie shell beads, faceted blue glass beads and a corroded copper or brass bead. At the south end of the ledge, sandstone slabs have been placed vertically to form a kind of vault or enclosure. This vault measures 2.9m x 2.2m. A 2' x 6' piece of lumber rests across the top, but no other material is associated with the vault.

Records Search Data

Allotment # 407 Lot 3, Lot 4, E SW Fighter 7-10-1900 12-31-1900

Site 32DU731 (Plate 23) is located on an isolated sandstone terrace block at the confluence of McKenzie Bay and the Little Missouri River. It has been extensively disturbed so that most of the original context of the material has been lost or destroyed. Pieces of wooden and metal trunk hardware, representing portions of at least two round-topped trunks are scattered across the surface. At the edge of the sandstone outcrop a natural, erosional chamber has been sealed with dry laid sandstone blocks. This artificially enhanced vault measures 2m x 1.2m. A single adult humerus is exposed at the base of the vault. Another natural crevice in the rock may also have held a burial since some of the trunk parts are still contained within it. Aside from the trunk parts, a hemispherical remnant of a brass-headed nail was found here. It may have served as a decorative element on the trunks or it may have been part of some other artifact. A small rock cairn is situated about 6m north of this sandstone outcrop.

Records Search Data

Allotment # 485 SW High Eagle 7-10-1900 12-31-1900

Site 32DU780 consists of a wooden trunk surrounded by a circle of large, rounded cobbles and an adjacent linear arrangement of cobbles. It is located along the upper edge of a prominent ridge. The trunk bottom is metal-reinforced but the top is missing so it is impossible to determine the configuration of the lid. The trunk is 72cm long and the surrounding rock circle is slightly over a meter in diameter. The



Plate 23. View of sandstone slab vault at site 32DU731, facing N.

boulder alignment extends for 3m, with its terminus about 1.5m north of the trunk. No surface materials were observed here.

Records Search Data

Allotment #	517	Many Ribs	7-10-1900	12-31-1900

Site 32DU782 (Plate 24) combines some elements of the box or trunk burial sites with some attributes of the small family or organized cemeteries. The site is located on the upper surface of a sandstone ridge at the confluence of the Little Missouri and Missouri rivers. One large subsurface depression is surrounded by numerous sandstone slabs, while three smaller depressions are aligned in a row farther back along the ridge.

Records Search Data

Allotment #	486	NW NE	Kettle Woman	7-10-1900	12-31-1908
	487	SW NE	Star Eyes	7-10-1900	12-31-1908
	1828	E NE	Florence Coyote	5-19-1924	8-29-1924

Discussion

Traditional Mandan-Hidatsa burial practices have been described since the visits of Lewis and Clark in 1804 (Thwaites 1959), Bradbury and Brackenridge in 1811 (Bradbury 1817; Brackenridge 1814), Catlin in 1832 (Catlin 1973) and Prince Maximilian in 1833 (Thwaites 1906). Illustrations of the scaffold burials were prepared both by Catlin and by Karl Bodmer, of Maximilian's staff. These sources agree that the Mandan and Hidatsa dead were ornamented with red paint, dressed in good clothing and tightly wrapped in a robe or blanket. Personal articles such as tools and weapons were placed along with the body on a platform supported between four tall posts. A cemetery comprised of these scaffolds was located on an open prairie behind the village. When the scaffolds decayed and collapsed the crania were placed in a circle and the surviving post-cranial bones were buried.

Lewis Henry Morgan visited the combined Mandan-Hidatsa-Arikara village of Like-a-Fishhook in 1862 and described a similar field of scaffolds with wrapped bodies (Morgan 1959). By 1877 Matthews noted for the Hidatsa "the practice of burying in the ground, after the manner of



Plate 24. View of Burial 1, site 32DU782, facing W.

Europeans and Arickaree, is generally becoming more common; and every year the scaffolds decrease, and the graves increase in number" (Matthews 1877:9). Smith (1972:v) states that a new "principal burial ground" for the Three Affiliated Tribes was established at the then abandoned Like-a-Fishhook village in 1924 and served as such until the creation of the Garrison Reservoir.

Bowers's ethnographic fieldwork among the Mandan from 1929-1931 (Bowers 1950) and among the Hidatsa from 1932-1933 (Bowers 1965) was primarily concerned with documenting traditional, rather than contemporary, practices. Therefore, it is rather surprising to find the following statement as his last paragraph in the chapter on the Mandan Life Cycle.

After the Mandan were placed on individual allotments on the Fort Berthold Reservation, it was customary to place the dead in boxes and trunks or to wrap them in robes and blankets which were placed in crevices in rocks or on high hills. Those who were closely affiliated with one of the churches were prevailed upon to have their dead buried in the church cemetery. Some bodies were unburied as late as 1928. For a number of years after moving onto individual allotments a skull circle was maintained on a hill a short distance east of the Tom Smith farm, but in later years the skulls were not removed (Bowers 1950:101).

No comparable data for this period of fieldwork are presented for the Hidatsa.

The artifacts which provide a unifying theme to both isolated burials (described above) and individual cemetery graves (described below), are the round-topped trunks. They are present at most of the isolated burial sites, although not every interment at these sites can be documented to have been in a trunk. Trunk parts or visible trunk outlines are present at cemetery 32DU786, and the size and shape of some of the depressions in other cemeteries allow for the possibility that some of the individual interments were in trunks. Where parts of these trunks were visible they all conformed to a similar pattern. They were relatively small, had a curved-top lid and were covered with embossed sheet metal. The pattern of this embossing was of flowing curvilinear tendrils, branching tripartite leaflets and a terminal floral arrangement. The pattern is repeated across the surface to form a rather busy, repetitious design.

A check of reproductions of both the 1902 and 1908 Sears, Roebuck and Company catalogs showed virtually identical trunks under the description of crystallized metal-covered trunk, barrel top. The trunks are listed in the following sizes and accompanying prices (Table 26).

Table 26. Sizes and Prices of Crystallized Metal-Covered Trunks, Barrel Top - from Early Sears, Roebuck and Company Catalogs.

MEASUREMENTS (inches)			PRICES (\$)	
Length	Width	Height	1902	1908
26	14½	17½	1.65	1.85
28	15½	18½	1.95	
20	16½	19½	2.10	2.45
32	17½	20½	2.40	
34	18½	21½	2.65	3.05
36	19½	22½	2.90	3.35

By 1927 no such trunks were illustrated in the catalog. The few trunks that could be roughly measured in the field during the current survey produced the following dimensions (Table 27).

Table 27. Measurements of Burial Trunks Located During the Dunn County Survey.

SITE	MEASUREMENTS
32DU702	73cm x 39cm or 29 in. x 15½ in.
32DU719	62cm x 40cm or 24½ in. x 16 in.
	92cm x 49cm or 36 in. x 19½ in.
32DU730	85cm x 47cm or 33½ in. x 18½ in.
32DU403	68cm x 38cm or 27 in. x 15 in.

In some cases the field measurements are identical to those in the catalogs and in others the proportions of the trunks are comparable.

Other artifacts were found at several sites, including various colored small glass beads at 32DU703, 32DU719, 32DU730 and 32DU786, and bone and shell (cowrie, dentalium) beads at 32DU703 and 32DU730. In addition, some kind of metallic beads were observed at 32DU730.

Analysis

A host of early nineteenth century observers identified traditional Mandan and Hidatsa mortuary patterns. These practices continued at least until the abandonment of the last traditional village, Like-a-Fishhook, which occurred in 1885. With resettlement onto individual allotments in the late 1880s, it is understandable that new burial practices would develop around the new community and settlement pattern. Isolated homesteads, such as the individual allotments, or small dispersed communities, such as Independence, would have made it difficult to maintain the former burial practices.

It is the contention of this study that one of these new practices involved individual burial in isolated locations. This pattern of individual burial in separate, widely dispersed locations would have mirrored the new settlement pattern. However, this pattern appears to have been used for a relatively short time. By the 1930s, and considerably before that time in some highly acculturated cases, burials were placed in structured, ordered cemeteries.

Lone Hill or Independence was established in 1885 by Wolf Chief, whose mercantile store was a significant part of this loose community populated by fewer than 300 individuals (Brunner 1961:252). Without case-specific demographic data it is difficult to estimate such a population's vital statistics. Using a generalized death rate of 2.8 percent a year for 300 individuals for 40 years (1885-1925), a total of 336 deaths could be calculated for such a community. Obviously this survey recorded only a small fraction of this number of burials, but the total area available for burials was not surveyed. In fact, several designated burial areas are known to exist beyond the survey limits. Nonetheless, the calculation is useful as an indication of the potential for these kinds of sites in the vicinity.

Locations for isolated burials appear to have been chosen with emphasis placed upon elevated sandstone outcrops with vistas of the Missouri River valley. The burials themselves were either in simple homemade, milled lumber coffins or in more elaborate metal-covered, round-topped trunks. Burials were surrounded by, and perhaps originally partially covered with, sandstone slabs or other available stones. A small cairn was an option that was built on the ground surface nearby or directly over the burial on the sandstone outcrop's upper surface.

Various types of glass, bone and shell beads were observed at several burial locations, but it is not known if they were once part of clothing and body adornment or if they had been scattered in the vicinity. The former is more likely.

The commercial inventory of Wolf Chief's store, aside from "beads, bangles and other gimmicks" (Meyer 1977:154), is not documented, but presumably it was a general mercantile establishment. It would certainly have allowed access to a wealth of manufactured goods that could have been delivered by rail to Van Hook (after 1914), then transported by road and ferried across the river to Independence. Thus, Wolf Chief's store may have been the source for the round-topped trunks. The use of these trunks as ready-made coffins is somewhat of an enigma which appears to have been a phenomenon restricted in both time and space. No similar use has been reported in the available literature.

While trunks are admittedly an accessible, ready-made coffin-like resource, other characteristics would mitigate against such a use. One characteristic is their size. As indicated in Table 1, only a limited range of sizes was available. Length was possibly the most critical dimension in their use as a coffin. The longest trunk available from the Sears catalog, and the longest observed in the field during this survey, was 36 inches. Only individuals less than about four years of age could be expected to fit into such a coffin as extended or flexed burials. Given a relatively high rate of infant mortality, it is possible that their use was generally restricted to the interment of sub-adults. However, these trunks may also have served for interment of skeletal elements after initial scaffold interment, following the more traditional Mandan-Hidatsa practices.

Another adverse factor in the utilization of trunks is the cost. An expense of two-three dollars, plus shipping and handling would have been a considerable draw on the budget of families who were basically subsistence agriculturalists. Undoubtedly the trunks could have been purchased after a windfall, like the disbursement of 1917 (Meyer 1977:166) or after the sale of an allotment, but such events could not be counted on as a reliable source of income.

Alternatively, perhaps such apparent disadvantages were really criteria which might encourage the use of trunk coffins. With a premium placed on children, a high infant mortality rate and a desire for

conspicuous display of temporary wealth, store-bought coffins might have filled several perceived needs or wants simultaneously.

However, from the early reservation period (1870s) the U.S. government force-issued caskets in an attempt to alter Native American mortuary practices. It is conceivable that these trunks may somehow have been distributed through the Indian Agency. Documentary research into this topic should provide some answers.

Management considerations

Due to the sacred and sensitive nature of human interments to the Native American community, impacts to these sites should be strenuously avoided. None of the trunk burial sites located during this survey appeared to be immediately threatened by adverse effects beyond natural decay. However, if any of these sites are to be impacted, detailed research and testing should be undertaken to determine whether the sites can be related to any living person(s) and whether any burials are actually extant.

Given further research, these sites may be eligible for nomination to the National Register of Historic Places under a thematic classification.

Formal cemeteries. These sites are composed of formally organized, (small-group or family) cemeteries. Cemeteries located by this survey are the White Calf Burial Ground (32DU722), the Young Bear Cemetery (32DU757), the Benson Cemetery (32DU759), and an unnamed cemetery, designated site 32DU786. Two cemeteries located just outside the survey area include the Crow's Beart or Crow's Breast family cemetery (marked with a surrounding fence and headstones) and the Antelope Society cemetery.

Site 32DU722 (Plate 15) is an area which has been identified as the White Calf Burial Ground (BIA 1950:24). This identification is based on Corps cemetery records, although the legal locations are not exactly the same as those recorded during the current survey. The area contains three rows of sunken depressions. One row consists of one relatively large depression and four smaller ones; the other two rows consist, respectively, of five and six small to medium-sized depressions. Two other possible depressions located to the northeast serve as outliers. The long axis of all of the depressions faces in a NE to SW direction. The whole area is on the surface of a broad, low ridge that terminates abruptly at a reservoir-eroded cutbank.

Records Search Data

Allotment #	540	NW NE	Shows Bird	7-10-1900	12-31-1900
	1624	SW NE	Nellie White Calf	11-29-1915	7-3-1918
	1629	NE NE	Florence Susie Lone Bear	11-29-1915	7-3-1918
	1636	SE NE	Sarah Rogers White Calf	11-29-1915	7-3-1918

Site 32DU757, rather than being placed on top of a hill, is in a slight saddle with surface elevation rising a foot or so to both the west and east. Roughly two rows, with a total of eleven depressions, were located. The rows consist of two large depressions and nine small ones, oriented NW-SE. The only surficial material noted was a glass bottle neck (shifted to lavender in color due to manganese in the glass). This location is identified as the Young Bear Burial Ground (BIA 1950:24).

Records Search Data

Allotment #	407	SW	Bad Gun	7-10-1900	12-31-1900

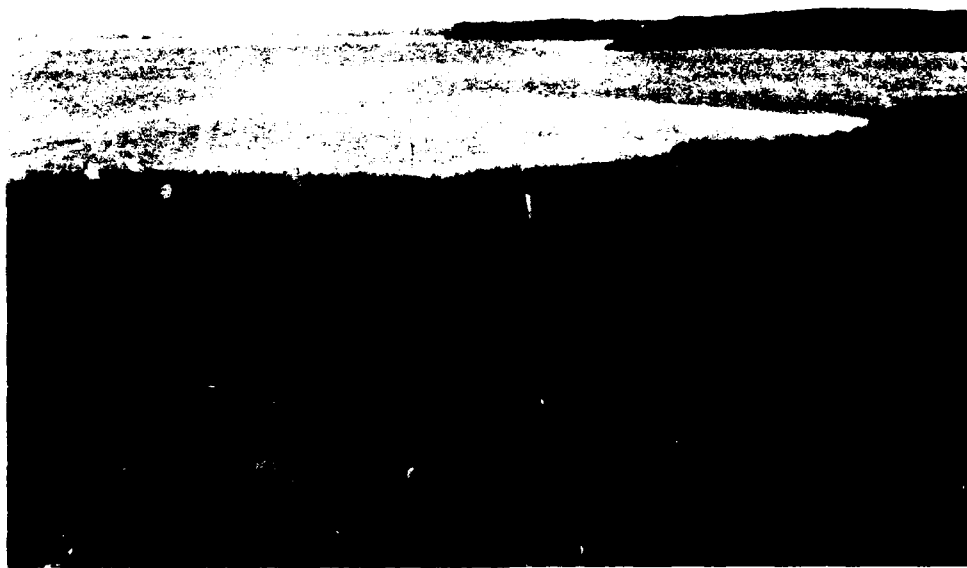


Plate 25. View of site 32DU722, facing S.

Site 32DU759 is identified as the Benson Burial Ground (BIA 1950:22). One portion of this site consists of seven depressions arranged in two irregular rows. At the extreme east end of the point or high terrace on which it is located there is another sandstone encircled area containing some wood fragments that may represent a single, isolated grave site, or may have been an earlier isolated, solitary grave.

Records Search Data

Allotment # 231 SE Old White Man 7-10-1900 12-31-1900

Site 32DU786 is located on top of an isolated knoll or butte along the south bank of the Little Missouri River. It consists of irregular rows of depressions, once again oriented roughly NE-SW or E-W. Some of these depressions contain edges and fragments of sheet metal-covered trunks. Numerous examples of small manufactured materials are visible on the surface, but the survey crew was requested to leave this area before a complete inventory could be accomplished.

Records Search Data

Allotment #1074A Lots 1 & 2 S NE Woman in the Water 11-29-1915 10-9-1916
1672 NW Lot 3 SE NW Edna Alice Badgun
Drags Wolf 11-29-1915 7-3-1918
1985 Lot 4 SW NW Sawaki Victoria
Hosie 5-19-1924 8-29-1924

The Crow's Heart or Crow's Breast family cemetery is marked with a surrounding fence and contains headstones which document the names and date of death for the individuals interred. It is on private or tribal property and was not further investigated. The Antelope Society cemetery is also on private property and was not visited. These cemeteries, and those identified as 32DU757, 32DU759 and 32DU786, are all located immediately downstream from the confluence of the Little Missouri and Missouri rivers.

Discussion

Family cemeteries, as well as cemeteries for special sodality members, are known from the early 1900s. During the preliminary phase of the Garrison Reservoir construction, the U.S. Army Corps of Engineers instigated an active cemetery removal/relocation program (Bureau of Indian Affairs 1950), with the BIA undertaking the actual contracting. Many small family and organized group cemeteries were identified with the help of known survivors, and located and removed to areas beyond the reservoir limits. Other cemeteries were excluded from Corps acquisition by gerrymandering the boundary line around them, probably stemming from the fact that some families were unwilling to sell the cemeteries to the Corps. The Crows Heart or Crows Breast family maintained a small cemetery with headstones located just outside the survey area. The findings of the current survey demonstrate that not all human remains on Corps property were identified and reburied prior to reservoir construction.

Currently, Native American graveyards are attached to relocated churches and missions. Cemeteries are also located on the edges of the towns of Mandaree and Twin Buttes.

Management considerations

These cemeteries are sacred sites and, as such, impacts to these areas should be strenuously avoided. Only site 32DU722 appears to be possibly threatened by shoreline erosion in the near future. If any of the sites are to be impacted, however, detailed research and testing should be undertaken to determine whether the sites can be related to any living person(s) and whether any burials actually remain extant.

Earthlodge villages. Two previously recorded earthlodge villages are present in the survey area - sites 32DU1 (Nightwalker's Butte in the Badlands/Jacobsen site) and 32DU2 (Midipadi Butte). No other earthlodge villages were located during this survey.

Traditional Hidatsa oral history makes reference to three buttetop village sites on the Fort Berthold Indian Reservation (Lehmer, Wood and Dill 1978; Wood 1980:17). All of these have been credited to a group of Hidatsa under the leadership of "Night Walker" or "he who travels about in the twilight" (Wood 1980:17). The three Nightwalker villages have been identified as Nightwalker's Butte (39ML39), the Midipadi Butte site (32DU2), and Nightwalker's Butte in the Badlands (32DU1) (Caldwell and Smith 1962; Lehmer, Wood and Dill 1978:66-67; Wood 1980:17). Oral tradition does not specify the time period in which the Nightwalker's villages were occupied. Extensive excavation of 32ML39 recovered data which indicated occupation during the late 1700s (Lehmer, Wood and Dill 1978:423). A local Indian informant who visited the Nightwalker's Butte excavations identified the site as belonging to the Hidatsa Waterbuster clan. The informant further stated that those villagers had a reputation as dissidents who frequently broke away from the tribe and were forced to live on easily defended buttetops due to their small numbers (Lehmer, Wood and Dill 1978:66-67) (Kuehn, Falk and Drybred 1982:14).

32DU1

This site (Plates 26-30) was previously recorded by Will and Hecker (1944), Kivett (1948), River Basin Surveys crews (1950 - as 32DU18) and Metcalf (1963). The site was visited and described by Leaf (1976:7-10) and discussed by Kuehn, Falk and Drybred (1982:14). More recently, the site was described and a sketch map was prepared by Johnson (1983). No professional archeological excavations have been undertaken, but the site has, in the past and continuing to the present, been subject to "vandal diggings" (see Plate 30).

Over 35 depressions are visible on the butte top (Plates 26 and 27), ranging from those clearly discernible (Plate 28) to those barely perceptible. Some notched cedar posts (Plate 29) are situated at the "entry" to the butte top. The site is postulated to have been occupied between A.D. 1781 and 1837. It is considered a very significant site in the area and is clearly eligible for nomination to the National Register of Historic Places once basic documentation of its research potential



Figure 16. Aerial view of 32DU1 location, taken before (pre-reservoir)
[ASCS Aerial Photograph CGP 11B80].



Plate 27. View of butte top location of site 32DU1.



Plate 28. View of depression #4, site 32DU1, facing NW.



Plate 29. Notched cedar posts at site 32DU1.



Plate 30. Vandal diggings in depression #9, site 32DU1, facing SE.

has been established through subsurface excavation and other site evaluation techniques.

32DU2

Midipadi Butte is a prominent landmark (Plate 31) and site 32DU2 was first recorded by an amateur archeologist, George Will (Will 1924). It was later recorded by Will and Hecker (1944) and again by Metcalf during the River Basin Surveys in 1950 (Metcalf 1963). Metcalf conducted test excavations at the site in 1950. In 1977 the site was mapped and further tested (Good and Hauff 1977) to investigate its potential eligibility for listing on the National Register of Historic Places [at that time the site was given the name, Highway 8 site].

Good and Hauff recommended that additional investigations were necessary to adequately complete the nomination of the site to the National Register.

Although we have at least established a potential for nomination the following recommendations should be given consideration:

1. Our first recommendation is to complete aerial photographic study using infra-red and conventional films....During our investigation it was obvious that portions of the site were obscured by vegetation.

2. In conjunction with the first recommendation, all vegetation would be mowed in order to better expose features already recorded and any which may be discovered during aerial photography.

3. The third recommendation and the most essential of all recommendations is the complete excavation of at least two large depressions now in danger of destruction in order to determine their function, to increase the artifact inventory and to retrieve datable material (Good and Hauff 1977: 41-42).

This site was determined eligible for listing on the National Register of Historic Places in 1978. In 1982 salvage excavations were undertaken at the site (Kuehn, Falk and Drybred 1982). This work was specifically aimed at recovering data in advance of the mass wasting that was taking place along the lakeside edge of the site; this was not a total evaluation as recommended by Good and Hauff. "It is of critical importance to note that no attempt was made to systematically investigate the site as a whole....An evaluation of the entire site



Plate 31. Aerial view of site 32DU2, taken 7-18-51 (pre-reservoir)
[ASCS Aerial Photograph CCP 8B49].

would require a representative sample of excavation units over the whole butte top, perhaps complimented by block area excavation (cf. Binford 1972)" (Kuehn, Falk and Drybred 1982:17).

At least sixteen depressions were noted to be extant at the site in 1982. The excavations revealed a Besant Woodland tradition occupation (A.D. 1-900) and a Disorganized variant, Coalescent tradition village occupied ca. A.D. 1781-1815 (see above). Based on the history of investigations of this site and the fact that the site has been determined eligible for listing on the National Register of Historic Places (1978), it is now our recommendation that as complete a documentation of the site as possible be undertaken ahead of completing such a listing. This documentation should follow the recommendations defined by Good and Hauff (1977:41-42) and Kuehn, Falk and Drybred (1982:17).

The rationale for this recommendation is that the site continues to be threatened by mass wasting along the lakeside edge and it does not appear feasible to arrest this process. A long-term program of salvage excavation might, therefore, be considered. To develop a research design for this program an adequate overall evaluation of the site's research potential is needed. As Kuehn, Falk and Drybred point out (1982:17), such an evaluation has not yet been undertaken. It would clearly make a difference to the management strategy at this site if it was determined that the portion of the site under the most continuous threat from erosion - say for the next 100 years - was very different in content from that portion of the site located several meters away from the lakeside edge and not likely to be impacted within that timeframe.

Foundations/other historic occupation sites. Tables 19 and 20 (above) list 15 sites which are historic or contain a historic find or component (excluding trunk burials and formal cemeteries). One of these sites, 32DU180 (Lost Bridge), was excluded from the computer analysis.

The historic occupation sites which were located by the current survey are nearly all early to mid-twentieth century in date of initial occupation (see Historical Research below). Indeed, little Euro-American settlement of the area occurred prior to the 1880s. The site types recorded as historic (excluding burials and cemeteries) consist of Richards Ranch house; the foundations and depressions associated with the community of Independence; Lost Bridge which crosses the Little Missouri River (Plate 32); and artifact scatters associated with depressions/dugouts and log cabins. Other depressions and foundations, as well as some fairly recent sites were also recorded. These include a cattle feeder, livestock watering tanks and a recreation area with an outhouse. Table 28 briefly summarizes (lists) the above sites.

Table 28. Historic Sites Located During the Dunn County Survey.

SITE #	DESCRIPTION
<u>A) FOUNDATIONS AND DEPRESSIONS</u>	
32DU13	Community of Independence.
32DU177	Rectangular ditched feature - probably for timber sills/foundation to structure (Plates 32 and 33).
32DU417	Stone slab foundation for log cabin.
32DU695	Timber sills/foundation in rectangular cut.
<u>B) HISTORIC DEPRESSIONS ONLY/MAIN FEATURE (with or without historic artifacts)</u>	
32DU161	Log-covered dugout.
32DU638	Rectangular depression (homestead).
32DU698	Depressions resulting from gravel quarrying.
32DU699	Small rectangular pit.
32DU744	Five depressions/pits that are 0.5m square near a brass cap marker.
<u>C) SITES WITH STANDING STRUCTURES (may include other features)</u>	
32DU131	Richards Ranch (Plates 32, 34-37).
32DU180	Lost Bridge (Plate 32).
32DU419	Log cabin (Plate 38).
32DU728	Cattle feeder.
32DU789	Recreation area with outhouse.
<u>D) MISCELLANEOUS HISTORIC SITES</u>	
32DU777	Livestock watering tanks.



Plate 32. View of Lost Bridge (32DU180) spanning the Little Missouri River, with site 32DU177 immediately this side of the bridge on the right side of the road, and site 32DU131 at the edge of the floodplain beyond the bridge and to the left of the road, facing S.



Plate 33. View of rectangular ditched enclosure at site 32DU177, facing S.



Plate 34. View of ranch house, site 32DU131, facing SW.

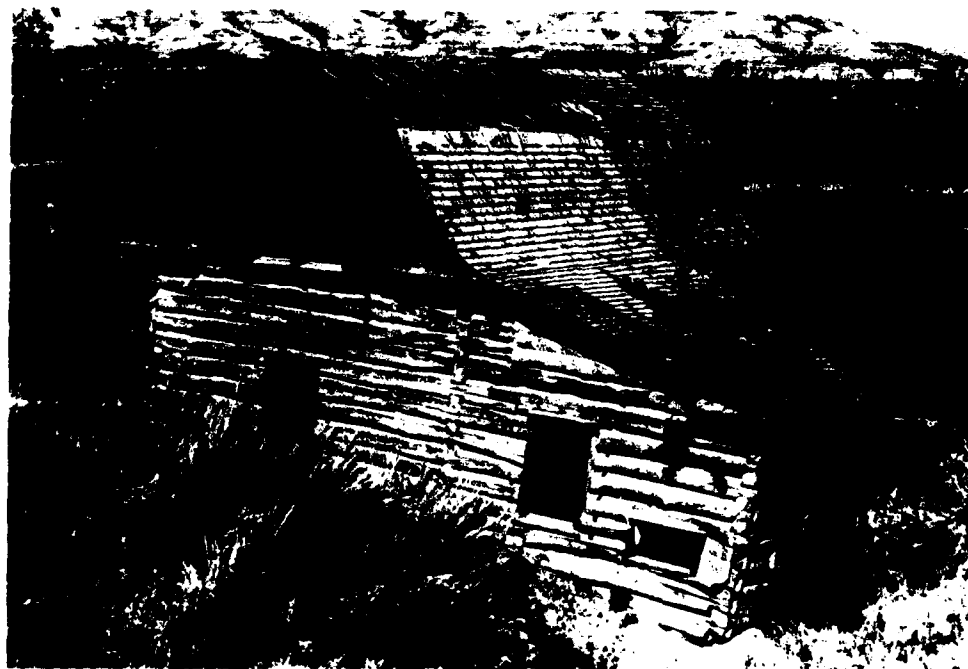


Plate 35. View of ranch house, site 32DU131, facing NW.



Plate 36. View of dugout at site 32DU131, facing N.



Plate 37. View of dugout at site 32DU131, facing S.



Plate 38. View of log cabin at site 32DU419, facing SW.

Historical Research

Dr. Loren Horton, historian with the Iowa State Historical Department, served as the project's historical archeologist/architectural historian. All information specific to historic sites collected by the field crew, including maps, notes, photographs and artifacts, was analyzed by Dr. Horton. Based on that analysis, and discussions with the field crew, Horton decided which sites, if any, he would be required to field check in order to make assessments of significance. Because of the nature of the sites and the information already recorded, he determined that none of the sites required further on-the-ground evaluation. His assessments of the sites are based on his many years of experience in Euro-American historical research and analysis.

In addition to the site-specific information being evaluated by an historical specialist, an examination and interpretation of a number of early maps was made and a search at the Register of Deeds in the Dunn County Courthouse was conducted for each historic site located during the survey. Bureau of Indian Affairs records were also examined, both at the offices in New Town, North Dakota and Aberdeen, South Dakota.

Summary of Information Obtained from Records Search

The information provided below is derived from a records search conducted at the Register of Deeds Office located in the Dunn County Courthouse, Manning, North Dakota. Data on allotments were obtained from the Bureau of Indian Affairs, Department of Acquisition and Disposal, located at New Town, North Dakota [Note - for allotment, the first date given reflects when the allotment was approved; the second date is when the Trust was patented].

32DU13

Independence Allotment # 1886 a1

			Allotment approved	Trust patented
1886	NW NE	Lillie Maggie Fast Dog	5-19-1924	8-29-1924
Lot 1 & 2				
Lot 5 & 6		Timber reserve		

32DU131

- 1864: This is the date of the earliest deed. An Act of Congress granted lands to aid in the construction of a railroad and telegraph line from Lake Superior to Pacific Sound.
- 1870: A joint resolution dated May 31 granted to Northern Pacific Railroad Company every alternative section of public land, not mineral, designated by odd numbers.
- 1920: On March 19, all of Section 3 became the property of Wilson L. Richards of Richards Land and Cattle Company.
- 1946: The land was passed from Richards to John Humphries.
- 1948: On April 12, the land passed from John Humphries to Jack Fettig and Phil Fettig.
- 1949: There was a judgment of Declaration of Taking; a future record notes that the Richards Ranch, 4341.70 acres, less 1279 acres, was taken by the United States of America for the Garrison Reservoir.

32DU161

US Patent 651609 Patent number 703961

Fee simple patent issued to the claimant Lewis W. Baker, an Indian of the Ft. Berthold Reservation, granted unto the claimant...

There is reserved from the lands hereby granted in lieu of patent No. 549186 date October 7, 1916 which has been cancelled.

Transfer entered 26 November 1949.

Judgment on Declaration of Taking, May 13, 1952

Certain parcels of Land in McLean, Dunn, McKenzie and Mountrail Counties, State of North Dakota and Unknown Owners.

Allotment # 502 SE Lone Fight 7-10-1900 12-31-1900

32DU177

The earliest record at the Register of Deeds is October 22, 1930 - a Public Easement between W.L. Richards and Dunn County.

In 1936 another Public Easement was recorded between Clair Everett and Dunn County.

32DU417

Allotment # 2213 Lorraine Alto Whitney 5-19-1924 8-29-1924

32DU419

Department of the Interior, Bureau of Indian Affairs

Deed to Restricted Indian Land Special for this Indenture, February 10, 1932, between Fritz Burr and Lola Burr NEE Vally, allottee #1088A Indian of the Ft. Berthold Agency, Elbowoods and Virginia Burr (daughter).

Land had been allotted to 1st party, is now transferred to 2nd party for \$500.00.

Provided if grantee dies unmarried and without issue title reverts to grantor.

Statement of claim of mutual interest

KBM, Inc. (1604 S. Washington St., Grand Forks, ND)

March 22, 1985

Allotment # 1088A Fritz Burr 11-29-1915 10-9-1916

32DU638

The Register of Deeds records the homestead of Bert and Mabel Sauvageau in this area (July 20, 1920) of 162 and 60/100 acres.

A Rasmus Jensen of Killdeer was associated with the area between 1921 and 1924.

On April 17, 1944 a record shows the distribution of the estate of Rasmus Jensen, including 348 cattle, 41 horses, stock and farm machinery.

32DU695

First record - Judgment on Declaration of Taking.

Allotment #	1190	NE	SE	Brown Woman	7-15-1910	12-19-1910
	1571	NE	SE	Benjamin Goodbird	11-29-1915	7-3-1918
	1092A	S	SE	Foolish Woman	11-29-1915	10-9-1916

32DU698

BIA, April 19, 1932 20634

Deed to Restricted Indian Land Special for this Indenture made this 31 March 1932 by and between James Baker, devisee of Owl Woman, deceased allottee #548 and Blanche Baker, his wife and Clyde Baker (son).

P.O. address Ft. Berthold, Elbowoods. For the sum of \$250.95 held in trust by the US for the benefit of the 2nd party.

S $\frac{1}{2}$ of NE $\frac{1}{4}$ S10 and SW $\frac{1}{4}$ NW $\frac{1}{4}$ and Lot 2, Sec 11 containing 167 and 38/100 acres.

Provide if death of grantee occurs unmarried and without issue title reverts to grantor.

May 26, 1932. Filed for the record July 25, 1932.

Judgment on Declaration of Taking

Order of BIA to BLM directing a fee simple patent issue to Olive A.

Spotted Bear Benson for an undivided 2/27 interest in the

SW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec 10 T149N R9 W 40 acres Patent # 33-84-0045, July 23, 1984.

Allotment #	548	S $\frac{1}{2}$	NE	Owl Woman	7-10-1900	12-31-1900
	578	N $\frac{1}{2}$	NE	Spotted Weasel	7-10-1900	12-31-1900

32DU699

Allotment #	548	S $\frac{1}{2}$	NE	Owl Woman	7-10-1900	12-31-1900
	578	N $\frac{1}{2}$	NE	Spotted Weasel	7-10-1900	12-31-1900

32DU728

Allotment #	835A		All Blossoms	11-29-1915	10-9-1916

32DU777

Allotment #	1570	NW SW	Isabel Goodbird	11-29-1915	7-3-1918
	1572	S SW	John Goodbird	11-29-1915	7-3-1918
	1190	NE SW	Brown Woman	8-15-1910	12-19-1910

The principal maps and records consulted for this project consisted of the following: the Missouri River Commission maps (MRC) of 1894; the Corps of Engineers map (Corps) of 1891; the General Land Office maps (GLO) of 1894, 1897 and 1907; the Smithsonian Institution River Basin Surveys (SIRBS) records and maps of 1947 and 1952; the Department of the Interior, Bureau of Indian Affairs, Missouri River Basin Investigations "Location and Census of Indian Cemeteries and Burials within the Taking Area, Garrison Dam and Reservoir, Fort Berthold Reservation, North Dakota" dated July 31, 1950; general highway maps of Dunn County of 1970 and 1980; U.S. Geological Survey 7.5 minute quadrangle maps of 1967 and 1970; and maps accompanying previously recorded sites (e.g., Haberman and Schneider 1975; Leaf 1976).

The only buildings shown on the nineteenth century maps that fall within the current survey area are those apparently associated with the community of Independence. The remains of Independence were found on what is now an island (site 32DU13). One cemetery, site 32DU782, was shown on the 1970 USGS Hay Flat quadrangle map. No other structures were noted on any of these maps that fall within the survey area.

In terms of remains now visible, the historic sites are evaluated as being twentieth century in origin. The majority of the sites and artifacts noted are considered less than 50 years old. On a local basis, the most potentially significant historic sites are: the remains of the community of Independence (32DU13); the Richards Ranch (32DU131); and the site of individual homesteads or cabins (32DU161 and 32DU638). Three sites with depressions of unknown function (32DU698, 32DU699 and 32DU744) and the rectangular ditched enclosure at 32DU177 also merit further investigation. Additionally, Lost Bridge is considered a significant structure (for transportation) today. The remaining sites are considered either too recent or too disturbed to warrant further work.

Isolated finds. Table 29 summarizes, by category, all the isolated artifacts recorded. For purposes of the current survey, an isolated find was defined as the occurrence of five or less artifacts in isolation, or a very sparse, widespread scatter with a low cultural material density. The category of isolated find was also used to record cultural material considered less than 50 years old or of dubious human modification/use (e.g., bone fragments). Latitude was given to the field directors to utilize professional judgment in their designations.

The distribution of both prehistoric and historic isolated finds throughout the project area reflects the distribution of prehistoric and historic sites. The limited number of historic isolated finds were identified primarily in areas along the Missouri River, in the same general locations as the cemeteries and trunk burials. A substantial number of the prehistoric isolated finds relate to the utilization of Knife River Flint cobbles that occur due to outwash in the region. This material predominates in the Moccasin Creek Bay and Squaw Creek Bay areas.

Table 30 presents a list of previously recorded isolated find locations in the Dunn County survey area.

Table 29. Summary of Isolated Finds.

CATEGORY	NUMBER OF ISOLATED FINDS
a) Single lithic flake (IFs 7, 10, 26, 31, 32, 44, 47, 51, 52, 59, 60, 72, 73, 76, 77, 86, 88, 89, 100, 102, 105, 107, 113, 125, 129, 137, 139, 153, 154, 155, 157)	Total = 31
b) Single lithic tool/core (IFs 8, 11, 18, 19, 80, 82, 83b, 95, 110, 115, 117, 118, 120, 123, 134, 158)	Total = 16
c) Two-five lithic items or very sparse scatter (IFs 1, 2, 3, 4, 5, 6, 12, 13, 14, 16, 17, 20, 24, 25, 27, 28, 29, 30, 33, 34, 35, 39, 40, 45, 68, 69, 70, 81, 83a, 84, 99, 103, 104, 106, 109, 111, 122, 124, 126, 130, 131, 135, 141, 143, 144, 147, 159, 161, 163, 164)	Total = 50
d) Lithics and bone (IF 127)	Total = 1
e) Animal bone (IF 87)	Total = 1
f) Human bone (IF 138)	Total = 1
g) Historic/recent debris* (IFs 21, 22, 23, 85, 108, 112, 114, 116, 119, 128, 136, 140, 142, 145, 149, 156, 165)	Total = 17
h) Ceramics (IF 9)	Total = 1
i) Naturally outwashed Knife River Flint cobbles with one to five flakes/ struck cobbles noted (IFs 15, 36, 37, 38, 41, 42, 43, 46, 48, 49, 50, 53, 54, 55, 56, 57, 58, 61, 62, 63, 64, 65, 66, 67, 71, 74, 75, 78, 79, 91, 92, 93, 94, 96, 97, 98, 101, 121, 132, 133, 146, 148, 150, 151, 152, 162)	Total = 46

*Items most likely less than 50 years old; but the possibility exists in some cases that the age is greater than 50 years

DUNN

ISOLATE # DESCRIPTION OF ISOLATE

- 1 Two secondary and one tertiary flake of KRF in 40m diameter area.
- 2 Projectile point (collected) and brown chalcedony flake, 4 meters apart.
- 3 Three areas, each 8 meters apart, with two-three KRF fragments/flakes, one showing secondary working.
- 4 Four KRF flakes, secondary and tertiary.
- 5 Unifacial retouched flake (collected) and secondary flake of KRF, 1 meter apart.
- 6 One primary and one tertiary flake of KRF; one secondary flake of porcelanite; retouched porcelanite flake.
- 7 Struck plate nodule of KRF.
- 8 Unifacially retouched flake of KRF.
- 9 Three ceramic fragments on top of knoll (Plate 39) [collected].
- 10 Secondary KRF flake.
- 11 Fragment of KRF biface.
- 12 Two secondary KRF flakes, 2 meters apart.
- 13 Sparse KRF scatter: one primary flake, one uniface, one core fragment, and three nodules.
- 14 One KRF flake and three KRF nodules.
- 15 Three-four brown chalcedony/KRF flakes within a scatter of KRF nodules, watertossed and broken.
- 16 Two KRF secondary flakes.
- 17 Two KRF tertiary flakes.
- 18 One KRF biface fragment.
- 19 Transverse scraper (collected).
- 20 Three KRF flakes, one with retouch.
- 21 Fragment of an iron loop.
- 22 Recent wire fence and wooden stakes in a pile on hillslope.
- 23 Recent corral at the junction of two fences with barbed wire and round-headed 6" nails. Made of driftwood and cut planks, partially collapsed.
- 24 Two tertiary, one secondary, and one utilized flake of KRF.
- 25 One primary, two secondary and one tertiary KRF flake; buried soil at 30cm b.s.
- 26 Secondary KRF flake.
- 27 One KRF flake at N end of a ridge; one KRF shatter on W side of a ridge.
- 28 Transverse scraper (collected) and three KRF flakes.
- 29 Two tertiary KRF flakes.
- 30 Small scatter of three KRF flakes and three porcelanite flakes (outside survey area).
- 31 Secondary KRF flake.
- 32 Tertiary KRF flake.
- 33 Two secondary KRF flakes.
- 34 Secondary core reduction flake and a microflake of KRF; a secondary chalcedony flake and a retouched schist fragment. Note: this material is now included in site 32DU624 (see Appendix M).
- 35 Four secondary KRF flakes among KRF cobbles.
- 36 One secondary KRF flake among KRF cobbles.
- 37 A primary, a secondary and a tertiary KRF flake among KRF cobbles.
- 38 One secondary and one tertiary KRF flake, and a secondary quartzite flake among KRF cobbles.
- 39 Secondary KRF flake and a struck KRF cobble, on mud flat.



Plate 39. View of location of ceramic fragments (IF 9) on top of steep-sided, conical knoll, facing E.

DUNN

ISOLATE # DESCRIPTION OF ISOLATE

- 40 A core and a secondary flake of KRF.
- 41 Three tertiary and one secondary KRF flake among KRF cobbles.
- 42 Two tertiary KRF flakes among KRF cobbles.
- 43 Two tertiary and two secondary flakes among a small scatter of tabular KRF.
- 44 Large tertiary KRF flake.
- 45 Three tertiary flakes and one shatter of KRF.
- 46 Two secondary and three tertiary flakes of KRF among KRF cobbles.
- 47 Core reduction flake of translucent chalcedony.
- 48 Struck KRF nodule among KRF cobbles.
- 49 Struck KRF nodule among KRF cobbles.
- 50 Struck KRF nodule among KRF cobbles.
- 51 Tertiary flake, KRF.
- 52 Tertiary flake, translucent chalcedony.
- 53 One tertiary flake of KRF among KRF cobbles.
- 54 Four tertiary flakes of KRF among sparse KRF cobbles.
- 55 Two tertiary flakes and one secondary flake of KRF among sparse KRF cobbles.
- 56 Struck cobble and three flakes of KRF among KRF cobbles.
- 57 Tested cobble and four flakes of KRF among a light scatter of KRF cobbles.
- 58 Very sparse scatter of tested cobbles and five flakes of KRF among a medium scatter of KRF cobbles - very sparse.
- 59 Tertiary KRF flake.
- 60 Tertiary KRF flake.
- 61 Two retouched secondary flakes, a bipolar core of KRF and a medium scatter of KRF cobbles.
- 62 Three tertiary flakes of KRF and a light scatter of KRF cobbles.
- 63 Bifacial tabular flake (collected) and two tertiary flakes of KRF among a medium scatter of KRF cobbles.
- 64 Struck cobbles and flakes of KRF among a light scatter of KRF cobbles.
- 65 Two retouched secondary flakes among a light scatter of KRF cobbles.
- 66 Struck cobbles among a light scatter of KRF cobbles.
- 67 Very sparse scatter of struck cobbles and flakes of KRF among a moderate scatter of KRF cobbles.
- 68 Biface, patinated on one side, 55 x 40 x 10mm; and two secondary and two tertiary flakes of KRF.
- 69 Two core fragments and two struck cobbles of KRF.
- 70 Biface fragment and two tertiary flakes of KRF near road.
- 71 Four struck cobbles among scatter of KRF cobbles.
- 72 Tertiary flake of clear, patinated chalcedony.
- 73 Struck cobble of KRF.
- 74 Two flakes and two struck cobbles of KRF among a scatter of KRF cobbles.
- 75 Three tertiary flakes and a secondary flake of KRF among a scatter of KRF cobbles near a small knoll.
- 76 Struck KRF cobble.
- 77 Tertiary flake of KRF.
- 78 Three tested cobbles and two flakes among KRF cobbles, on a small knoll.

DUNN

ISOLATE # DESCRIPTION OF ISOLATE

- 79 Very sparse scatter of KRF cobbles and tested cobbles; 500+ items, with less than one percent tested.
- 80 KRF preform reduction blank (collected).
- 81 Cobble core and flake of KRF.
- 82 KRF tabular flake with bifacial thinning (collected).
- 83a Two KRF tertiary flakes.
- 83b KRF biface (collected).
- 84 A primary and a tertiary flake of KRF.
- 85 Historical graffiti on concrete wrapping around a pipeline which reads "JEFF GARNER, NASHVILLE, TENN, Oct. 18, 1953."
- 86 Heavily patinated tertiary flake of KRF.
- 87 Bison skull, pelvis, two ribs and a humerus buried ca. 10cm b.s.
- 88 Tertiary KRF flake.
- 89 KRF flake.
- 90 DELETED
- 91 KRF cobbles, one tested.
- 92 Three tested cobbles and two cobble flakes among KRF cobbles.
- 93 Small area of KRF cobbles (25+) with five tested.
- 94 KRF cobbles (two tested) and two flakes.
- 95 One KRF flake with possible anvil stone at ridge hub.
- 96 One chalcedony flake, KRF cobbles.
- 97 Very sparse scatter of tested KRF cobbles, flakes and shatter (five items among some 50+ KRF cobbles).
- 98 Two KRF flakes among scatter of KRF cobbles.
- 99 One KRF tested cobble and one KRF tertiary flake.
- 100 Isolated, tested KRF cobble.
- 101 One KRF cobble flake among KRF cobbles.
- 102 A tested tabular KRF cobble.
- 103 One KRF shatter, a patinated KRF cobble and a KRF flake fragment.
- 104 A tested KRF cobble and two shatter fragments of KRF.
- 105 KRF tertiary flake.
- 106 An opaque chalcedony flake and four pieces of KRF debitage.
- 107 KRF secondary flake.
- 108 Recent historical graffiti on soft, sheer sandstone cliff.
- 109 Shatter, flake and two KRF cobbles. Note: this material is now included in site 32DU623 (see Appendix M).
- 110 Projectile point (collected).
- 111 Sparse scatter of items in a two-track: an unworked KRF tabular cobble; a KRF prismatic core fragment; one KRF secondary/tertiary flake; one opaque chalcedony tertiary flake; and a blue and white chert tertiary flake.
- 112 White painted metal pipe in the shape of a cross measuring 1.45m high and 0.97m along the arm. The inside pipe diameter is 1½". In addition, there are the remains of red plastic roses and green leaf stalks at the base of the cross.
- 113 KRF tertiary flake.
- 114 Solid steel axle with threaded ends, 1.5m long, ?from old car or truck.
- 115 KRF flake core.
- 116 Circular fiberglass watertank with a plastic hose connecting it and a nearby spring head; an unused oval sheet metal tank beside the watertank; and a circular sheet metal tank down the hill.

DUNN

ISOLATE # DESCRIPTION OF ISOLATE

- 117 Grooved maul or hammer fragment (collected). Cobble split longitudinally due to distal end impact.
- 118 KRF stage II biface fragment.
- 119 Recent historic trash.
- 120 KRF projectile point (collected).
- 121 KRF tabular flake with bifacial flaking on the right lateral edge; and a transverse scraper with unifacial flaking on the proximal end, heavily water abraded (collected), among KRF cobbles.
- 122 KRF retouched flake and KRF tertiary flake.
- 123 KRF biface (collected).
- 124 Two KRF pebble cores, two KRF tertiary flakes and a shatter fragment.
- 125 KRF tertiary flake.
- 126 KRF preform reduction blank (collected) and large secondary KRF flake.
- 127 Two secondary and two tertiary flakes of KRF and a large bovid molar, scattered along 40m of beachline.
- 128 Possible sweatlodge made of a domed pole framework with four vertical members and one horizontal, attached with wire. Located on the bank are rugs, a sleeping bag, a quilt and a bedspread arranged in a circle that is approximately 4.5m in diameter.
- 129 KRF retouched flake.
- 130 Two cores and a primary, secondary, and tertiary flake of KRF.
- 131 Three tertiary KRF flakes.
- 132 Stage II biface fragment and very sparse scatter of tested cobbles and probable flakes of KRF among extensive area of KRF cobbles.
- 133 A core and tertiary flake of KRF mixed in with hundreds of KRF cobbles.
- 134 Pelican Lake projectile point midsection and base (collected).
- 135 KRF tertiary flake and flake fragment.
- 136 Locus I seems to be a recent prayer or offering spot consisting of a mat of silver sagebrush twigs and leaves approximately 2.5m square with five small holes or depressions where tree limbs had been pushed into the ground. At a location 3.65m to the northwest, willow or juniper bark has been stripped from its branches. Artifacts in the area include a safety plug, a strip of blue collar fabric with white five- or six-pointed stars or flowers, and the tag to a Bull Durham tobacco sack. Additional sagebrush limbs seem to have been placed around the periphery of the bluff edge. Locus II is a bundle of fine sticks (two formed into one unit), each with different colored cloths wrapped and tied to the upper end of each stick. Colors are red, yellow, white and light blue. Multiple strings connect each stick. Small bundles of blue cotton cloth with white stars or flowers are interspersed along each string. Each of the main cloth banners has a similar small bundle in it. In addition there is half a sack of Bull Durham tobacco and a book of paper matches with six matches left. The match book cover says "Four Bear Gas Station Four Bears Park." Other than observing these materials nothing was collected or disturbed at this spot.
- 137 KRF tertiary flake.

DUNN

ISOLATE # DESCRIPTION OF ISOLATE

- 138 Partially exposed human pelvis, femur, proximal tibia and possible distal femur fragment. This material probably is redeposited from a cemetery site which is uphill from this location (32DU786).
- 139 KRF tertiary flake.
- 140 Recent historical graffiti on sandstone "grotto."
- 141 Four secondary flakes and a tertiary flake of KRF.
- 142 Pole structure sunshade. The poles are small tree trunks with the bark still attached. One corner has collapsed as has the roof. Rafters are joined to the uprights with wire. There are two broken 3-hole bricks and a Hunts tomato sauce can.
- 143 Core fragment (?), two primary and three tertiary flakes all of a blue chert with white inclusions. These items are in a very sparse scatter at the base of a mud bluff in an erosional semicircle, with a KRF secondary flake nearby.
- 144 Two KRF tertiary flakes.
- 145 Corral of log and branch posts and nails. The rails are attached to the posts with wire. Most of the posts on the north and south sides have collapsed.
- 146 KRF tertiary flake and possible testing debris in an area of KRF cobbles.
- 147 Five flakes and tested cobbles of KRF.
- 148 KRF tertiary flake in area of KRF cobbles and cobble testing.
- 149 A five-foot long metal screw auger and a four-foot long packing rod, which appear to be intended for drilling holes and packing with explosives.
- 150 A KRF core and tertiary flake in an area of KRF cobbles.
- 151 Two KRF tertiary flakes in an area of KRF cobbles.
- 152 Two KRF cores in an area of KRF cobbles.
- 153 KRF tertiary flake.
- 154 KRF secondary flake.
- 155 KRF tertiary flake.
- 156 Recent historic trash.
- 157 KRF tertiary flake.
- 158 Late Prehistoric KRF projectile point (collected).
- 159 Large KRF transverse scraper, heavily water abraded (collected) and a KRF prismatic flake blade.
- 160 DELETED
- 161 McKean complex KRF projectile point midsection (collected), and a small core.
- 162 Very sparse scatter of cobble tested KRF cores and debitage among KRF cobbles.
- 163 Five KRF tertiary flakes.
- 164 A secondary and a tertiary flake of KRF.
- 165 Historic graffiti, "H MARTENS JR ELLIOTT ND" and "WHEND", on vertical surface of sandstone outcrop.

Table 30. Previously Recorded Isolated Finds in Dunn County Survey Area.

DUNN REFERENCE	T---N	R--W	LOCATION				QUADRANGLE				DESCRIPTION OF ISOLATE
			S	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	SE	NE	NW	HAY FLAT	
Kinney and Schreiner 1983	147	91	03				SE	NE	NW	HAY FLAT	one retouched flake, KRF
Kinney/ HAS, Inc. 10-18-82	147	93	19				NW	NE	NW	MANDAREE SE	one KRF biface fragment
Kinney/ HAS, Inc. 10-18-82	147	94	13				SE	NE	SE	MANDAREE SE	site lead--cultural material scatter, chipped stone
Kinney and Schreiner 1983	148	91	20				NW	SW	SW	HAY FLAT	one primary, three secondary and one tertiary flakes--all KRF
Kinney and Schreiner 1983	148	91	29				NE	NW	NW	HAY FLAT	one primary flake, one secondary flake, one core--all KRF
D.J. Tweton REAP	148	91	33							HAY FLAT	historic site lead-- Charging Eagle Townsite (probably inundated)
Roberson 1982	149	91	06				NW	NW	NE	NEW TOWN SE	scraper, KRF
Mattison 1955:49	150	93	18							SANISH SE or SANISH SW	historic site lead-- Lewis and Clark: A stop at "Indian Creek" (COE 1891) on August 12, 1806. Present Bear Den Creek?

11. GENERAL DISCUSSION: HUMAN UTILIZATION OF THE STUDY AREA

The focus of past human utilization in the study area centers on the major water sources, particularly the Little Missouri River and its tributaries and the Missouri River. The Missouri River "was a focal point for settlement because of the concentration of subsistence and technological resources resulting from diversified ecosystems, bedrock exposures, and varied alluvial deposits" (Kuehn and Gregg 1985:160). However, inundation brought about by the construction of the Garrison Dam has destroyed or covered many sites along these drainages, making the reconstruction of prehistoric settlement dynamics in the area an extremely complex research goal.

Prehistoric site density in the survey area is on the order of four to five sites per square mile, but increases dramatically near the mouth of the Little Missouri River, along Skunk Creek, Squaw Creek and particularly Moccasin Creek. This increase coincides with significant concentrations of outwashed Knife River Flint cobbles. The stretch of the Little Missouri River between Wolf Chief Bay and Jim Creek exhibits fair evidence of prehistoric utilization, although many of the sites in this area are now completely outwashed.

The present data base suggests human occupation cycles that are sporadic and discontinuous, both temporally and spatially. The previous section in this report containing the cultural history overview posits an area that has been exploited continuously over the past 10,000-11,000 years, although much detail of this early utilization is sketchy.

The data derived from this survey might suggest very limited utilization of the area prior to more extensive habitation during the Later Archaic period; this was followed by sporadic use during the Late Prehistoric period and into the Historic period. This statement is based on the diagnostic materials recovered and the types of sites noted in the survey area. Such general speculations do not adequately account for the complexities involved in assessing the impacts to sites over the past 10,000-11,000 years, the biases in the present data base and a whole range of other unknown factors affecting site preservation and discovery.

It would appear that lithic resource utilization in the area is dominated by locally available raw materials; Knife River Flint is

readily available in outwashed gravels and was clearly utilized extensively. The subsistence strategies of the prehistoric groups in the area are considered to have been variable, both seasonally and through time. Bison were undoubtedly a major food source but it will take the detailed excavation of many sites where organic materials are preserved to evaluate the relative importance and reliance prehistoric groups placed on this resource.

Two permanent "village" sites are present in the survey area, with others recorded nearby and some now inundated by the reservoir. Oral tradition relates both villages to a group of Hidatsa under the leadership of Night Walker. These occupations are thought to have occurred during the period A.D. 1781-1815. It is assumed that many prehistoric groups in this area were transitory, moving around the region seasonally. The numerous cairns documented on this survey may, in part, mark trails used by such mobile groups.

It has been reported that "the mouth of the Knife River, near Stanton, marks the northwesternmost effective limit for native village cultures along the Missouri River before they were disturbed by white contact" (Smith 1980:87). Many mobility models for hunter-gatherers have been proposed (for instance see Butzer 1982:Figure 13-2), and as more information becomes available it should be possible to distinguish sites that served as semi-permanent camps (occupied for several months repeatedly year after year) from seasonal camps (occupied for several months during one season), and temporary camps (occupied for a few days or weeks) from ephemeral camps (occupied for at most a few days). Some isolated ceramic material (not associated with a site), probably of the Plains Village period, was recorded at one location during the survey. Kuehn and Gregg note that "Missouri River tributaries...appear to have been regularly used by Plains Villagers as routes for transporting resources out of interior badlands and uplands areas back to permanent residential bases in the Trench" (1985:163). This find spot may represent such utilization of the area.

The historic sites in the survey area consist of sites relating to both Euro-American and Native American occupation - a homestead, a ranch house, Native American burials and cemeteries, and allotment cabins. All of these sites are twentieth century in origin.

This survey has produced a corpus of information concerning site types and site locations in the area, providing data regarding prehistoric/historic landscape utilization plus variations in site densities. The current data matrix will require additional input on several levels before its full potential can be realized. The management summary specifically delineates the sites at which further evaluation will substantially increase the utility of the data derived from this survey (and similar surface surveys in this region), and also provides the site-specific information necessary to begin to grasp the complexities of prehistoric hunter-gatherer lifeways.

Summary of Site Impacts

Sites have been assigned management and condition codes on the sites forms, and management/research considerations have been discussed (above) by site type. A summary of site conditions and site management codes is presented below (Table 31). To strengthen the management of these cultural resources, the relative threats/impacts to each site need to be assessed as part of the calculations. Table 32 presents the sites recorded during the current survey. The sites are listed in numerical order, with the assigned management and condition codes presented, plus a rank order impact assessment: (1) under major and ongoing impacts (primarily badlands surface erosion/mass wasting and shoreline erosion); (2) under minor and ongoing impacts (limited shoreline erosion, surface erosion); (3) presently under no significant impacts but potentially will be within the next ten years; (4) under no impacts now (other than normal weathering) or in the foreseeable future (excepting deliberate changes in land use at the site area); (5) site essentially destroyed by erosion.

These impact assessments relate to how the current state of the site may change in the future, rather than current site condition. A site that has already been impacted by cultivation but which is under no further threat of additional destruction of cultural deposits, will receive a (4) rating.

Management Plan and National Register Evaluations

At the present time several of the sites located on the Dunn County survey are considered potentially eligible for nomination to the National Register of Historic Places, but additional work - including site testing and, in the case of historic sites, expanded documentary research - is recommended prior to such nomination.

Many of the sites are potentially eligible for nomination as part of a district nomination or thematic group. One area that could be considered for appraisal as a district nomination would be the Lost Bridge vicinity, where a number of historic sites, related to ranching in the area, are located. The Mandan-Hidatsa trunk burial sites could

Table 31. Summary of Site Condition and Site Management Determinations.

CONDITION	TOTAL # SITES	NUMBER OF ARTIFACT SCATTERS	CAIRNS	EAGLE PITS	NUMBER OF DEPRESSIONS	NUMBER OF STONE CIRCLES	HISTORIC	NUMBER OF BURIALS	NUMBER OF CEMETERIES	NUMBER OF EARTHLODGE VILLAGES
(0) UNKNOWN	1 (0.5%)	1 (1.4%)	-	-	-	-	-	-	-	-
(1) DESTROYED	3 (1.6%)	3 (4.1%)	-	-	-	-	-	-	-	-
(2) INUNDATED	10 (5.3%)	10 (13.5%)	-	-	-	-	-	-	-	-
(3) VERY POOR	13 (6.8%)	10 (13.5%)	-	-	-	-	1 (7.1%)	2 (20.0%)	-	-
(4) POOR	33 (17.4%)	27 (36.5%)	2 (3.7%)	-	1 (25.0%)	1 (11.1%)	1 (7.1%)	1 (10.0%)	-	-
(5) FAIR	21 (11.0%)	10 (13.5%)	1 (1.8%)	1 (5.6%)	1 (25.0%)	2 (22.2%)	5 (35.7%)	-	-	1 (50.0%)
(6) GOOD	14 (7.4%)	1 (1.4%)	4 (7.4%)	1 (5.6%)	-	1 (11.1%)	5 (35.7%)	1 (10.0%)	-	1 (50.0%)
(7) EXCELLENT	95 (50.0%)	12 (16.2%)	47 (87.0%)	16 (88.9%)	2 (50.0%)	5 (55.5%)	2 (14.3%)	6 (60.0%)	5 (100.0%)	-
MANAGEMENT										
(1) NO FURTHER WORK	36 (18.9%)	29 (39.2%)	1 (1.8%)	-	1 (25.0%)	-	6 (42.8%)	-	-	-
(2) FURTHER WORK	13 (6.8%)	5 (6.8%)	4 (7.4%)	2 (11.1%)	-	-	2 (14.3%)	-	-	1
(3) IMPACT ANALYSIS	2 (1.1%)	-	2 (3.7%)	-	-	-	-	-	-	-
(4) IMPACT ANALYSIS AND FURTHER WORK	116 (61.1%)	40 (54.1%)	40 (74.0%)	16 (88.9%)	2 (50.0%)	8 (88.9%)	6 (42.8%)	1 (10.0%)	1 (20.0%)	1 (50.0%)
(5) AVOIDANCE-MITIGATION	23 (12.1%)	-	7 (12.9%)	-	1 (25.0%)	1 (11.1%)	-	9 (90.0%)	4 (80.0%)	1 (50.0%)

Table 32. Management Summary - Site Significance and Site Impacts.

SITE NUMBER	PRIORITY* STATUS	MANAGEMENT* CODE	CONDITION* CODE	IMPACT STATUS* (1-5)
SITE TYPE: PREHISTORIC ARTIFACT SCATTERS				
32DU3	-	1	2	5
32DU7	(NOT RELOCATED)			5
32DU22	3	4	4	2
32DU113	2	4	4	1
32DU132	1	4	4	1
32DU133	-	1	2	5
32DU134	4	1	4	3
32DU160	(NOT RELOCATED)			
32DU404	-	1	2	5
32DU405	-	1	2	5
32DU406	1	2	0	1
32DU407	4	1	3	5
32DU408	4	1	3	5
32DU409	-	1	2	5
32DU410	-	1	2	5
32DU412	-	1	2	5
32DU413	-	1	1	5
32DU414	(NOT RELOCATED)			5
32DU415	-	1	4	5
32DU416	(NOT RELOCATED)			5
32DU418	4	1	4	5
32DU628	4	1	3	1
32DU629	4	1	4	2
32DU630	4	1	4	2
32DU632	4	1	3	5
32DU633	-	1	1	5
32DU634	-	1	1	5
32DU635	4	1	3	2
32DU637	2	2	5	1
32DU640	4	1	4	2
32DU641	4	1	4	2
32DU642	4	1	3	2
32DU643	3	2	5	2
32DU645	2	2	5	2
32DU649	4	1	4	2
32DU650	1	4	5	2
32DU652	1	4	4	2
32DU653	4	1	4	5
32DU654	3	4	3	1
32DU656	4	1	4	1
32DU657	3	4	5	2
32DU658	2	4	5	2
32DU659	2	2	5	2
32DU660	-	1	2	5
32DU661	2	4	2	5
32DU662	2	4	2	5
32DU663	2	4	4	2
32DU664	2	4	3	5
32DU665	2	4	4	5

Table 32. (cont.)

SITE NUMBER	PRIORITY STATUS	MANAGEMENT CODE	CONDITION CODE	IMPACT STATUS (1-5)
SITE TYPE: PREHISTORIC ARTIFACT SCATTERS (cont.)				
32DU666	2	4	7	4
32DU667	3	4	4	5
32DU669	1	4	5	1
32DU670	1	4	4	5
32DU671	2	4	4	5
32DU672	3	4	3	5
32DU673	2	4	7	2
32DU675	3	4	4	5
32DU680	2	4	7	2
32DU685	2	4	6	4
32DU724	3	4	4	3
32DU729	1	4	7	4
32DU735	2	4	7	1
32DU736	3	4	7	2
32DU737	3	4	7	4
32DU738	3	4	7	4
32DU760	3	1	3	5
32DU761	3	4	7	2
32DU762	4	1	4	4
32DU764	2	4	4	1
32DU765	1	4	4	1
32DU766	3	4	5	4
32DU769	2	4	4	1
32DU770	1	4	5	1
32DU771	2	4	7	4
32DU772	3	4	7	4
32DU773	2	4	4	5
32DU781	1	4	4	5
32DU784	1	4	7	2
SITE TYPE: EAGLE TRAPPING PITS				
32DU631	(+ artifact scatter)		5	2
32DU636		2	6	3
32DU674		4	7	4
32DU677		4	7	4
32DU679		4	7	4
32DU681		4	7	4
32DU682		4	7	4
32DU689		4	7	4
32DU690		4	7	4
32DU733		4	7	4
32DU739		4	7	4
32DU741		4	7	4
32DU742		4	7	4
32DU743		4	7	4
32DU746		4	7	4
32DU774		4	7	4
32DU775		4	7	4
32DU785		4	7	4

Table 32. (cont.)

SITE NUMBER	PRIORITY STATUS	MANAGEMENT CODE	CONDITION CODE	IMPACT STATUS (1-5)
SITE TYPE: PITS/DEPRESSIONS (PREHISTORIC)				
32DU646		1	5	2
32DU678		4	7	4
32DU751		5	7	4
32DU767		4	4	2
SITE TYPE: ROCK CAIRNS AND ALIGNMENTS				
32DU639	(+ lithics)	2	5	3
32DU644	(+ lithics)	2	4	2
32DU647	(+ lithics)	2	6	4
32DU648		3	6	3
32DU651	(+ lithics)	3	6	3
32DU668		4	7	3
32DU676		4	6	4
32DU683		4	7	4
32DU684		4	7	4
32DU686	(+ lithics)	4	7	4
32DU687		4	7	4
32DU688		4	7	4
32DU694		4	7	4
32DU696		4	7	4
32DU700		4	7	4
32DU701		4	7	4
32DU705		4	7	4
32DU706		4	7	4
32DU707		4	7	4
32DU708		4	7	4
32DU709		4	7	4
32DU710	(+ lithics)	4	7	4
32DU711		4	7	4
32DU712		4	7	4
32DU713		4	7	4
32DU715		4	7	4
32DU716	(+ slump/depression)	4	7	4
32DU717		4	7	4
32DU718		4	7	4
32DU721		4	7	4
32DU723		4	7	4
32DU725		4	7	4
32DU726		4	7	4
32DU727		4	7	4
32DU732		4	7	4
32DU734		4	7	3
32DU745	(+ lithics)	4	7	4
32DU747	- stone oval	4	7	4
32DU748		5	7	3
32DU749		5	7	4
32DU750	- alignment	4	7	4
32DU752	(+ lithics)	5	7	4
32DU753		4	7	4

Table 32. (cont.)

SITE NUMBER	PRIORITY STATUS	MANAGEMENT CODE	CONDITION CODE	IMPACT STATUS (1-5)
<u>SITE TYPE: ROCK CAIRNS AND ALIGNMENTS (cont.)</u>				
32DU754		5	7	4
32DU755		5	7	4
32DU758	- alignment	5	7	4
32DU763	(+ lithics)	2	4	4
32DU768	(+ lithics)	4	7	3
32DU776		4	7	4
32DU778	- stone pavement	4	7	4
32DU779	- alignment and oblong setting	4	7	4
32DU783		4	7	4
32DU787		1	7	4
32DU788		5	7	
<u>SITE TYPE: STONE CIRCLE SITES</u>				
32DU8		4	7	4
32DU655		4	4	1
32DU692		4	6	4
32DU693		4	7	4
32DU697		4	5	4
32DU704		4	7	4
32DU714		4	5	1
32DU756		5	7	4
32DU790		4	7	4
<u>SITE TYPE: HISTORIC SITES</u>				
32DU13		4	5	1
32DU131		4	5	4
32DU161		2	4	4
32DU177		5	7	2
32DU180		4	7	4
32DU417		1	3	4
32DU419		1	5	4
32DU638		2	6	3
32DU695		1	5	4
32DU698		4	6	3
32DU699		4	6	4
32DU728		1	7	4
32DU744		4	7	4
32DU777		1	6	4
32DU789		1	6	4
<u>SITE TYPE: TRUNK BURIALS</u>				
32DU403		4	4	4
32DU691		5	6	4
32DU702		5	7	4
32DU703		5	7	4
32DU719		5	7	4
32DU720		5	7	4
32DU730		5	7	4
32DU731		5	3	4

Table 32. (cont.)

SITE NUMBER	PRIORITY STATUS	MANAGEMENT CODE	CONDITION CODE	IMPACT STATUS (1-5)
SITE TYPE: TRUNK BURIALS (cont.)				
32DU740		5	3	4
32DU780		5	7	4
SITE TYPE: CEMETERIES				
32DU722		5	7	3
32DU757		5	7	4
32DU759		5	7	4
32DU782		4	7	4
32DU786		5	7	4
SITE TYPE: EARTHLodge VILLAGES				
32DU1		4	6	1
32DU2		5	5	1

* Definitions

PRIORITY STATUS (Artifact scatters only): An assigned ranking of high (1) to low (4) and none (-) based on the size, content and integrity of the site.

MANAGEMENT CODE: The investigators' management recommendation for each site [on ND State site forms] based on seven categories. 0 - Unknown; 1 - No further work necessary; 2 - Further evaluation required; testing, resurvey, or some form of research needed before further recommendations can be made; 3 - Impact analysis required; analyze construction plans to evaluate impacts and/or check feasibility of avoidance; 4 - Additional evaluation and impact analysis required; both "2" and "3"; 5 - Avoidance; the site should be avoided if possible. If the site cannot be avoided, mitigation is required; 6 - Exclusion; impacts to this site cannot be mitigated. It must be preserved. [Note: Categories 0 and 6 were not assigned - see Table 31].

CONDITION CODE: The investigators' estimate of the site condition [on ND State site forms], based on seven categories. 0 - Unknown; 1 - Destroyed - site has been completely eradicated; 2 - Inundated - site is under water; 3 - Very poor - more than 75% of the site has been disturbed; 4 - Poor - 50% - 75% of the site has been disturbed; 5 - Fair - 25% - 50% destroyed; 6 - Good - less than 25% has been destroyed; 7 - Excellent - the site is relatively undisturbed.

IMPACT STATUS: The investigators' assessment of impacts to the site, ranked as follows: 1 - Under major and ongoing impacts (primarily badlands surface erosion/mass wasting and shoreline erosion); 2 - Under minor and ongoing impacts (limited shoreline erosion, surface erosion); 3 - Presently under no significant impacts but potentially will be within the next ten years; 4 - Under no impacts now (other than normal weathering) or in the foreseeable future (excepting deliberate changes in land use at the site areas); 5 - Site essentially destroyed by erosion.

also be considered for a thematic nomination. These sites represent a mortuary practice that was of limited duration, but which reflects pressures of acculturation in the area.

Procurement and utilization of Knife River Flint is a major research topic in Dunn County. While most previous work has focused on the quarry locales, the sites along Moccasin Creek and Squaw Creek in the survey area might be considered for a district nomination as representative of the procurement and utilization of the naturally occurring Knife River Flint cobbles present in outwashed gravels.

Finally, the two earthlodge villages located in the survey area, 32DU1 and 32DU2, are clearly significant, and 32DU2 has been determined eligible for nomination to the National Register of Historic Places. Site 32DU2 has been tested and limited salvage excavations have been undertaken; however, the site has never been fully evaluated. It is our opinion that the site should be fully evaluated prior to being listed so that adequate measures can be taken to manage this significant resource in the face of continuing mass wasting of the butte edge. Site 32DU1 has not been professionally tested, and such an evaluation is considered a necessary documentary step prior to nomination of this site for reasons similar to those advanced for 32DU2. At 32DU1 the most imminent threat is vandalism.

In terms of management of the cultural resources, one critical consideration is the nature of the impacts to the sites. All sites suffer to a degree from natural impacts caused by weathering and age. Many of the sites discussed in this report are subject to bank slumpage from lake shore erosion and some are being extensively vandalized. In the short term, the impacts of weathering and age are unlikely to substantially alter the research potential of these sites. The impacts from shoreline erosion have already destroyed the integrity of some sites. Vandalism and other "immediate" threats need to be monitored, but are difficult to anticipate. The agency of most crucial concern, which will most substantially diminish the research potential at some of the sites, is shoreline erosion.

The evaluation and management of sites located during this survey has been considered above by site type. Table 32 summarizes the information on site management, condition and impacts. For artifact scatters a priority ranking of high (1) to low (4) and none (-) has been

added based on the size, content and integrity of the sites as presented earlier. Rock cairns and one eagle trapping pit associated with artifact scatters are noted and unusual stone settings emphasized.

Recommendations and Specific Management Objectives

For numerous reasons the primary recommendations for the management of the cultural resources within the Dunn County survey area described above are those of protection and avoidance. Even if sufficient funds were available to fully mitigate all sites, this procedure would not be recommended. What are state-of-the-art techniques today will no doubt be superseded by those of future generations of archeologists. Excavation should only be undertaken as a last resort to salvage information that will otherwise be lost, or as part of a well-formulated research design, the results of which will clearly advance the discipline of archeology in its broadest sense.

Immediate management decisions should be made concerning those sites currently being affected by either slope erosion or reservoir/cutbank erosion (Table 32 - Impact Status 1). Thirteen artifact scatters have been assigned an impact status 1, with twenty-one receiving an impact status 2. Of the artifact scatter sites with impact status 1, five are priority 1 sites (32DU132, 32DU406, 32DU669, 32DU765 and 32DU770) and five are priority 2 sites (32DU113, 32DU637, 32DU735, 32DU764 and 32DU769). Other site types with sites in the impact status 1 category include two stone circles (32DU655 and 32DU714), the remains of the community of Independence currently located on an island (32DU13) and both earthlodge villages (32DU1 and 32DU2).

These sites have already been significantly impacted and are likely to be completely destroyed in a relatively short period of time. Once evaluated, those sites that are considered eligible for nomination to the National Register of Historic Places should be either preserved, through stabilization of the erosional impact, or mitigated.

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alluvial: Deposits of clay, silt, sand, gravel or other rock materials transported by flowing water and deposited on floodplains, streams, or in valley floors.

amsl: Above mean sea level.

badland: Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

camelback: A type of truss bridge in which the arched top chord is formed with five slopes.

dovetail: A projecting, wedge-shaped part (called tenon) that fits into a corresponding indentation (called mortise) to form a joint.

ecosystem: A system made up of a community of plants and animals and its interrelated physical environment.

field survey: Intensive pedestrian survey utilizing spacing intervals averaging 30 meters apart, varying with terrain and surface visibility.

gambrel roof: A roof with two slopes on each side, the lower steeper than the upper, which form the ridge.

hackly: Showing sharp, jagged points in fracture.

loess: An unstratified deposit of wind blown silt, sand or clay.

paleosol: Former ground surface that has been subsequently buried.

patination: The formation of a weathered surface on an artifact which is caused by oxidation or chemical alteration of the surface after long exposure or burial.

previously recorded site: A site previously assigned a North Dakota State Site Number.

SIRBS: Smithsonian Institution-River Basin Surveys. When SIRBS appears as a reference it indicates that the reference is to River Basin Survey notes only and will not be found in the References Cited section.

shoreline survey: Survey conducted by boat along accessible shoreline areas, inspecting cutbanks for features/artifacts using binoculars when the area cannot be more closely inspected by boat or pedestrian survey.

shovel testing: Tests accomplished during the survey with a shovel to inspect the immediate subsurface conditions in areas of poor visibility. Generally the test pit would measure approximately 45 x 45 x 45cm deep.

soil association: A group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

take-line/taking area: That area alongside the reservoir taken/managed by the U.S. Army Corps of Engineers.