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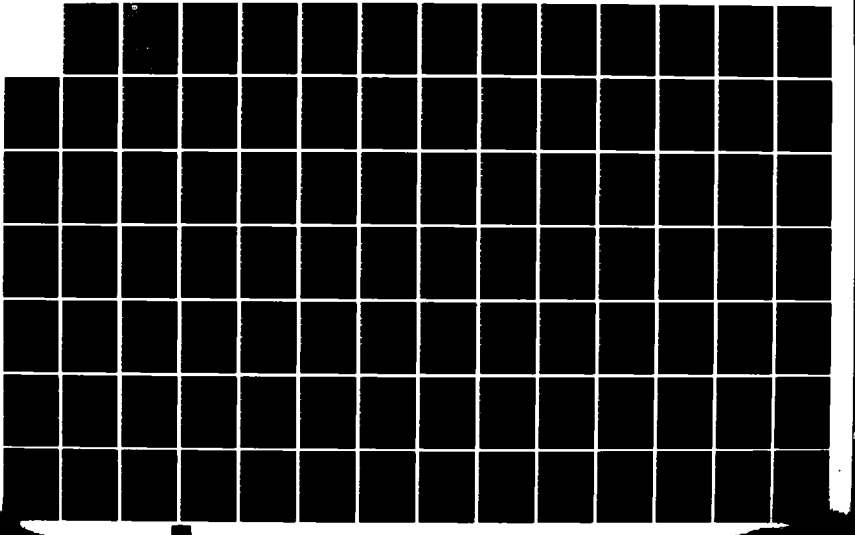

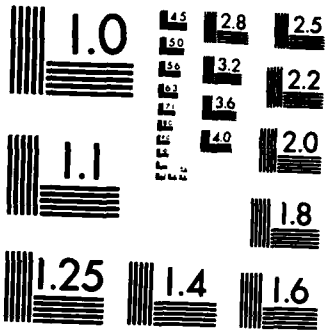

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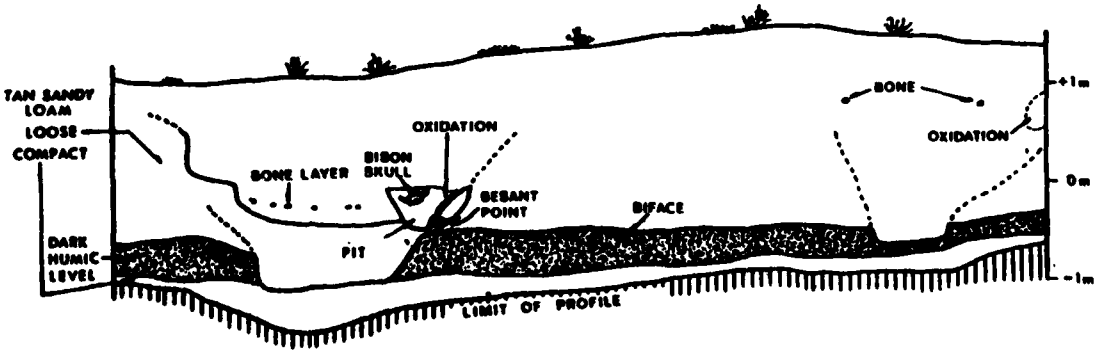
A Cultural Resources Inventory of Proposed Recreation Areas, Lake Oahe: Emmons, Morton, and Sioux Counties, North Dakota

Volume 1



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Prepared by: Larson–Tibesar
421 South Cedar
Laramie, Wyoming

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ABSTRACT

An intensive cultural resource inventory was conducted on approximately 1,140 acres of land adjacent to Lake Oahe in Emmons, Morton and Sioux Counties, North Dakota. The work was conducted by Larson-Tibesar Associates during June of 1982 under the auspicies of the U. S. Army Corps of Engineers (Contract DACW45-82-M-1985). A total of 34 archeological sites were recorded and evaluated indicating a possible continuum of occupation from the Archaic to the Historic time period. Thirteen of the sites evaluated are believed to be eligible for nomination to the National Register of Historic Places. Further work is necessary in order to determine the eligibility of 14 sites. Seven sites are not believed to be eligible for nomination to the National Register of Historic Places.

A Cultural Resource Inventory of Proposed Recreation Areas, Lake Oahe: Emmons, Morton and Sioux Counties, North Dakota

Volume I

by

Thomas K. Larson
Kurt P. Schweigert
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December, 1983

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ABSTRACT

An intensive cultural resource inventory was conducted on approximately 1,140 acres of land adjacent to Lake Oahe in Emmons, Morton and Sioux counties, North Dakota. The work was conducted by Larson-Tibesar Associates during June of 1982 under the auspicies of the U. S. Army Corps of Engineers (Contract DACW45-82-M-1985). A total of 34 archeological sites were recorded and evaluated indicating a possible continuum of occupation from the Archaic to the Historic time period. Thirteen of the sites evaluated are believed to be eligible for nomination to the National Register of Historic Places. Further work is necessary in order to determine the eligibility of 14 sites. Seven sites are not believed to be eligible for nomination to the National Register of Historic Places.

ACKNOWLEDGMENTS

A number of individuals contributed both time and knowledge to the accomplishment of this inventory. Primary among these is Ralph Thompson of Bismarck, North Dakota. Mr. Thompson spent several days with our crew in the field and shared with us his extensive knowledge of the study area. In a number of cases, his information made our task much easier and more productive.

The authors would also like to thank the personnel of the Midwest Archeological Center in Lincoln, Nebraska for allowing us to access invaluable materials concerning Middle Missouri archeology. In particular, we would like to thank Tom Thiessen for sharing with us his information on the subject.

Chris Dill, Ann Johnson, J. J. Hoffman, Carl Falk, Greg Fox and Allen Osborn were all contacted at one time or another during this study and they are greatfully acknowledged for the information they provided.

In addition to the authors listed on this report, William Tibesar, Paul Sanders, Jayne Adams and Mona Thompson of Larson-Tibesar Associates all contributed extensively in various aspects of report preparation.

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CHAPTER ONE

INTRODUCTION

by

Thomas K. Larson

During June of 1982, Larson-Tibesar Associates of Laramie, Wyoming, conducted a cultural resource inventory of approximately 1,140 acres (461 hectares) of land adjacent to Lake Oahe in North Dakota. This work was conducted for the United States Army, Omaha District Corps of Engineers (DACW45-82-M-1985). The ten parcels of land inventoried are subject to future recreation development.

Figure 1 is a map showing the general location of the ten areas inventoried. Table 1 contains the written legal descriptions of the areas inventoried. More specific maps of individual project areas are shown in Figures 2 through 12. All field work was within portions of Emmons, Morton and Sioux counties, North Dakota.

Crew members for the Lake Oahe project included Thomas Larson (principal investigator), Paul Sanders, Ted Krieg, Mona Thompson and Patricia Treat. The total survey amounted to 10 field days. Historic sites located during the inventory were also inspected by Kurt P. Schweigert and Ronald Deiss of Cultural Research and Management, Bismarck, North Dakota.

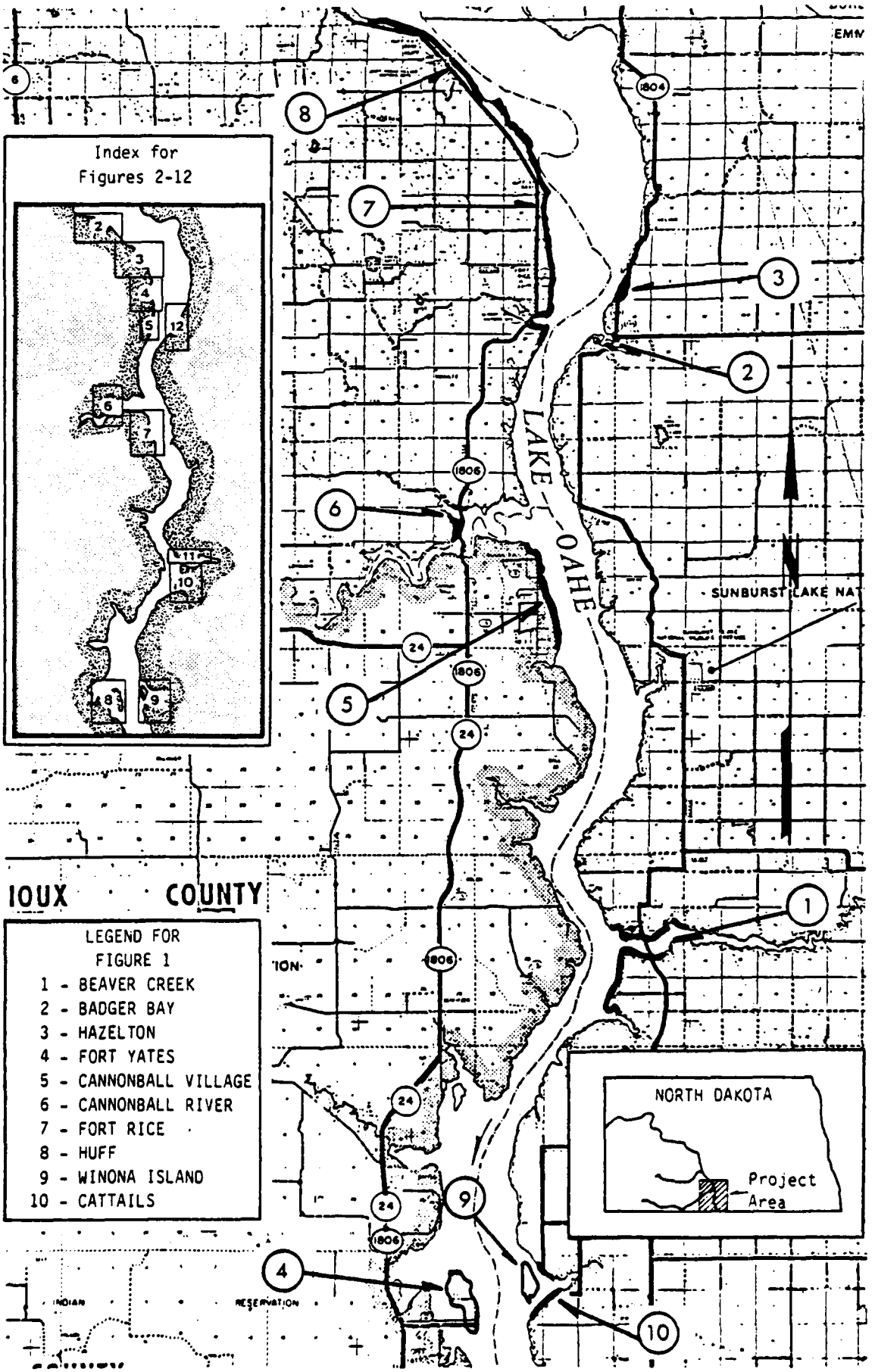


Figure 1. Map of areas inventoried. Approximate scale: 1" = 4 miles. Adapted from Corps of Engineers, Lake Oahe Boating and Recreation maps.

Table 1. Legal locations of the areas inventoried.

RECREATION AREA	MASTER PLAN AREA NO.	LEGAL LOCATION	COUNTY
1. Beaver Creek	156	SW¼ Sec.18, T132N, R78W	EM
		S½ Sec.13, T132N, R79W	EM
		S½ Sec.14, T132N, R79W	EM
		Shoreline Sec.23, T132N, R79W	EM
		NW¼ Sec.24, T132N, R79W	EM
		Shoreline Sec.26, T132N, R79W	EM
2. Badger Bay	166	NE¼ Sec.24, T135N, R79W	EM
3. Hazelton	167	W½ W½ Sec. 7, T135N, R78W	EM
		SE¼ SE¼ SE¼ Sec.12, T135N, R79W	EM
4. Fort Yates	146-148	Shoreline W½ Sec. 7, T130N, R79W	SI
		Shoreline NW¼ Sec.18, T130N, R79W	SI
		S½ Sec. 1, T130N, R80W	SI
		Shoreline NE¼,NW¼,SE¼, Sec.12 T130N, R80W	SI
		Shoreline NE¼ Sec.13, T130N, R80W	SI
5. Cannonball Village and 6. Cannonball River	162-164	W½ Sec.35, T134N, R79W	SI
		NE¼ NE¼ NW¼ Sec.35, T134N, R79W	SI
		E½ W½ Sec.26, T134N, R79W	SI
		W½ Sec.17, T134N, R79W	MO
		E½ Sec.23, T134N, R79W	SI
		NE¼ NE¼ NE¼ Sec.22, T134N, R79W	SI
7. Fort Rice and 8. Huff	166-171	W½ SE¼ NE¼ NE¼ Sec.22, T135N, R79W	MO
		NW¼ Sec.23, T135N, R79W	MO
		NE¼ SE¼ Sec.15, T135N, R79W	MO
		Shoreline W½ Sec.14, T135N, R79W	MO
		Shoreline E½ W½ Sec.11, T135N, R79W	MO
		Shoreline E½ W½ Sec. 2, T135N, R79W	MO
		Shoreline E½ W½ Sec.35, T136N, R79W	MO
		Shoreline E½ W½ Sec.26, T136N, R79W	MO
		Shoreline SW¼ Sec.15, T136N, R79W	MO
		Shoreline NE¼ Sec.27, T136N, R79W	MO
		E½ Sec.22, T136N, R79W	MO
		SW¼ Sec.15, T136N, R79W	MO
		E½ Sec.16, T136N, R79W	MO
		SW¼ Sec. 5, T136N, R79W	MO
		N½ Sec. 6, T136N, R79W	MO
		S½ Sec.32, T137N, R80W	MO
		SW¼ Sec. 9, T136N, R79W	MO
		E½ Sec. 8, T136N, R79W	MO
9. Winona Island	149	Sec.22, T131N, R79W	EM
		Sec. 5, T130N, R79W	EM
		SW¼ Sec. 4, T130N, R79W	EM
10. Cattails	149	NE¼ Sec. 8, T130N, R79W	EM
		NW¼ Sec. 9, T130N, R79W	EM

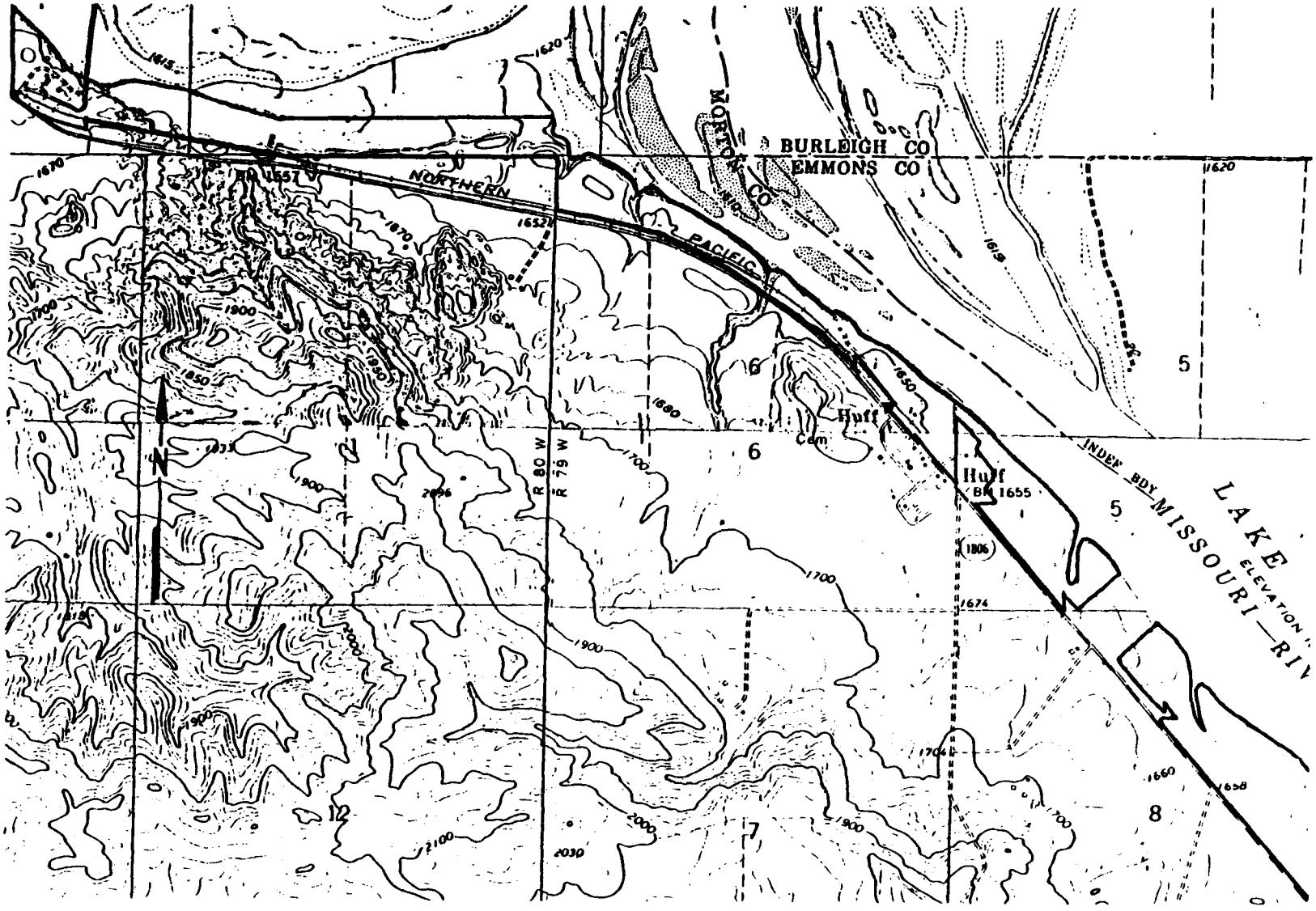


Figure 2. Map showing portions of the Huff survey area. Adapted from U.S.G.S. Sugarloaf Butte and Huff quadrangles. Scale 1:24,000.

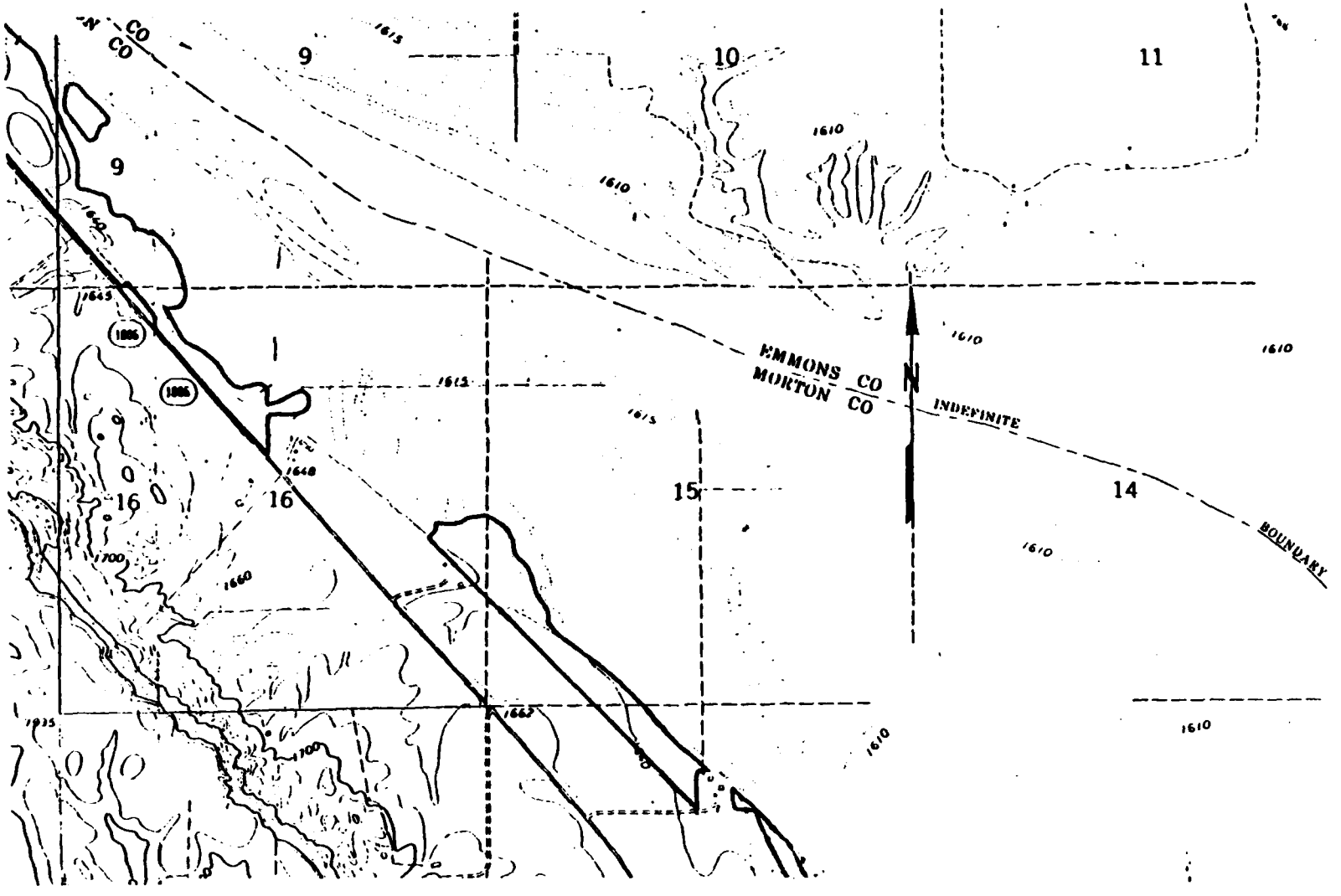


Figure 3. Map showing portions of the Huff and Fort Rice survey areas. Adapted from U.S.G.S. Fort Rice Quadrangle. Scale 1:24,000.

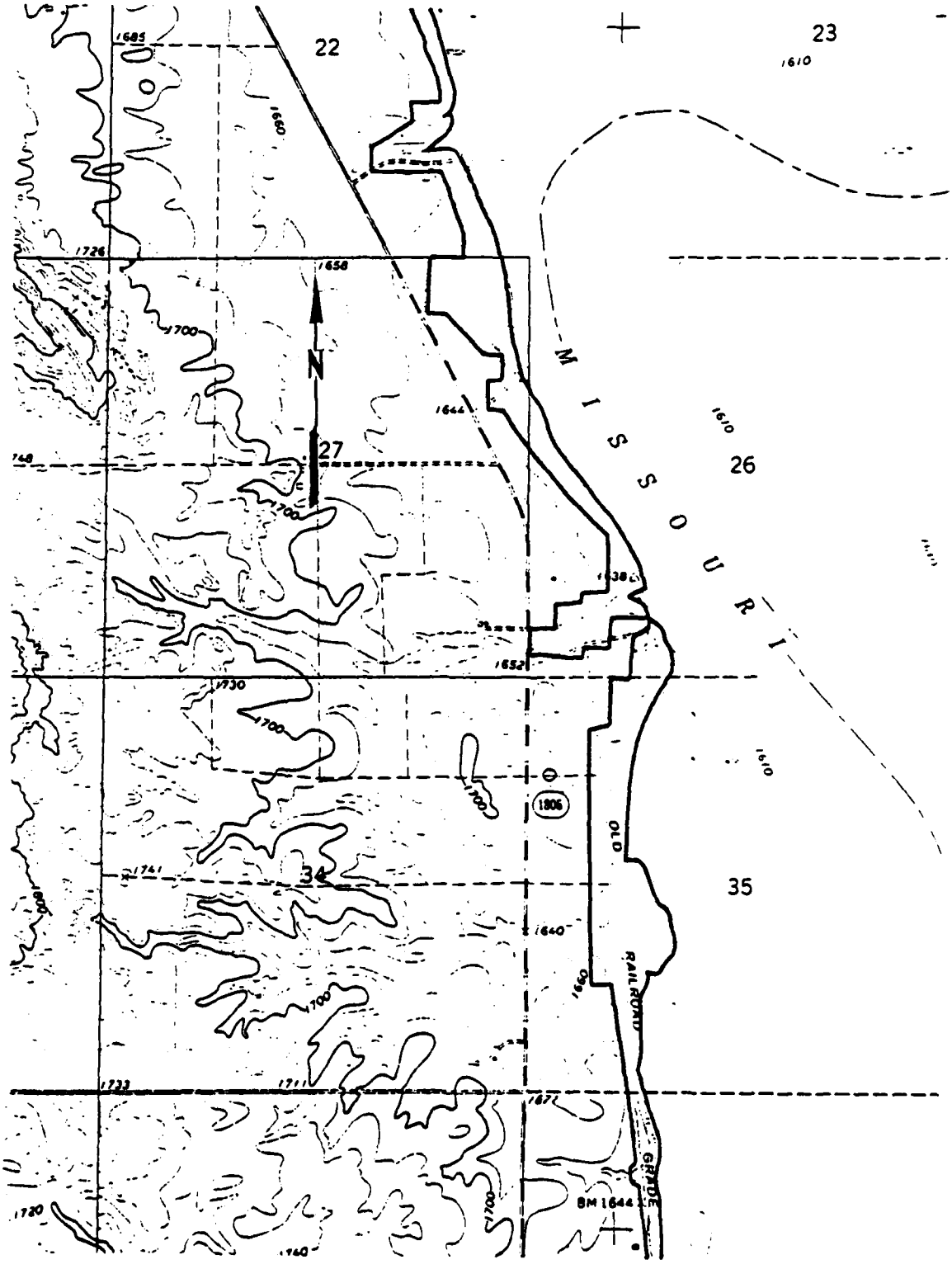


Figure 4. Map showing portions of the Fort Rice survey area. Adapted from U.S.G.S. Fort Rice Quadrangle. Scale 1:24,000.

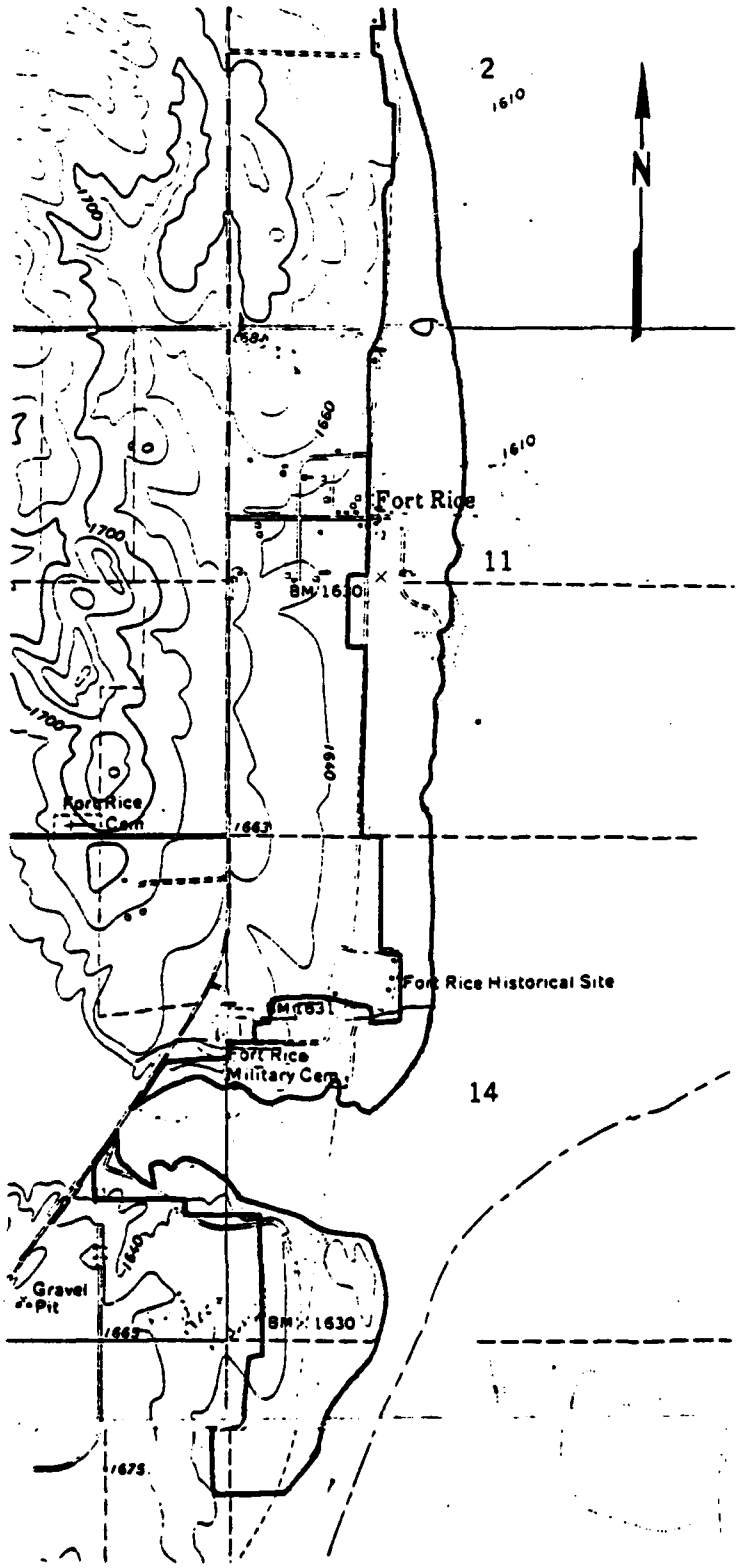


Figure 5. Map showing portions of the Fort Rice survey area. Adapted from U.S.G.S. Fort Rice Quadrangle. Scale 1:24,000.

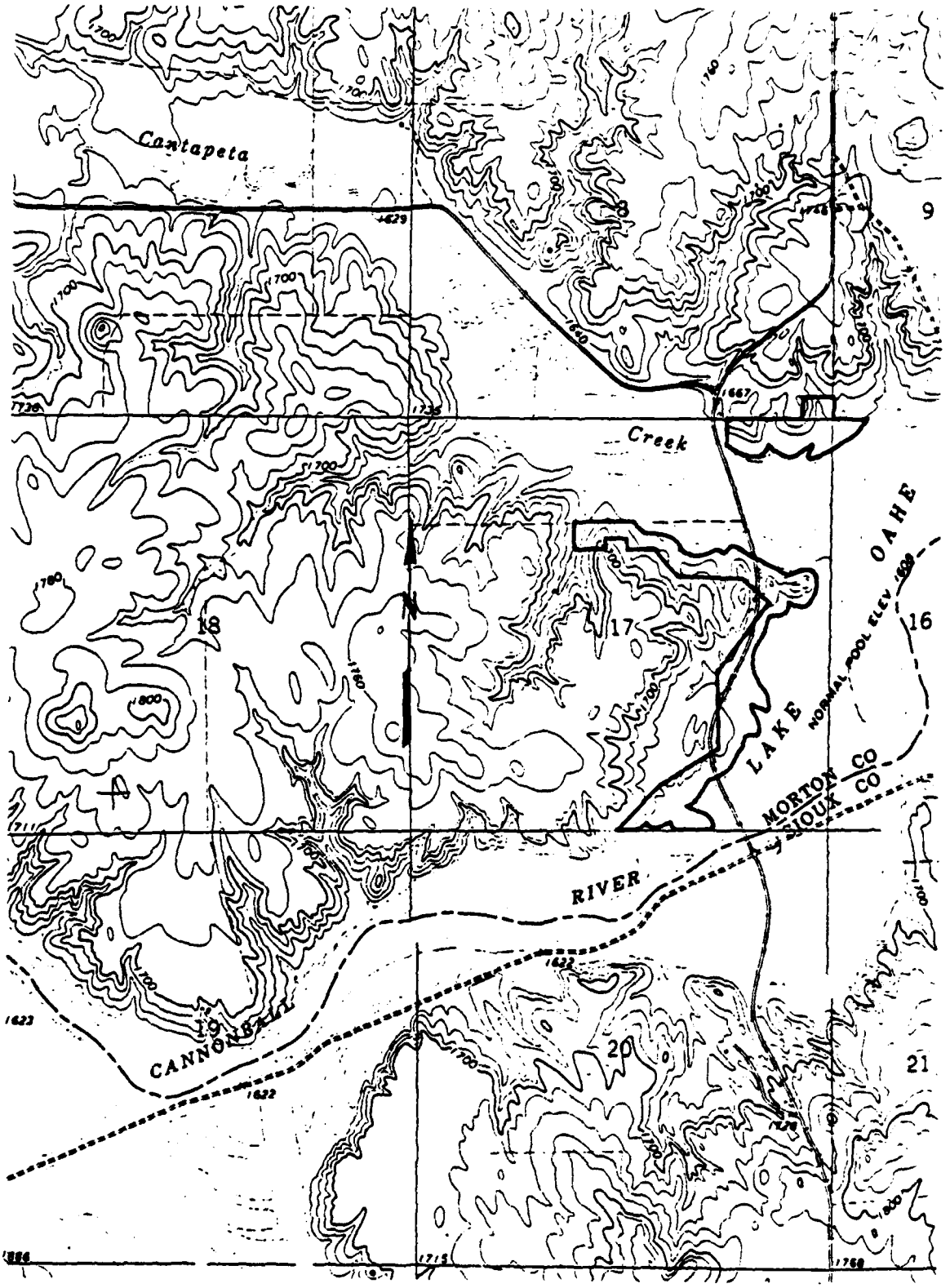


Figure 6. Map showing the Cannonball River survey area. Adapted from U.S.G.S. Cannon Ball NW Quadrangle. Scale 1:24,000.

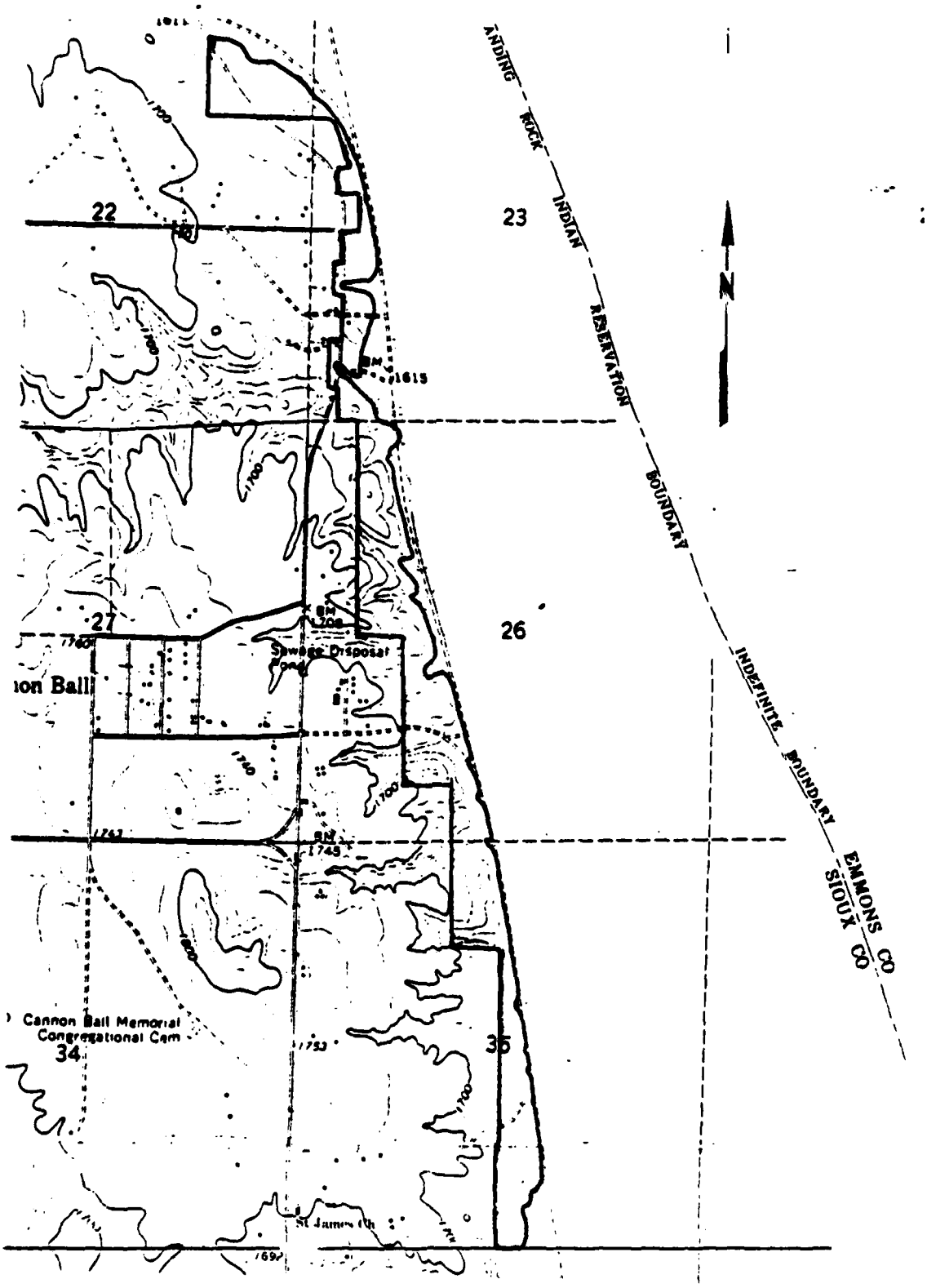


Figure 7. Map showing the Cannonball Village survey area. Adapted from U.S.G.S. Cannon Ball and Cannon Ball SE quadrangles. Scale 1:24,000.

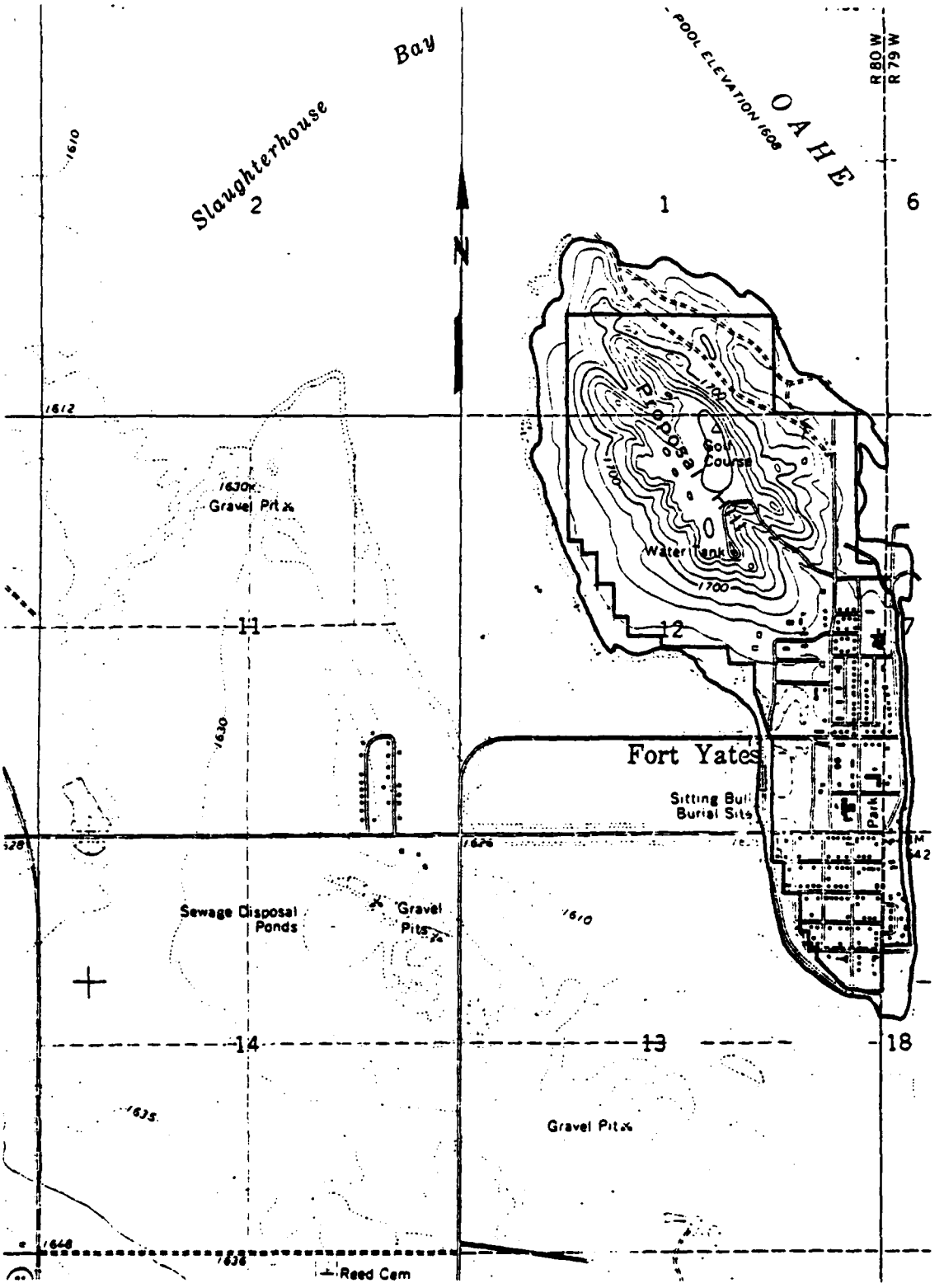


Figure 8. Map showing the Fort Yates survey area. Adapted from U.S.G.S. Fort Yates Quadrangle. Scale 1:24,000.

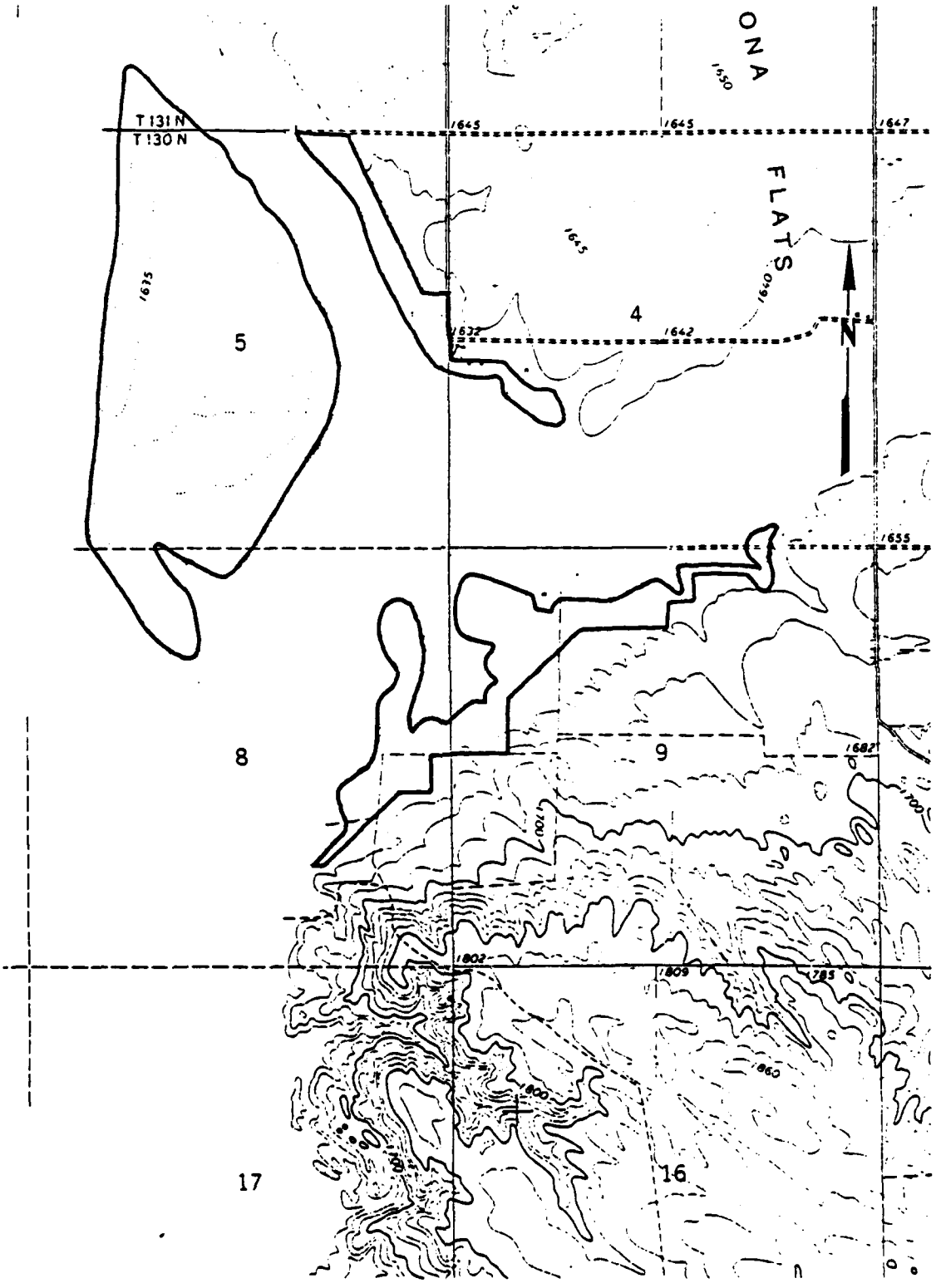


Figure 9. Map showing the Winona and Cattails survey areas. Adapted from U.S.G.S. Fort Yates SE Quadrangle. Scale 1:24,000.

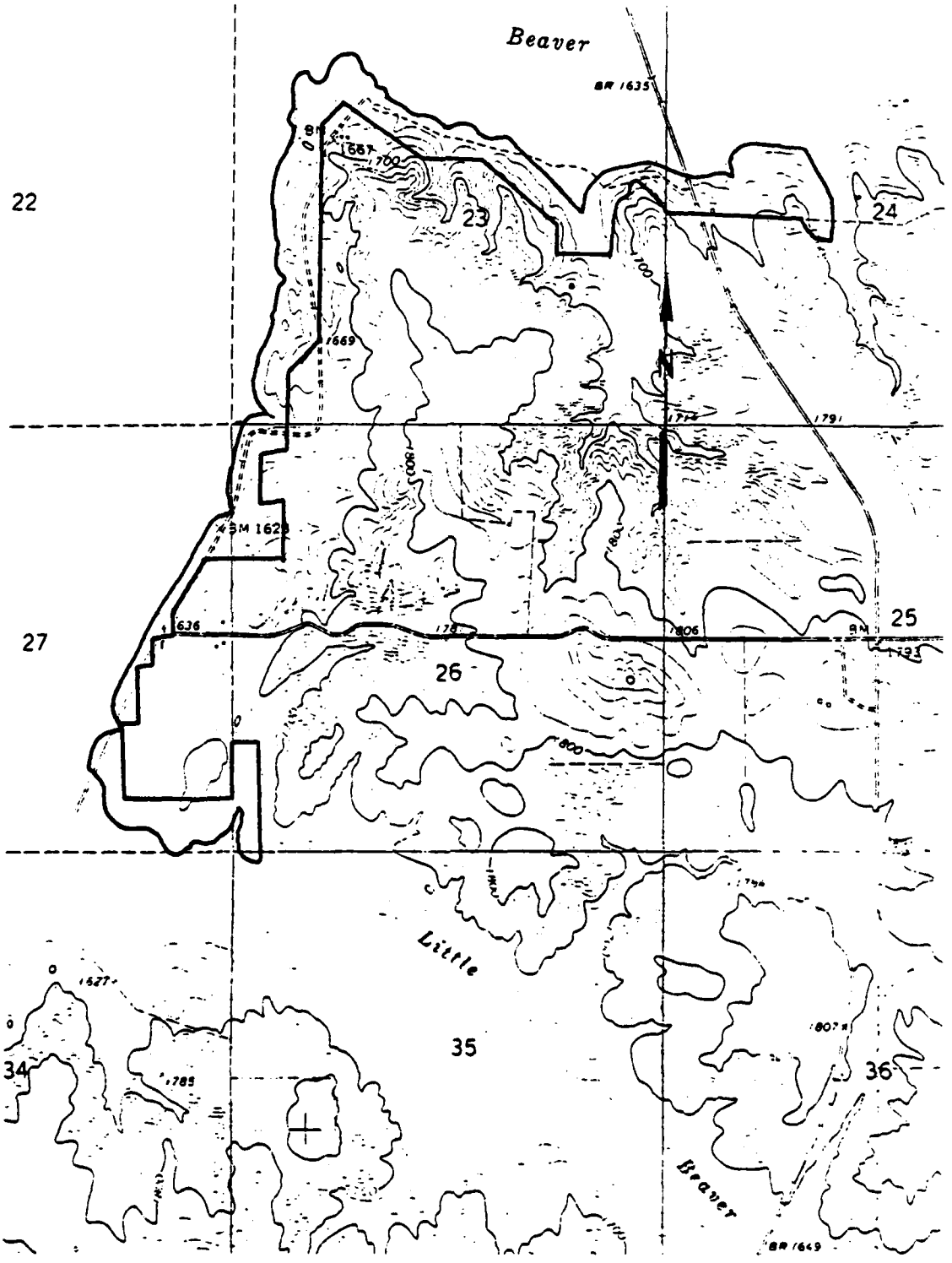


Figure 10. Map showing portion of the Beaver Creek survey area. Adapted from U.S.G.S. Fort Yates NE Quadrangle. Scale 1:24,000.

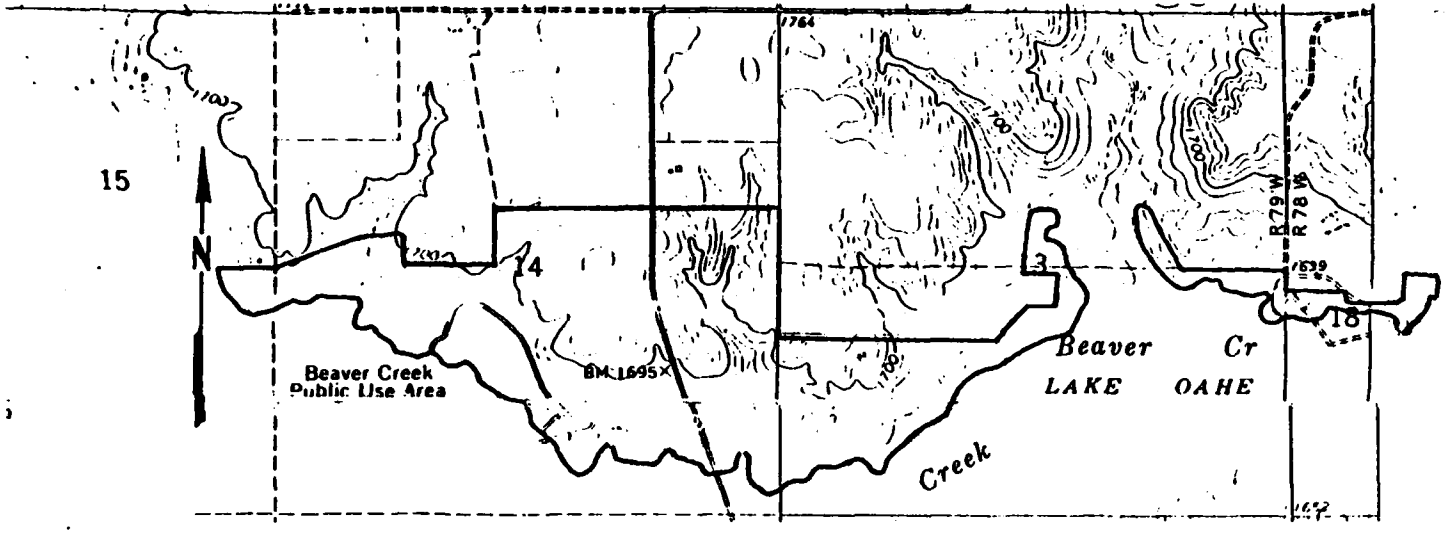


Figure 11. Map showing portions of the Beaver Creek Survey area. Adapted from U.S.G.S. Fort Yates NE and Cannon Ball SE quadrangles. Scale 1:24,000.

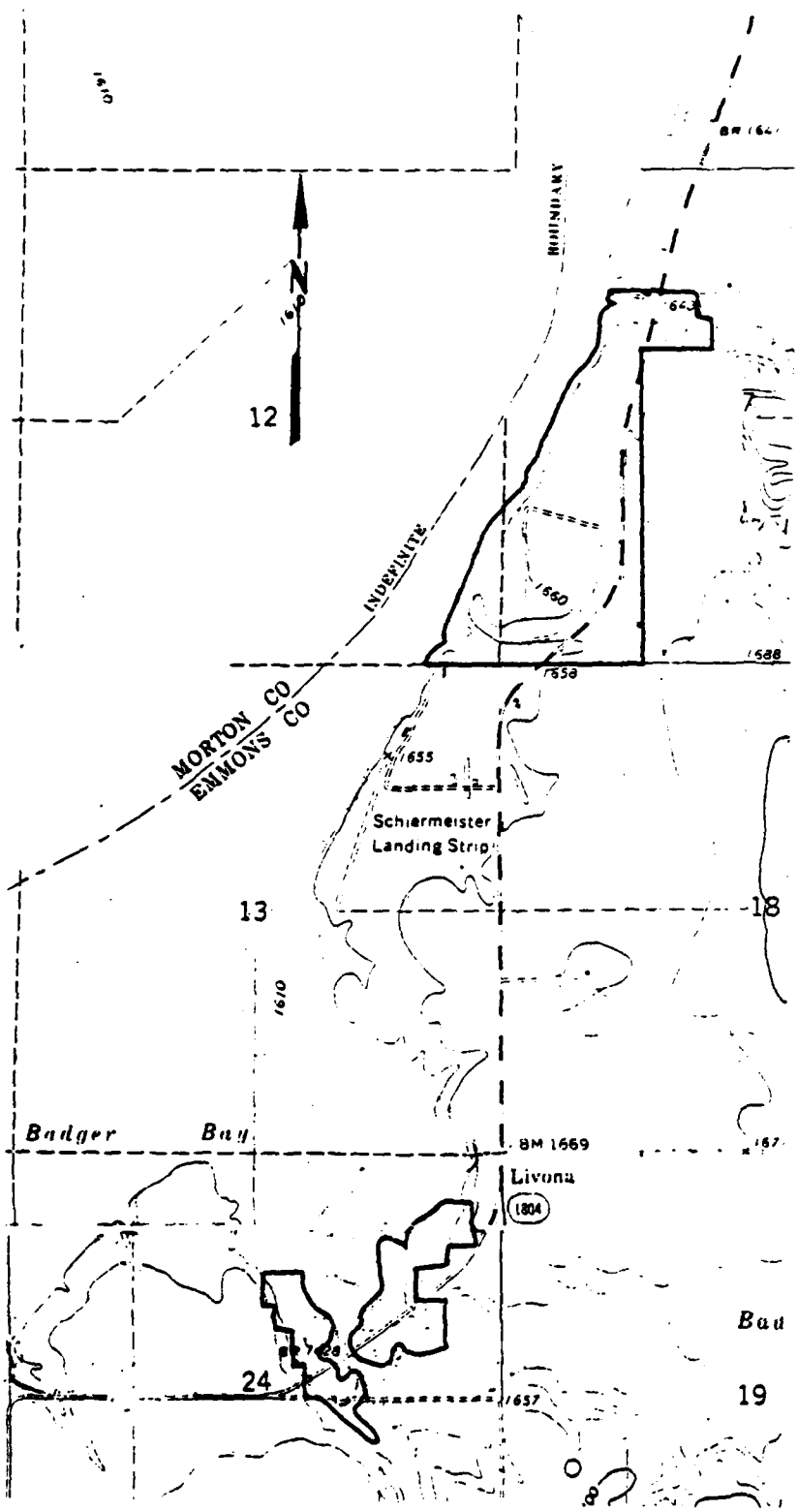


Figure 12. Map showing the Hazelton and Badger Bay survey areas. Adapted from U.S.G.S. Fort Rice and Cannon Ball quadrangles. Scale 1:24,000.

The survey efforts involved recording and evaluation of 34 sites. Sixteen of these sites were previously recorded by other researchers and eighteen are newly discovered properties. Of the sites recorded, at least one component at 13 separate sites is believed to be eligible for nomination to the National Register of Historic Places. Further work would be needed at 14 sites to determine the eligibility of one or more components.

The following chapters of this report discuss the regional setting, previous work in the area, methodologies, results and recommendations for the 1982 Lake Oahe project. Also contained within this volume is an appendix which describes the prehistoric artifactual materials collected from various sites during the project.

Since this report is intended for general distribution, the exact locations of the sites encountered are not discussed. This measure has been taken to protect, to the degree possible, the integrity of the sites discussed herein. The exact legal locations of these sites are shown in both written and graphic form in the site forms completed for this project. These forms have been supplied to the Corps of Engineers as Appendix B to this report in a separate, detached, volume. Those readers who desire a copy of Volume II of this report should contact the staff archeologists at the Omaha Engineer District Office, for further information.

In addition to the information contained in volumes I and II of this report, the Corps of Engineers has also been supplied with USGS topographic maps, aerial photos, land plat maps, and boating and recreation maps showing both the areas inventoried and the locations of the sites recorded. Copies of the site forms for this project are also on file at the State Historical Society of North Dakota. All cultural materials collected will be stored at the same institution.

The work performed under DACW45-82-M-1985 is intended to provide compliance with all, or pertinent segments of, the following list of federal and state documents:

1. Antiquities Act of 1906, 43CFR Part 3.
2. The Reservoir Salvage Act of 1960.
3. The National Historic Preservation Act of 1966, 36CFR Part 800.
4. National Environmental Policy Act of 1969.
5. Executive Order 11593.
6. Historic and Archeological Preservation Act of 1974.
7. The American Indian Religious Freedom Act.
8. Archaeological Resources Protection Act of 1979, 36CFR Part 1215.
9. North Dakota Guidelines for Cultural Resource Inventory Projects.

It is hoped that this report will serve as both a usable data base for future researchers and as an effective management report for land administrators. The 1982 Larson-Tibesar inventory involved only a small portion of the total shoreline of Lake Oahe in North Dakota. Even so, it is believed that following chapters of this report demonstrates both the significance and the density of cultural materials along the northern segment of Lake Oahe.

CHAPTER TWO

ENVIRONMENTAL SETTING

by

Thomas K. Larson

The study area for this project is located in the Missouri Valley of North Dakota. It is along the extreme northern segment of Lake Oahe on either side of the Missouri River. The 10 parcels of land are scattered along approximately 70 kilometers of partially inundated river valley starting 26 kilometers south of the communities of Bismarck and Mandan and extending southward to Fort Yates, North Dakota.

The Missouri Valley is within the Great Plains physiographic province (Fenneman 1931). The segment of the valley within North Dakota and South Dakota is both physiographically and culturally distinct from areas up and down stream and has come to be referred to as the Middle Missouri subarea or region (Will and Spinden 1906; Wedel 1961).

Physiography, Geology, and Paleoclimate

Within the study area, the Middle Missouri Valley forms a trench cut into the Missouri Plateau from 3 to 7 kilometers wide and up to 100 meters deep. The Missouri Plateau is a northeastward sloping plain composed primarily of Early Cenozoic deposits. Downward cutting of the Missouri River has exposed interbedded clay, silt and sand, of Tertiary age, and a

Cretaceous shale bedrock (Moran et al. 1976:134-136).

Pre-late Wisconsinan glaciations deposited a great deal of till over the eastern portions to the Missouri Plateau. The last of these was the Napolean Glaciation which probably did not advance beyond the present location of the Missouri River in the study area (Moran et al. 1976:149). Following the deposition of the Napolean drift there was a period of erosion and weathering during which the present valley bottoms were entrenched. Moran et al. (1976:150) consider this weathering episode to be middle Wisconsinan in age.

During the late Wisconsinan, the Lostwood Glaciation covered areas to the north and east of the study area with final advances of ice starting approximately 22,000 years B.P. Near the end of the Lostwood Glaciation, meltwater flowed southward into the Missouri Valley depositing a gravel terrace approximately 10 meters above the present river level. These gravels were subsequently covered with a loess deposit. These deposits are referred to as Mallard Island and form the lowest member of what Clayton and Moran (1971) have named the Oahe formation.

From the end of glaciation to approximately 10,000 years B.P. there occurred a cool humid period during which time much of the area was covered by spruce-aspen woodland. These conditions resulted in the development of a fine-grained and brightly-colored soil which makes up the lower portion of the Aggie Brown Member of the Oahe formation (Moran et al. 1976:153). Between 10,000 and 8,500 years B.P., the climate warmed somewhat and the spruce-aspen woodland was replaced by grasslands. The resultant soils are the dark fine-grained portions of the upper Aggie Brown Member (Moran et al. 1976:153). The formation of the Aggie Brown Member is, chronologically, nearly analogous to the Paleoindian period of the cultural sequence for the Plains (e.g. Frison 1978 and Chapter Three of this report).

Between 8,500 and 4,500 years B.P., there was a period of warmer and dryer climate than the present. Within the Middle Missouri Valley, this time period is represented by the coarse-grained and light-colored Pick City Member of the Oahe formation (Moran et al. 1976:154). This age and climate corresponds to what others have referred to as the Altithermal period (Antevs 1955) or Atlantic Climatic episode (Bryson et al. 1970). It also corresponds to the Early Plains Archaic cultural period (Frison 1978).

The late Holocene is described by Moran et al. (1976:154) as the present climate interspersed with intervening dry periods. The resultant Riverdale Member of the Oahe formation is therefore characterized by dark submembers, representing the cooler periods, separated by coarser-grained and lighter-colored units which represent the dry periods.

Modern soils in the Missouri Valley of southern North Dakota are usually a dark grey-brown prairie top soil less than 20 centimeters thick. Hilltops and steeper slopes often have a stoney or gravel surface (Kazeck 1956:85).

The Missouri River is the major water course draining western North Dakota. Prior to the numerous dams constructed along the Missouri, the river transported enormous amounts of sediment southward toward the Gulf of Mexico. Eastward flowing tributaries of the Missouri have highly developed dendritic drainage patterns. The major tributary drainages within or near the study area are the Heart and Cannonball rivers:

> The Heart River has its source near Saddle Butte, in Billings County, which is a mere twelve miles from the main channel of the Little Missouri River...From these higher elevations, the Heart flows torturously eastward through Stark, Grant and Morton Counties, to join the Missouri just south of Mandan. Although this river has a drainage basin of only 3,000 square miles [7770 square kilometers], it carries a large volume of water each spring...
>
> The Cannonball River begins in the southern part of Billings County and, with its important tributary, Cedar Creek, drains some

> 6,000 square miles [15,540 square kilometers] just north of the South Dakota border. The Cannonball has a length to 520 miles [837 kilometers], with an average fall of three feet per mile [.6 meters per kilometer] (Kazeck 1956:124).

A number of authors (e.g. Lehmer 1971:53) have noted the differences in both physiography and subsistence patterns between the east and west sides of the Missouri River. Nearly all of the differences are attributable to the fact that areas west of the Missouri are well-drained plains with only a minimum of glacial till. On the other hand, areas to the east of the river are covered with glacial drift prairie and form a kettle topography characterized by nonintegrated sloughs and ponds.

Climate

The portion of the Missouri Valley in which the study area is located is within the Upper Sonoran life zone (Bailey 1926). This zone is characterized by a semiarid climate in which evaporation exceeds precipitation most of the year. Mean annual precipitation ranges from 38 to 43 centimeters a year, with the rate of precipitation generally decreasing the farther south one goes (Kazeck 1956:87, 127).

This amount of precipitation would be insufficient for sustained agricultural development if it were not for the time of year it comes. As Wilkins and Wilkins (1977:16) point out:

> The only meteorological stations in the United States to record a lower annual precipitation than North Dakota's are those in the desert of the Southwest and the Great Basin area of the Far West. The single factor which enables North Dakota to survive is that 77 percent of the annual moisture comes during the growing season - a greater percentage than that received in the same period in any other state.

North Dakota is infamous for its temperature extremes. The July temperature mean for the study area is 21.7 degrees Centigrade, while the mean January temperature is -13.3 degrees Centigrade (Kazeck 1956:89; Jensen n.d.). Extremes for the state are a recorded low temperature of -85

degrees Centigrade and a high of 82.8 degrees Centigrade, both recorded during 1936 (Kazeck 1956:89).

Flora

Within the region of the study area, the Missouri Valley is a zone of transition, where short, mid and tall grasses exist side by side. Short and mid grasses are dominant, however, with common species being western wheat grass (Agropyron smithii), blue gramma (Bouteloua gracilis), buffalo grass (Buchloe dactyloides), needle-and-thread (Stipa comata), Sandberg bluegrass (Poa secunda), and thread-leaf sedge (Carex filifolia). Recent introduced species include such grasses as crested wheatgrass (Agropyron cristatum), brome grass (Bromus spp.), and sweet clover (Melilotus spp.).

Broadleaf cottonwood (Populus deltoides), various willows (Salix spp.), boxelder (Acer negundo), green ash (Fraxinus pennsylvanica), American elm (Ulmus americana), and bur oak (Quercus marcrocarpa) are the most common trees within the riparian habitats along the floodplains of the Missouri and its tributaries.

Shrubbery bearing edible fruit is common in sheltered areas within the valley. The more common of these include June berry (Amelanchier alnifolia), plum (Prunus americana), chokecherry (Prunus virginiana), buffaloberry (Shepherdia argentea), black currant (Ribes americanum) and wild prairie rose (Rosa arkansana). Other common edible plants include tipsin (Psoralea esculenta), Indian plantain (Plantago spp.), ground plum (Astragalus caryocarpus) and cattail (Typha latifolia).

Fauna

Most of the mammals found in the study area are equally common in both of Upper Sonoran Life Zone and the more northern and eastern Transition Zone of the state. Specific to the Upper Sonoran Zone, however, are

woodrats (Neotoma cinerea), prairie dogs (Cynomys ludovicianus), and, in the recent past, black-footed ferrets (Mustela nigripes) and badlands mountain sheep (Ovis canadensis auduboni).

Other mammals characteristic to both the Upper Sonoran and the Transition Zone include Richardson ground squirrels (Spermophilus richardsonii), thirteen-lined ground squirrels (Spermophilus tridecemlineatus), several species of field mice (Peromyscus sp.), white-tailed jackrabbits (Lepus townsendii), cottontail rabbits (Sylvilagus floridanus), weasels (Mustela frenata), mink (Mustela vision), striped skunks (Mephitis mephitis), red foxes (Vulpus vulpes), coyotes (Canis latrans), white-tailed deer (Odocoileus virginianus), mule deer (Odocoileus hemionus) and antelope (Antilocapra americana). In the recent past, bison (Bison bison bison), elk (Cervus canadensis), wolves (Canis lupus), black bears (Ursus americanus) and grizzly bears (Ursus arctos) are known to have inhabited the study area (Bailey 1926).

Characteristic breeding birds include many varieties of raptors, waterfowl and perching birds. Bailey (1926) gives an extensive list of these species which include the morning dove (Zenaidura macroura), burrowing owl (Speotyto cunicularia), Franklin gull (Larus pepixcan), Ferruginous hawk (Buteo regalis), sage grouse (Centrocercus urophasianus), magpie (Pica pica) and canvasback duck (Aythya valisineria). Many other species utilize the Middle Missouri Valley as part of their migratory path. Both bald (Haliaeetus leucocephalus) and golden (Aquila chrysaetos) eagles were observed during the field work.

Characteristic reptiles include the plains garter snake (Thamnophis radix), bull snake (Pitnophis sayi), prairie rattlesnake (Crotalus viridis), painted turtle (Chrysemys picta), snapping turtle (Chelydra

serpentina) and horny toad (Phrynosoma douglassi). Common amphibians include the tiger salamander (Ambystoma tigrinum) and several varieties of frogs (Rana sp.) and toads (Bufo sp.; Wheeler 1954).

Fish species in the Missouri River are both abundant and highly subject to the influence of man. Archeological investigations just south of the study area at the Jake White Bull site (39C06) have revealed the presence of gar (Lepisosteus sp.), minnows and carp (Hypobis sp.), white sucker (Catostomus commersoni) and several varieties of catfish (Ictalurus sp.; Ahler 1977:175).

Many of the vertebrates mentioned in the preceding paragraphs were utilized by the prehistoric inhabitants of the Middle Missouri subarea. Primary among these must be considered the American buffalo (Bison bison bison). Early historic accounts indicate that there were, at times, immense numbers of these animals along the Missouri River. Audubon, during his trips across the Dakotas in the 1840's, described the herds many times:

> In a cart heavily laden, he [James Kipp] passed through herds of buffalo for six days in succession. At another time he saw the great prairie near Fort Clark on the Missouri River, almost blackened by these animals, which covered the plain to the hills that bounded in all directions (in Bailey 1926:20).

In 1833, Maximilian noted the habit of the buffalo of migrating back and forth across the Missouri during their spring and fall migrations (Thwaites 1906). Wilcox (in Bailey 1926:21) noted the same phenomenon in the spring of 1862:

> At two different times our steamboat was obliged to stop, and tie up alongside the shore to avoid the immense herds of buffalo that were floating down the river. The first drove we encountered was near where Bismarck in North Dakota is now located. The river was nearly half a mile wide and was filled [to] nearly its entire width with live buffalos, and they were at least half an hour in passing. We encountered the other drove a little above the mouth of the Yellowstone and it must have contained at least 20,000 animals.

While aboriginal inhabitants in the Middle Missouri subarea utilized a

number of methods to procure bison, including jumps, pounding and individual kills, the drowned animals from these river crossings offered a unique resource base:

> The Arikaras are good swimmers, venture out on floating cakes of ice when the Missouri breaks up in the spring and bring ashore the drowned buffalo drifting by. Many of these animals in attempting to cross the river fall before the ice is strong enough, break-through. Often whole herds are thus drowned, which remain in the mud until the ice starts, when they are carried down by the current...Although these drowned animals are so much putrefied that the meat will scarsely stick together, and can be eaten with a spoon in its raw state, yet these indians devour it greedily...(Denig 1961:49).

While there is no firm archeological evidence to substantiate it, Lehmer (1971:55) believes that the practice of using drowned buffalo was probably also employed during prehistoric times. Besides pointing out the importance of bison to the aboriginal subsistence pattern, the above passage also indicates that subsistence, both with and without horticulture, in the Middle Missouri was highly dependent on a combination of factors including the climate, the river itself and the biotic assemblage present in and adjacent to the valley.

Fieldwork Conditions

Environmental conditions during the 1982 fieldwork were generally favorable. Less than 2 days were lost to rain. The major environmental problems encountered were the lush grass cover in much of the study area and high water levels of Oahe Reservoir. Based on ocular estimate, surface visibility ranged from 50 to 90 percent with variations in vegetation. Visibility was lowest in thick grass zones. It was substantially higher in recently cultivated fields and in eroded areas subjected to wave action.

The water level of Lake Oahe during the summer of 1982 was sufficiently high enough to cover most beach areas and come up to the cutbanks along the shoreline. Figures listed in the Bismarck Tribune between June 21 and July

1 indicate that the mean lake level was approximately 1613 feet (492 meters) A.M.S.L. In addition to the water itself, driftwood carried in by the high water level also obscured ground visibility in certain areas. This was especially true of the Winona Island parcel where nearly 100 percent of the shoreline below the cutbank was covered by one-half to one meter of driftwood.

CHAPTER THREE

PREHISTORIC/PROTOHISTORIC CULTURE HISTORY

by

W. Raymond Wood

Although the project area is located on the Missouri River in south-central North Dakota, the individual segments of the project are unevenly scattered along both sides of the river. No meaningful story could be patched together from such scattered enclaves. Consequently, it is necessary to consider a slightly larger geographic area in outlining the local culture history. For our purposes here we will review the history of that segment of the Missouri River between the modern boundary separating North and South Dakota, and Double Ditch, a protohistoric Mandan village site about ten miles north of modern Bismarck, North Dakota (Figure 13).

The basic culture historical scheme for this area is the one Donald J. Lehmer (1971) developed for the village cultures of the Northern Plains for the period after about A.D. 900. This part of the river has been defined as the Cannonball region, although it includes the lower reaches of the Knife-Heart region (Lehmer 1971:29). Earlier cultural periods and cultural units are very poorly known for the project area, and must be inferred on the basis of surface finds and scattered, poorly defined components in the general area. We will review in turn the evidence for each of the four major culture historical stages in the project area: Paleo-Indian,

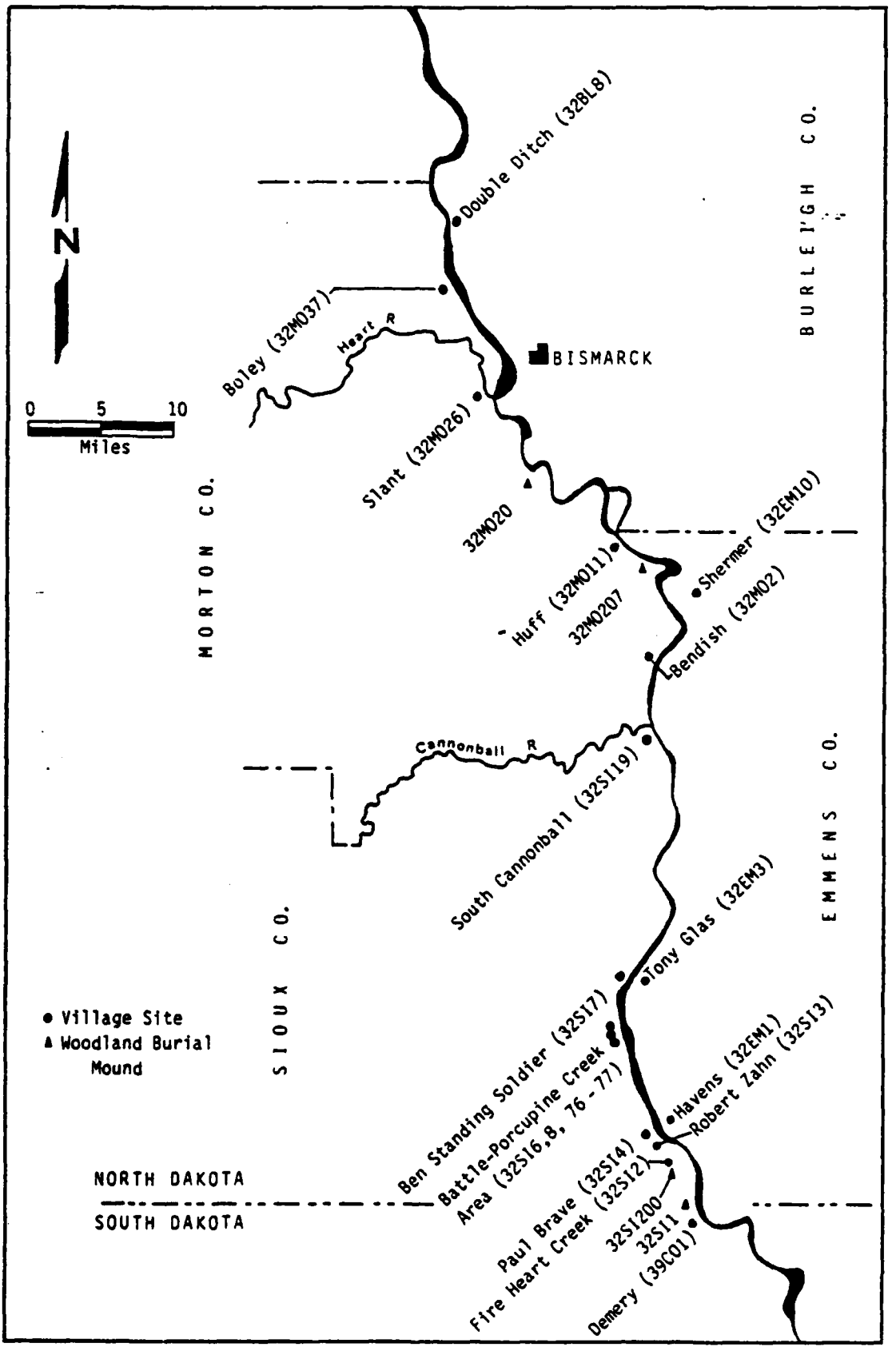


Figure 13. Excavated sites discussed.

Archaic, Woodland, and Plains Village.

Paleo-Indian

The earliest recognized culture complex in North America is the Clovis complex, dating from about 11,000 to 12,500 years ago. These hunting and gathering peoples ranged widely on the western Plains, and mammoths and other now-extinct animals are commonly associated with their sites (Frison 1978). Although increasingly convincing evidence is beginning to accumulate for pre-Clovis occupations in the Plains -- such as at the Selby and Dutton sites in northeastern Colorado (Standford 1979) -- no dateable, definable pre-Clovis cultural complexes can yet be defined.

No Clovis complex occupational or kill site has yet been found in the project area, although the distinctive fluted Clovis projectile point has been found by collectors in western North Dakota. The nearest Clovis site to the project area, in fact, is the Lange-Ferguson Clovis mammoth kill or butchering site on the White River in western South Dakota, just east of the Black Hills (Hannus 1980). One reason for the lack of Clovis and other early sites in the project area is the fact that, to date, attention has been focused on the highly visible and productive Woodland mounds and later earth lodge villages in the area. Furthermore, the probability is high that early sites are likely to be in locales not yet surveyed, so the possibility is strong that such sites exist, for example, in deeply buried contexts along the Missouri River or along its tributary streams.

The remainder of the Paleo-Indian period is not much better known in the project area. Folsom hunters, who pursued a now-extinct form of bison on the western Plains, were active about 10,500 years ago. Folsom points are also found in western North Dakota, but no sites have been found in the project area. Numerous projectile points, known collectively as Plano points, and dating to about 10,000 to 7000 years ago, are also found in

western North Dakota: Agate Basin, Hell Gap, Angostura, Alberta, Cody (Scottsbluff-Eden), James Allen, Frederick, and Lusk. These points, used by Plano hunters to dispatch modern forms of bison and other game (Frison 1978), are represented by rare specimens in the vicinity of the project area. The best known nearby sites are in the vicinity of the Black Hills, and include the Hudson-Meng Alberta site west of Chadron, Nebraska (Agenbroad 1978).

Archaic and Woodland

The Plains Archaic cultures closely correspond in time with the Altithermal (Hypsithermal) geologic-climate unit, as first proposed by Antevs (1955). Originally conceived as a widespread, warm dry period, more recent work has shown that there were perturbations in the Altithermal during which time it was more moist -- especially during the late Altithermal (Benedict 1975:72). That is, it was a time of variable (if generally warmer and drier) climate.

Early Archaic sites are rare everywhere in the Northwestern Plains. Again we must go to the Black Hills area for the nearest Early Archaic excavated site: the Hawken sites in the northwestern Black Hills date to about 6500 years ago. The side notched points there are associated with an arroyo bison trap kill site (Frison 1978: 40-46). Middle Archaic sites are all but synonymous with the McKean complex which was defined on the basis of work along the northwestern rim of the Black Hills. Dating about 4500 to 3000 years ago, the complex is distinguished by McKean, Duncan, and Hanna points -- types which are widespread in the Northwestern Plains, although they are not as yet well known in western North Dakota (Frison 1978: 46-56). Middle Archaic Pelican Lake projectile points do, however, occur in the project area, notably at the as yet unreported Sugarloaf Butte site (Johnson et al. n.d.).

On the Northwestern Plains west of the study area, the Late Archaic witnessed the appearance of what has been called the Besant complex. The Besant projectile is a relatively small dart point with small side to corner notches. Besant peoples were hunters who used drive lanes and pounds or corrals to take bison: their campsites are common in many parts of the Northwestern Plains, and appear to represent the earliest sites yet recorded in the project area. Besant points are, however, regularly found associated with pottery along the Missouri River and its environs. For this reason, Johnson (1977) regards such sites as belonging to the Plains Woodland tradition, especially since they are contemporaneous with Woodland sites elsewhere in the Northern Plains.

Side or corner notched points from many of the Woodland sites along the Missouri River -- and even further east -- are typologically Besant, including those from Sonota complex sites (the Swift Bird, Grover Hand, and Arpan mounds, and the Stelzer site; see Neuman 1975). Other such sites near the project area include the Baldhill mounds (along the James River), site 32MZ2, Nightwalker's Butte, and Whiskey Hills (Hewes 1949; Wood 1956; Lehmer, Wood and Dill 1978; Johnson 1977). At High Butte, a few miles north of the mouth of the Knife River, Besant points were associated with Woodland pottery dating to about A.D. 350±40 (Wood and Johnson 1973).

Related excavated sites in the project area include the Boundary mounds, 32SI1, of the Sonota complex, the Alkire mound, 32SI200; and the Porcupine Creek component at 32SI6 (Neuman 1975; Henning 1965; Scheans 1957). These sites (see Figure 13) span the period about A.D. 100 to 800. Related but unexcavated sites in the project area include the Sugarloaf Butte site, 32MO17 (Johnson et al. n.d.), and an unnamed bison kill site, 32MO401 (Patricia A. Treat, personal communication). The latter site is about six miles downriver from Sugarloaf Butte, and about a mile and one-

half due south of the Huff site. Two other excavated mounds are in the general area of the project. The Schmidt mound, 32MO20, is probably a Sonota complex mound (Neuman 1975:79), but an unnamed mound, 32MO207, contained nothing in the way of artifacts to provide taxonomic placement (Neuman 1961:58).

Shoreline survey along Missouri River reservoirs are beginning to reveal buried Paleo-Indian through Archaic sites on level ground well above the floodplain and terrace levels, near the rim of the river bluffs -- perhaps where the sites would be near upland game resources. One such example, in the Garrison Reservoir, is the Moe site, which contained Paleo-Indian through historic occupations (Schneider 1975). A second such site, Walth Bay, is on the Missouri River in the Oahe Reservoir just downstream from modern Mobridge, South Dakota. It contains late Paleo-Indian through Archaic materials (Ahler et al. 1974). It is reasonable to expect similar situations in the project area, although such settings are well above the reservoir shoreline.

Plains Village

The last prehistoric culture complex to occupy the project area, the Plains Village tradition, appears to represent the arrival of new peoples in the Missouri valley, rather than a development out of the preceding local Woodland occupation. This tradition of sedentary, horticultural village dwelling peoples continued to dominate the Missouri valley until the mid-19th century. For a time before their decline in population and power they were sharing control of the valley with the newly arrived equestrian Dakota Sioux, and with the vanguard of the advancing American frontier. The historic representatives of the tradition in the Northern Plains are the Mandan, Hidatsa, and Arikara Indians. Much of the

development of the Plains Village tradition took place much further downriver, so that in the project area we are concerned principally with only the last stages of the tradition.

The Plains Village tradition, according to the scheme first proposed by Donald J. Lehmer (1954), began as two separate subtraditions about A.D. 900. One of them, the Central Plains tradition, occupied the Central Plains (specifically, the river systems of eastern Nebraska and contiguous portions of Kansas and Iowa), and the other, the Middle Missouri tradition, occupied the valley of the Missouri River in what is now south central South Dakota, and the valleys of other major streams in southeastern South Dakota.

About A.D. 1500, according to Lehmer's view, representatives of the Central Plains tradition moved north to the Missouri River in central South Dakota, where they came into contact with the Middle Missouri Tradition. The resulting culture change so modified both traditions that they lost much of their former distinctiveness in material culture and architecture. The fusion of the two traditions resulted in the Coalescent tradition which, in the Missouri valley of North and South Dakota, led to the historic Mandan, Hidatsa, and Arikara Indians and, in the Nebraska area, to the historic Pawnee Indians. This scheme was later elaborated in monograph form by Lehmer (1971); for this reason the synopsis offered here is a brief one, and is based on Lehmer's studies.

The Middle Missouri tradition is divided into three sequential variants: Initial Middle Missouri (A.D. 900-1400), Extended Middle Missouri (A.D. 1100-1550), and Terminal Middle Missouri (A.D. 1550-1675). Only the latter two variants are represented in the project area proper (Table 2). The excavated Extended Middle Missouri sites are probably all assignable to a single taxon, the Fort Yates phase:

Table 2

Excavated sites in the general area of the project*

Site No.	Site Name	Instit.	Excavator	Years Worked	Cultural Unit	References
32BL8	Double Ditch	HU	Will	1905	HRP	Will and Spinden 1906
32EM1	Havens	SHSND	Sperry	1967-8	EMM	Sperry 1982
32EM3	Tony Glas	SHSND	Howard	1958	EMM	Howard 1958
32EM10	Shermer	SHSND	Sperry	1965-6	TMM	Sperry 1968
32MO2	Bendish	MWAC	Johnston	1969	EMM	Thiessen 1975
32MO11	Huff	SHSND SHSND SHSND	Hecker Howard Wood	1938 1959 1960	TMM	Will, Hecker 1944 Howard 1962 Wood 1967
32MO20	Schmidt Mound	MBP	Neuman	1960	Woodland	Neuman 1975
32MO26	On-a-Slant	CU UND	Strong Schneider	1938 1979	HRP	Strong 1940 Ahler et al. 1981
32MO37	Boley	DC	Lehmer	1964	HRP	Lehmer n.d.
32MO207	Unnamed mound	MBP	Neuman	1960	Woodland?	Neuman 1961
32SI1	Boundary Mounds	SHSND MBP	Wood Neuman	1956 1960	Woodland	Wood 1960 Neuman 1975
32SI2	Fire Heart	SHSND	Lehmer	1964	EMM,DC	Lehmer 1966
32SI3	Robert Zahn	SHSND	Woolworth	1955	EMM	Wood, Woolworth 1964
32SI4	Paul Brave	SHSND	Woolworth	1955	EMM	Wood, Woolworth 1964
32SI6	Porcupine Creek	SHSND	Scheans	1957	Woodland, Historic Dakota	Scheans 1957
32SI7	Ben Standing Soldier	MBP	Hoffman	1965	EMM	Hoffman n.d.
32SI8	Jerome Standing Soldier	SHSND	Scheans	1957	EMM, Historic Dakota	Scheans 1957
32SI9	South Cannonball	MBP	Hoffman Johnston	1965 1966-7	EMM	Griffin n.d.
32SI76	Yellowlodge	SHSND	Scheans	1957	Historic Dakota	Scheans 1957
32SI77	Meadow	SHSND	Scheans	1957	EC	Scheans 1957
32SI200	Alkire Mound	SHSND	Lehmer	1964	Woodland	Henning 1965
39CO1	Demery	SHSND	Woolworth	1956	EC	Woolworth and Wood 1964

Table 2 (cont.)

* Adapted and updated from Lehmer (1971: Appendix 1):

INSTITUTIONS

CU	Columbia University
DC	Dana College, Blair, Nebraska
HU	Harvard University
MBP	Missouri Basin Project, Smithsonian Institution
MWAC	Midwest Archeological Center, National Park Service
SHSND	State Historical Society of North Dakota
UND	University of North Dakota, Grand Forks

CULTURAL UNITS

EMM	Extended Middle Missouri variant
TMM	Terminal Middle Missouri variant
EC	Extended Coalescent variant
HRP	Heart River phase, Post-Contact Coalescent variant
DC	Disorganized Coalescent variant

Havens
Fire Heart Creek
Paul Brave
Ben Standing Soldier
Jerome Standing Soldier
South Cannonball
Tony Glas
Bendish

Both excavated Terminal Middle Missouri variant sites, Huff and Shermer, are assigned to the Huff phase (Wood 1967; Sperry 1968). The Huff site is a North Dakota historic site.

A large number of unexcavated sites of both the Fort Yates and Huff phases are to be found in the project area. Both phases are characterized by villages of long rectangular houses. Fort Yates phase villages tend to be much smaller than Huff phase ones; the later villages are generally quite large and usually fortified. It was for this reason that the Tony Glas site was assigned to the Terminal variant by Lehmer, in spite of the fact that its material culture most closely aligns with the earlier Fort Yates phase sites. The principal differences between the Fort Yates and Huff phases lie in their dating and in subtle changes in ceramic and other material culture inventories; they occupy much the same territory, save that Huff phase sites are more restricted in their distribution along the valley than the Fort Yates ones.

The Coalescent tradition is subdivided into four sequential variants: Initial Coalescent (A.D. 1400-1550), Extended Coalescent (A.D. 1675-1780), Post-Contact Coalescent (A.D. 1675-1780), and Disorganized Coalescent (A.D. 1780-1862). Only two of these variants are represented in the project area proper (Table 2). A single excavated component of the Extended Coalescent has been tested -- a site just north of Fort Yates, North Dakota (Meadow, 32SI77) (Scheans 1957). Extended Coalescent sites are very rare north of

the North Dakota-South Dakota boundary; the Demery site, a few yards south of that boundary, is in fact the most northerly well-reported village site of the variant (Woolworth and Wood 1964), although Stanley A. Ahler (personal communication) is now finding related sites in the vicinity of the mouth of the Knife River.

There are no known Post-Contact Coalescent sites in the project area proper, although some may yet be discovered by survey. Heart River phase sites of this variant are, however, common just to the north, in the vicinity of Bismarck. Double Ditch (Will and Spinden 1906) is perhaps the best known of them, although excavations were conducted at On-a-Slant Village by Columbia University in 1938 (Strong 1940) and by the University of North Dakota in 1979 by Fred Schneider (Ahler et al. 1981). Another site, Boley, was tested by Donald J. Lehmer in 1964 but has never been analyzed. Two Disorganized Coalescent sites are in the project area: Fire Heart Creek and Eagle Nose Butte. Fire Heart Creek (Lehmer 1966) appears to represent a protohistoric Arikara encampment, but Eagle Nose Butte (which lies about two miles west-northwest of the Huff site) is apparently a Mandan village occupied just before the time of Lewis and Clark (Thwaites 1904-05, I:199; Will 1924:313).

Some time after the mid-1700's the Dakota Sioux began frequenting the project area. None of their early sites are known along the river, their occupation continues to the present day. Three historic sites have been investigated in the vicinity of Battle and Porcupine Creeks, just north of the town of Fort Yates: the Young component at the Porcupine Creek site, 32SI6; the Greybear component at Jerome Standing Soldier, 32SI8; and the Yellowlodge component at unnamed site 32SI76 (Scheans 1957).

The Young and Yellowlodge components date to the mid-1800's but Greybear dates to about 1900. Earth lodges were present at both of the

earlier components (Young and Yellowlodge). One other earth lodge village is known in the general area of theproject. A "dirt lodge village" occupied in the mid-1800's by Little Soldier and his band of Yanktonai lies on the east bank of the Missouri River approximately on the North Dakota-South Dakota boundary. It has yet to be located (Wood 1976; Warren n.d.). The Yanktonai appear to have been somewhat more sedentary than some of the other Dakota, but only a small percentage of them are believed to have lived in earth lodges. They appear, therefore, to be only marginally related to the Post-Contact Coalescent tradition.

By about 1780, following the devastating smallpox epidemic of that year, the Mandan appear to have abandoned the northern part of the project area, and to have moved to villages near the mouth of the Knife River, upstream along the Missouri River (Lehmer 1971), leaving the project area to the Dakota Sioux and to American traders and, later, settlers.

CHAPTER FOUR

EARLY WRITTEN AND CARTOGRAPHIC REFERENCES TO PLAINS INDIAN AND EURO-AMERICAN SITE LOCATIONS

by

Stephen A. Chomko
and
W. Raymond Wood

Introduction

The following is an attempt to determine which groups were in the upper Lake Oahe study area during the early historic period and to document as precisely as the records allow these tribal and Euro-American site locations. The spatial bounds for the this study are defined as the Missouri River trench from the Heart River on the north to the North Dakota-South Dakota state boundary on the south. This encompasses the ten proposed recreation areas (referred to as the project area in this report) and permits sufficient latitude to discuss the use of this portion of the river.

The temporal bounds for the study start at A.D. 1738, marking the first written record of a visit to the upper Missouri. Written sources dating up to the the amalgamation of the Plains Village groups at Fort Berthold in 1862 were consulted. With one exception, all known maps available to the authors made between 1795 and 1892, and believed to be relevant to an understanding of the archeological and historical cultural resources of the area, were consulted. The exception is the original Government Land Office

Survey maps which were examined by the project historian during the initial documents search for this project. A final map examined is the 1907 Sitting Rabbit map (Thiessen, Wood and Jones 1979).

The term "modern map," as used here, alludes to the United States Army Corps of Engineers map of the Missouri River from Gavins Point, South Dakota, to Stanton, North Dakota (1947 series), and cited in the text as "CEMOR 1947." The reader may wish to consult four additional sources for further data on the maps and on the general area discussed below: two of these studies are devoted to the area immediately to the north of the project area (Wood 1978 and 1979c); the other two studies concern the historical cartography of the lower Oahe Reservoir area and Lake Sharpe, South Dakota (Wood 1979a, 1979b). Because the present project consists of widely separated individual parcels of land distributed along both banks of the reservoir, and because the pre-1892 maps are decidedly generalized, the data to be obtained from these early maps are quite limited.

Three major types of groups can be discussed who may have utilized the Missouri Trench in southern North Dakota. At least one of the Plains village groups, the Arikara, were known to have utilized the project area in the 19th century while the Mandan had most likely been in the study area in the 18th century. In addition, a number of nomadic tribes were present: notably the Dakota and Cheyenne. The nomadic groups exploited the bison herds of the shortgrass plains and temporarily camped near the villagers when they came to trade with them. Finally, the Euro-American traders, trappers and explorers are known to have utilized the area in the 18th and 19th Century.

Each group would have left different types of sites along the Missouri which can be briefly outlined. The village groups, as the name implies,

lived in large fortified summer villages on the river terraces and in less permanent, unfortified winter villages in the floodplain along the Missouri River. The villagers served as a focal point for the historic fur trade (Chittendon 1902) and it has been proposed that they were a major nexus in the precontact trade system (Wood 1972). The villagers also would have left smaller more temporary sites such as hunting camps, garden areas, eagle trapping pits, etc. The nomadic groups would have left remains of temporary camps (residence units) along the Missouri in addition to smaller sites such as hunting camps, trading caches, etc. The first Euro-American trappers who were in the area lived among the Indian groups or essentially by themselves along the streams and rivers. It was not until A.D. 1794 or 1795 that there is a record of a "trading post" established on the upper Missouri; just south of the Knife River (Gates 1933: 113; Nasatir 1931).

The distinction advanced by Trigger (1969:306) between a historic location and an archeological site is maintained in this report. While the nature and importance of a historical location:

> are normally made clear from the accounts in which it is mentioned, its precise geographical location may or may not be known. An archaeological site, on the other hand, is a geographical area containing a single unit, or a temporal sequence of single units, of human occupation. Although the temporal and cultural affinities of the site may be a matter of inference, its geographical location cannot be in doubt.

When appropriate, those sites which conform in assumed date and geographic location are correlated with the historical locations. These correlations are offered as hypotheses, testable by archeological investigation and further ethnohistoric research.

Since this study requires specific information regarding historic locations and precise dates of occupation, primary documents provide the most useful information (see Table 3). While ethnographies of the tribal groups (written long after the temporal scope of this study) contain

Table 3. Primary edited documents referring to the upper Missouri: 1738-1862.

Source	Dates	Reference
La Verendrye	1738, 1742, 1743	Burpee 1927, Smith 1980
MacKay	1787	Nasatir 1952
D'Eglise	1790-1792	Nasatir 1927
Truteau	1794, 1795	Abel 1921, Nasatir 1952
Tabeau	1795-1804	Abel 1939
Du Lac	1803	Du Lac 1807
Lewis, Clark, Whitehouse, Ordway, Gass	1804, 1806	Thwaites 1959; Gass 1958; Osgood 1964, Quaife 1916
James	1809	James 1962
Thomas	1809	Jackson 1962
Bradbury	1811	Thwaites 1904a
Brackenridge	1811	Thwaites 1904b
Luttig	1812	Drumm 1920
Smith	1822	Morgan 1964
Atkinson, O'Fallon	1825	Reid and Gannon 1929
Catlin	1832	Catlin 1973
Maximilian	1833-1834	Thwaites 1906
Chardon	1834-1839	Abel 1932
Harris	1837	Harris 1838
De Smet	1840, 1846	Chittendon and Richardson 1905
Crawford	1842	Crawford 1842
Mitchell	1842	Crawford 1842
Audubon, Harris	1843	Audubon and Coues 1897; McDermott 1951
Moore	1846	Moore 1847
Matlock	1847	Matlock 1848
Hatton	1849	Robinson 1952
Culbertson	1850	Culbertson 1952
Kurz	1851	Kurz 1970
Saxton	1853	Saxton 1855
Vaughan	1853-1856	Robinson 1952; Vaughan 1855, 1856
Warren	1856	Warren 1875
Redfield	1857	Redfield 1858
Boller	1858-1859	Boller 1972
Maynedier	1860	Ellis 1927
Morgan	1862	Morgan 1959
Harkness	1862	Harkness 1896
Latta	1862	Latta 1863

references to historical locations, the dates of occupation and the specific locational data are generally too vague to be of much use for this study. With regard to the primary documents, it is assumed that the historic locations as given by the traders, explorers, and travelers are unbiased. Although most recorders were in the area for economic purposes (either related to fur trade or national expansion) and their economic bias may have resulted in inaccurate population estimates, the historic locations should have been relatively unbiased. That the assumption would appear to be reasonable is shown by the general agreement among the various sources regarding the same historic locations (see Chomko n.d.).

Results

The earliest first person account for the area was by Pierre Gaultier de Varennes, Sieur de la Verendrye, an explorer searching for an overland route leading from the vicinity of the Red and Assiniboine rivers to the Pacific. La Verendrye arrived on the upper Missouri on November 28, 1738, where he was told by a Mandan that they lived in six villages (Burpee 1927:320). He reached the northernmost Mandan village on December 3, 1738 and recorded that:

> There were five [additional] forts [villages] of their own people on the two sides of the river [and "further down"] much larger than the one we were in; that a day's journey from the last of their forts were the Panaux, who had several forts, and beyond them the Pananis (Burpee 1927:335).

The river in the vicinity of the Mandan villages appeared to flow towards the (magnetic) southwest by south (Burpee 1927:345). He continues:

> We remarked that in the plain there are several small forts of from forty to fifty cabins [lodges] each, construed in the same manner as the larger ones. At present [December] they are uninhabited. We were given to understand that they went there in summer in order to work the fields and that there was a large reserve of grain in the cellars [cache pits] (Burpee 1927:346).

While it has generally been accepted that the villages La Verendrye visited were in the vicinity of the Heart River, North Dakota (Smith 1980; Stewart 1974: 287-288; Bruner 1961:196) the identity of the Panaux and Pananis is open to interpretation. Will and Spinden (1906:95) identify both groups as Arikara; Nasatir (1952:33) suggests they are Pawnee; and Libby rejects the claim that La Verendrye visited the Mandan, but suggests he was at Hidatsa villages while the Panaux and Pananis were Mandan and Arikara, respectively (1908; 1916). Libby's hypothesis has little support among current writers (Smith 1951, 1980).

In 1742, one of La Verendrye's sons, Pierre, returned to the Mandan villages but left no record to aid in determining their location. The following year, 1743, another of La Verendrye's sons, Le Chevalier (for the identification of Le Chevalier, see Burpee 1927:18n) was among:

> the Gens de la Petite Cerise. They were returning from their winter quarters, and were two days march from their fort, which is on the bank of the Missouri (Burpee 1927:425).

At this village Le Chevalier "deposited on an eminance near the fort a tablet of lead" (Burpee 1927:427). This tablet was found in 1913 on a hill near the present site of Fort Pierre, South Dakota (see Deland 1914:20). If the "Gens de la Petite Cerise" were the Arikara, then the tablet would locate them on the Missouri River, at the mouth of the Bad River, south of the study area.

In 1794, Jean Baptiste Truteau led an expedition for the "Commercial Company of Explorers of the Upper Missouri" from St. Louis north to near the Cheyenne River (South Dakota). While he discusses the area north of the Cheyenne, he does not refer to specific locations in the project area (Abel 1921:173-176). He did, however, note that the "Sioux" (Dakota) utilized the study area (Abel 1921:176-177).

In the summer of 1796, John Evans (under orders from James MacKay and

working for the Commercial Company of Explorers of the Upper Missouri) led an expedition north to the Mandan villages on the Knife River. Evans did not specifically note any groups until he reached the Arikara who were then located in a village below the Knife River (Nasatir 1931). There is, however, a tantalizing notation of a "Jupiters house" appears on his 1796-97 map of the Missouri River at a point which (on modern maps) appears to be in the general vicinity of the modern town of Fort Rice (CEMOR 1947: sheet 131) and of the prehistoric fortified Fort Rice archeological site, 32MO3. Evans's original map was first published by Thwaites (1904-05, vol. 8, map 10), and has been transcribed and published by Wood (1981: fig. 6). None of the classical mythology scholars contacted to date has been able to provide any leads as to the significance of this notation. The possibility that it might refer to an Indian occupational site is only one of a number of interpretations of its meaning.

In 1803, Francois Marie Perrin du Lac claims to have journeyed up the Missouri as far north as the White River (du Lac 1807). While he did refer to groups and locations farther north, he fails to note anything in the study area. Further, his data appears to have been based on second hand sources and not from personal observations recorded by him while near the White River (Chomko n.d.).

There are three Lewis and Clark documents relating to the study area: the field journals of Lewis and Clark (Thwaites 1959), Clark's field notes (Osgood 1964) and the Clark-Maximilian maps. For those not familiar with Reubon Gold Thwaites' edition of the Lewis and Clark journals (1904-1905; and a reprint edition, 1959) the many emendations could be confusing. Thwaites provides this description for the many bracketed and parenthetical inclusions in the text:

> The Lewis and Clark manuscripts were...for a time in the hands of Nicholas Biddle, who prepared from them, his paraphrase Narrative, published in 1814. Clark, in assisting Biddle, not infrequently made interlineations in the text; so did Biddle_in our opinion, the former wrote in black ink, the latter in red. In 1893, Elliot Coues also made emandations in the [journals]...and there are some erasures and interlineations in an unknown hand... Words reproduced by us in Italics enclosed by parentheses, are corrections in red ink, presumably by Biddle_e.g. (Moses B. Read); those set in Italics enclosed by brackets, are in black ink and by several persons _ Clark, Coues, or an unknown hand_e.g. [Petite Cote]; words in Italics, unenclosed, were underlined by the author himself; the present Editor's signed or unsigned emandations are in Roman, bracketed_e.g. [Lewis]; plain parentheses (enclosing matter in Roman type) are in the text (Thwaites 1959 Vol.I:11).

Citation of the journals here reproduces the above editorial format; any additional notes inserted into the citation are enclosed in brackets. For a history of the Lewis and Clark journals refer to Cutright (1976).

Numerous maps resulting from the Lewis and Clark expedition have been published since 1814, but only recently have certain copies of William Clark's original field maps for the project area become available to the public. These maps, in the Joslyn Art Museum in Omaha, Nebraska, were obtained in 1832 by Prince Maximilian from Clark's nephew, Major Benjamin O'Fallon, for Maximilian's 1832-33 expedition up the Missouri River (Wood and Moulton 1981).

In 1804, Lewis and Clark noted:

> an antient fortification the Walls of which appear to be 8 or 10 feet high (most of it washed in) (Thwaites 1959 Vol.I:193).

This location was in extreme northern South Dakota (Figure 14,a; see also Osgood 1964:161); no site can be correlated with this location. Further upriver, they:

> passed a circular work, where the Shar ha or Chien, or Dog Indians formerly lived a short distance above passed a Creek...[now known as Porcupine Creek] (Thwaites 1959 Vol.I:195).

A further notation found on the Clark-Maximilian maps state that the Cheyenne were driven out of the village by the Sioux (Dakota). This

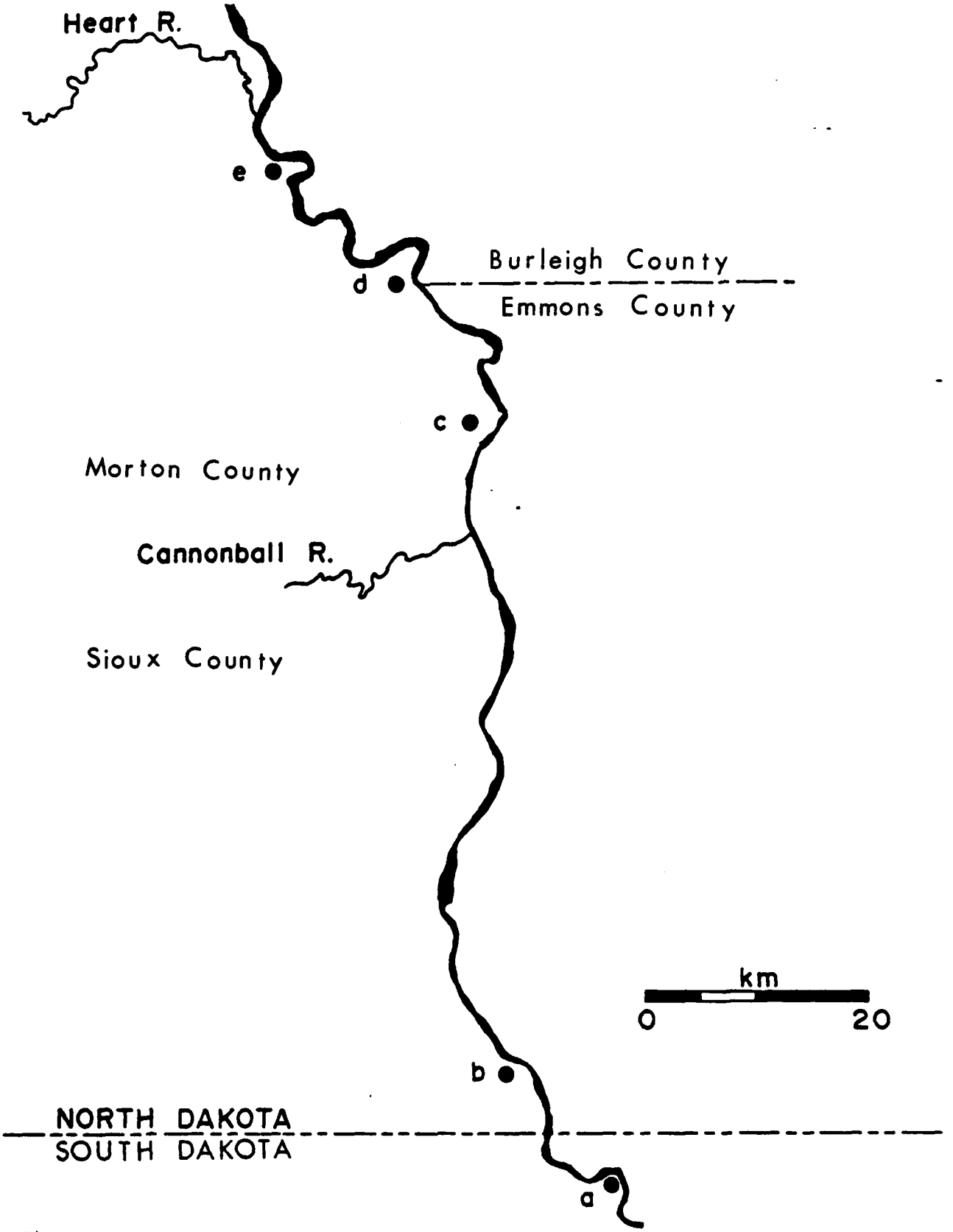


Figure 14. Abandoned villages recorded by Lewis and Clark in 1804.

location is shown as Figure 14,b (see also Osgood 1964:161). The Fire Heart Creek site (32SI2) is in this approximate location; however, Lehmer's (1966) excavations indicate that it is a Disorganized Coalescent component, thus it would appear to post-date the "Chien" occupation.

Interpretation of a statement by Meriwether Lewis and William Clark, recorded in 1806, indicates that the Mandan were located near the Heart River, North Dakota, in about 1766. While it is not certain exactly when the Mandan villages near the Heart River were occupied, it is generally believed that the Mandan lived in them just prior to 1780 (Chomko n.d.; Stewart 1974; Lehmer 1971). Big White, a Mandan, told them:

> that he was born [about 40 years] [ago] in the Village Opposit to our camp [in the vicinity of the Heart River] and at this time his nation inhabited 7 villages as large as that and were full of people..(Thwaites 1959 Vol. V:347).

This age for the villages is further supported by Clark, who states, in 1804, that at least some of the villages were "occupied about 25 years ago" (Osgood 1964:164) or in about 1779. This information was probably supplied by an Arikara who accompanied the expedition on this part of the river.

Sheet 16 of Maximilian's copies of Clark's field maps (Moulton 1983: map 27 bears the notation, "Old Fortification," on the north bank of Fort Rice Creek at the location of 32MO3, the fortified, bastioned Lower Fort Rice village archeological site. The expedition camped just east of this site on the evening of the 18th of October 1804, and that evening Clark had taken a stroll in the vicinity of their camp; it was almost certainly at this time that he must have noted the "old fortification."

The southernmost abandoned village which was ascribed to the Mandan was located approximately 28 miles above the Cannonball River (Figure 14,d):

> on a point of a hill 90 feet above the lower plan I observed the remains of an old village, (high, strong, watchtower &c) which had been fortified, the Indian Chief with us [an Arikara] tels me, a party of Mandins lived there, [Here first saw ruins of Mandan

nations] (Thwaites 1959 Vol. I:199).

The same village is referred to in Clark's field notes (Osgood 1964:163). The Eagle Nose site is in the correct location to be this village.

A second Mandan village was located within 2 miles below the Heart River on the right bank of the Missouri (Figure 14,e):

> I walked out on the L. Side [right bank of the Missouri River]...I saw old remains of a village (covering 6 or 8 acres) on the Side of a hill which the Chief with Too ne [an Arikara taking about the Mandan] tels me that nation lived in 2 [a number] villages 1 on each Side of the river and the Troulesom Seaux caused them to move about 40 miles higher up where they remained a fiew years & moved to the place they now live (Thwaites 1959 Vol. I:200).

This village was also noted on their return trip down river in 1806 (Thwaites 1959 Vol. V:346) and is recorded in Clark's field notes (Osgood 1964:163). The description and location of this village correlates well with the On-A-Slant Village (32MO26) archeological site. Lewis and Clark noted several additional abandoned Mandan villages above the Heart River (see Chomko n.d. for a detailed discussion).

Lewis and Clark also make mention of a number of occupied Indian camps in or near the study area. On October 13, 1804, the expedition passed "a camp of Seauex on the S.S. [left bank of the Missouri]" (Thwaites 1959 Vol. I:190). The camp is not illustrated on the Clark-Maximilian maps; its location would have been in extreme northern South Dakota. On October 15, three Arikara camps were noted:

> passed an Ind.n Camp (of hunters Ricaras) on the S.S. [left bank] we halted above and about 30 Indians came over in their canoos of Skins, we eate with them, they give us meat, in return we gave fish hooks & some beeds (Thwaites 1959 Vol. I:194).

And a second camp was noted:

> about a mile higher up we came too on the L.S. [right bank] at the camp of the Recores (ricaras) of about 8 Lodges, we also eate and they gave some meat, we proceeded on Saw numbers of Indians on both Sides (Thwaites 1959 Vol. I:194).

Finally,

> at Sunset we arrived at a Camp of Recares of 10 Lodges on the S.S. [left bank] we came too and camped near them, Cap.t Lewis and my self went with the Chief who accompanis us, to the Huts of Several of the men all of whom Smoked & gave us something to eate (Thwaites 1959 Vol. I:194).

The three camps are shown on the Clark-Maximilian maps and referred to in Osgood (1964:161); they are plotted on Figure 15 as camps a-c. All three camps are just south of the project area.

On the 16th of October, they arrived at a fourth camp of Arikara which was located on the left bank of the Missouri River (Figure 15,d). The tribal affiliation is not mentioned in the journal but is given as Arikara on the Clark-Maximilian maps and is noted as "R. Ree nation" by Ordway (Quaife 1916:154). This camp although close, would be north of the Beaver Creek recreation area. On October 25, the party met with some "Teton Seaux," apparently a hunting or raiding party of 12 men (Thwaites 1959 Vol. I:202). The exact location is not clear but was approximately 20 miles north of Bismarck on the left bank of the Missouri. While well outside of the project area, it is mentioned here to further document the use of the area by the Dakota.

Lewis and Clark themselves were a source of historic locations. On their way up river their camps of October 14 through October 20 were within the study area (Figure 15). Only two of the camps, October 17 and 18, are near recreation areas (Huff and Cannonball). However, it is apparent from the records that the camp locations are now in flooded bottomland.

On their return trip downriver in 1806, Lewis and Clark noted:

> passed the entrance of cannonball river imediately above is the remains of a large Sieoux excampment which appears to have been made this Spring (Thwaites 1959 Vol. V:349).

The Dakota camp referred to above is not shown on the Clark-Maximilian maps, however, the verbal description locates it fairly precisely (Figure

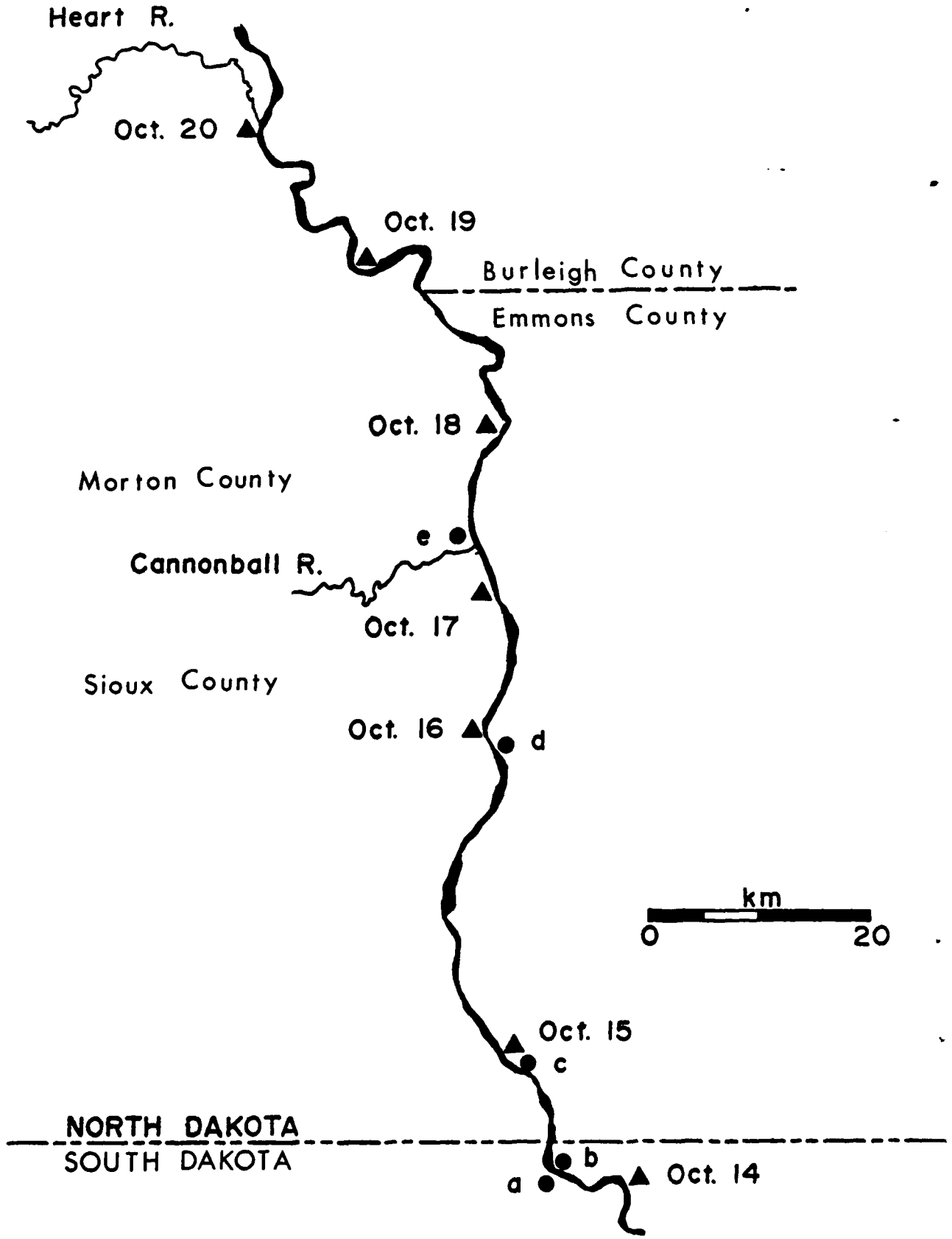


Figure 15. Occupied villages noted by Lewis and Clark in 1804 and 1806; triangles mark the location of Lewis and Clark camps in 1804.

15,e). This would place it just to the north of the Cannonball recreation area, provided that there has not been a major change in the location of the outlet of the Cannonball River. Lewis and Clark also provided the following notation: "Wardepon River [Scioux boundary to which they claim the country]" (Thwaites 1959 Vol. V:349). The river is now known as Big Beaver Creek.

In the spring of 1811, John Bradbury, a British naturalist, accompanied the overland Astoria expedition led by Wilson Hunt for the Pacific Fur Company (Thwaites 1904a). Bradbury traveled overland from the Arikara to the Mandan and Hidatsa villages, thus he was not in the immediate project area. Of importance to this study is his notation of the Cheyenne at the Arikara villages (Thwaites 1904a:139) and a short note that there was a decrease in the danger from the Sioux (Dakota) in the upper Cannonball River valley (Thwaites 1904a:145).

In 1812, Manuel Lisa, of the St. Louis Missouri Fur Company, established a trading post well above the Arikara villages (Oglesby 1963). Drumm (1920:68, n107) states that it was close to the line separating North and South Dakota while Maximilian (1906) states that it was closer to the Grand River. John Luttig, Lisa's chief clerk at the post, mentions the Mandan, Hidatsa, and Arikara, Pawnee, Cheyenne, and Sioux (Dakota) in his journal (Drumm 1920). The only locational information is a brief passage:

> When [Toussaint] Charbonneu passed the Chajennes [when he was returning from the Mandan villages] which are above us about 4 Leagues (Drumm 1920:124).

Drumm (1964:124, n166) suggests this would place the Cheyenne camp near Fort Yates, North Dakota, however, this is highly speculative.

It is probable that a Mandan village was located below the Heart River in 1819. An entry in the journal of the Atkinson-O'Fallon expedition of 1825 states that "an old village deserted some 6 years since by the Mandan

Indians" was on the right bank of the Missouri River (Reid and Gannon 1929:33). The editors identify the location as the Huff site; however, Wood (1967) documents Huff as a Terminal Middle Missouri Variant site which would date to before ca. A.D. 1650 if Lehmer's (1971:124) temporal estimate for the variant is correct.

Further support for the existence of the Mandan village is given by Maximilian, writing in 1833, he states that above the Cannonball River:

> The [Missouri] river turns to the westward, towards [a chain of hills which are] called the Mountains of the Old Mandan Village, because at this place where [they are] traversed by the river, such a village is said to have formerly stood... We came to the site of the old Mandan village, which was situated, at the foot of the hills, in a fine meadow near the river; some poles, that were still standing [in 1833], were the only remains of it; there was no village here at the time of Lewis and Clarke's journey (Maximilian 1906 Vol. 22:339).

An account of the Mandan who made this move is given by Bowers (1948:146; 1950:12, 100; 1965:485). Although Maximilian's verbal description is fairly detailed, it is insufficient to locate the village.

Traveling upriver Maximilian noted "On the eastern [left] bank we saw the ruins of an old trading house, and many traces of beavers" (Maximilian 1906 Vol. 22:340). The notation was made somewhere well north of the Cannonball River and somewhere south of Apple Creek in Burleigh County, North Dakota. Wishart (1979:50) suggests that the Columbia Fur Company (formed in 1821) built a "post" for the Arikara by 1826; his Figure 6 locates a post in the general area noted by Maximilian but on the opposite side of the river (certain aspects of Wishart's figures are very generalized and erroneous). This is too far north to have been Lisa's 1812 post. No other sources refer to a trading post in this area. It is possible that Maximilian was referring to a temporary (winter) structure.

On his return trip downriver in the spring of 1834, he notes "we stopped at Picotte's winter post among the Yanktonans..." (Maximilian 1906:

Vol 24:85). Picotte can not be positively identified but was probably a trapper. The "post" is undoubtedly a temporary dwelling which was a short distance (three hours by raft) below the Heart River.

In 1853, A. J. Vaughan, the Indian agent, noted that the "Yanktonaise" had 450 lodges and utilized the study area (Robinson 1954:164). In 1854, Vaughan stated that "he arrived at the village of the Yanktons, 250 miles above Fort Pierre on the 27th of June (Robinson 1954:176); the location of this village may have been in the project area.

In 1856, Vaughan recorded the following:

> A portion of the Yanctonais, headed by the "Little Soldier," have built a permanent village on the left bank of the Missouri, about one hundred miles below Fort Clarke... Between their village and Fort Clarke I met a band of Yanctonais (Vaughan 1856:629).

The location would be in the study area but it is too imprecise to identify it with greater accuracy. Vaughan was under pressure to "civilize" the Dakota, thus, his reference to a "permanent village" may have been more a semantic phrase than a reality.

The first map for the project area based on eyewitness data to follow that made by William Clark in 1804 was one prepared by Lt. Gouverneur K. Warren in 1856 (Wood 1978, 1979a-c); this map, however, carries nothing of significance for the project area. By this time all of the village tribes had removed to other parts of the Missouri River. The first detailed engraved maps of the Missouri River appeared in 1890. The Missouri River Commission maps (1890) and the Missouri River Survey maps (1892) date to the period when Euro-American settlement was beginning in the project area. Fort Yates and Fort Rice were already in operation, and a few private residences had also been built. The two fort sites still exist: Fort Rice has been reduced to ruins, and a few buildings only remain of the original Fort Yates. Most of the early private residences have since been abandoned

or removed, or were flooded by the reservoir.

One final map to be considered is one prepared in 1907 by Sitting Rabbit, a Hidatsa from the Fort Berthold Reservation, North Dakota. This chart, prepared for Orin G. Libby of the State Historical Society of North Dakota, shows two Mandan village sites in the project area. One of these, labeled "Mandan Town: Big River Village," is on the site of 32SI19, the South Cannonball village site (Thiessen, Wood, and Jones 1979: fig. 2, pp. 151, 154). The second village, which is unlabeled, consists of an earth-lodge symbol on the south bank of Fort Rice Creek ("Fishing or Pictured Rock Creek"). This village symbol is on the site of the Bendish village site, 32MO2 (Thiessen, Wood, and Jones 1979: fig. 3, p. 155; Thiessen 1975; CEMOR 1947: sheets 127, 132).

Conclusions

The ethnohistoric and cartographic overview of the study area has documented the presence of the Mandan near the Heart River in the 18th century and the Arikara in the southern portion of the study area in the early 19th century. The former occupied fortified villages and most likely also utilized small temporary sites. Although the latter are not documented they certainly can be inferred from the ethnographic record. The historic documents mention the use of the area by the Arikara but only as a hunting territory.

Use of the area by nomadic groups is documented in the historic literature. References indicate that the Pawnee and possibly the Assiniboine and Chippewa may have been in the study area; although this must be considered tentative since it is based on very vague references. More firm statements place the Cheyenne in the area. By far the most numerous references to a nomadic group are to the Dakota who apparently

utilized the area on a continual basis for hunting, trading, warfare and, at least in the mid-19th century, as a location for residence units.

A notation on the Evans 1796-97 map may possibly be a reference to 32MO3, the Lower Fort Rice village, but there seems to be little doubt that this village was the reason William Clark made the notation "Old Fortification" on his field map for the area just north of the mouth of Fort Rice Creek.

The Sitting Rabbit 1907 map identifies two other sites in the project area: "Mandan Town: Big River Village" is the site of the South Cannonball village, 32SI19; and an earthlodge village symbol is on the site of the Bendish village, 32MO2.

Documentation of early Euro-American use is surprisingly meager. The only camps which can be located with any kind of accuracy are those of Lewis and Clark in 1804 and 1806. Evidence of the fur trade consists of two references to "posts" in the area: one abandoned by 1833 and a second occupied in 1834. The latter was merely the winter quarters of a trapper (probably) living with the Dakota. Other numerous historic locations that must surely have existed are poorly documented in the literature. For instance, hunters typically left piles of wood along the river for the steamboats, however, not one source mentions these kinds of locations. In any case, almost all sites associated with river travel, if not destroyed by meandering of the Missouri, would have been inundated with flooding of Oahe Reservoir.

CHAPTER FIVE

HISTORICAL OVERVIEW

by

Kurt P. Schweigert

The Fur Trade and Early Exploration

In 1731 Pierre Gaultier de Varennes, Sieur de La Verendrye, began a search for an overland route from the Great Lakes to the Pacific. Verendrye had been granted permission by Louis XV of France, then ruler of Canada, to conduct the expedition at his own expense. In return, La Verendrye was granted a monopoly of the fur trade that might develop as a result of his expeditions. Verendrye received financial support for his expeditions from Montreal merchants eager to become part of the resulting fur trade monopoly. La Verendrye established forts and trading posts from Lake Superior to Lake of the Woods, Lake Winnipeg, and on the Red and Assiniboine Rivers (Burpee 1927).

In 1738 La Verendrye built Fort la Reine at the point where an established trail crossed the Assiniboine River. This trail had apparently developed as a trade route by which the Missouri River Valley tribes and the Assiniboine journeyed north to meet Cree traders. La Verendrye had received reports that a tribe of light-skinned Indians lived on a westward flowing river and in 1738 he departed Fort La Reine in the company of his

two sons and twenty other men. The route followed by the party has remained a matter of conjecture, but it is known that he reached the Missouri River on November 28, 1738.

La Verendrye's disappointment that the people he visited were not light-skinned was only surpassed by his disappointment that the river on which they lived flowed south and east rather than west toward the Pacific Ocean. The Verendrye party stayed at the Missouri River villages until January, 1739 before returning to Fort La Reine. In 1742-1743 two of Verendrye's sons journeyed to the Missouri river villages and travelled far to the west and south probably into present Wyoming and South Dakota. The failure of these expeditions to locate the western sea did not detract from their importance to the Montreal-based fur trade, which would monopolize the Assiniboine-Souris-Missouri River area until the 1780's (Burpee 1927; Schweigert 1979:18; Reid 1965; Libby 1916).

French trading activities in this area were conducted under questionable legality, at best. By right of discovery England claimed all lands that drained into Hudson Bay, including the Assiniboine and Souris Rivers. In 1670 the English Crown granted to a group of merchants and adventurers, known as the Hudson's Bay Company, absolute rights of government and trade in the entire Hudson Bay drainage. At the close of the Seven Years War in 1763, France ceded her Canadian possessions to England and her Louisiana territories to Spain. The Missouri River drainage remained the property of Spain until ceded back to France in 1800. France sold the Missouri River drainage to the United States in 1804.

The expulsion of the French government in Canada in 1763 removed the monopolistic licensing restriction of the French fur trade, and left the traders virtually limited only by their own fortitude and financial resources. A period of fierce and violent competition followed, during

which time rival Montreal trading companies extended the fur trade through the upper Mississippi drainage and onto the upper Saskatchewan River. The ruinous competition led in 1783 to the amalgamation of traders and merchants known as the North West Company, which included French Canadians, Scots Canadians, and a few Yankees. The North West Company was generally the vanguard of the expanding trade and the chief competition in northern North America of the Hudson's Bay Company until it merged with the latter company in 1821.

The North West Company did not monopolize the Montreal-based trade, however, and many independent traders offered competition to the two major companies. In 1785 the North West Company was eroded by the formation of the New North West Company, better known as the XY Company. Led by Alexander MacKenzie, the XY Company waged bloody competition to both the older companies until it was absorbed by the North West Company in 1804. All three of the major British companies, and independent traders as well, penetrated the Missouri River trade area from trading posts on the Assiniboine and lower Souris rivers (Phillips 1961:110-114).

The Montreal-based trade with the Missouri River tribes appears to have been dormant in the period 1738 to 1770, probably due to a depressed economy in New France caused by almost continuous war between France, Spain and England during that period. By the early 1770's, however, Montreal-based British traders had begun visiting the Mandan villages on a regular basis (Gates 1933:39, 51). By 1780 the Canadian traders had established posts on the middle Assiniboine River, and had apparently extensively explored the region between the Assiniboine and the Missouri River villages (Davidson 1918:46; Masson 1890:II, "Equisse":17-18). The first major terminous of the Assiniboine-Missouri trade was Fort Epinette, or Pine Fort, a North West Company post on the Assiniboine built in 1785 about

fifteen miles downstream from the mouth of the Souris River. Pine Fort for a time not only held half the trade of the Assiniboine River and all the fur trade of the Missouri River tribes, but was also the market for corn and other horticultural produce of the Missouri River tribes. The corn was of special value to the traders because of the difficulties of transporting staple grain or flour in canoes from Lake Superior via Lake of the Woods and Lake Winnepeg. By 1785 the Mandans were themselves carrying their produce to Pine Fort (Stewart 1930:8; Wagner 1955:Map II). In 1794 North West Company trader Renee Jusseaume built the first known trading post in North Dakota near the Knife River villages (Nasatir 1952:95).

Several other forts would be built on the Assiniboine and Souris rivers by the North West Company, the XY Company and independent traders. The Hudson's Bay Company was also not to be done out of its share of the Missouri River trade. As early as 1780 traders from York Factory may have crossed overland from the Assiniboine to the Missouri (Burpee 1935:356; Davidson 1918:46). In February, 1794 the Company actively entered the Missouri River trade by establishing Brandon House near the Souris-Assiniboine confluence. From Brandon House the Company conducted its trade southward by means of "freeman", who took trade goods on credit and paid with peltries on their return to the permanent post (McMorran 1935:56; Reid 1945:145).

The profitability of the Missouri village trade probably tapered off rapidly after the establishment of competition for the furs. The North West Company apparently maintained a virtual monopoly of this trade from 1783 to 1793, but by 1805 that company had abandoned attempts to organize the Missouri River trade in its favor. In 1805 North West Company factor Charles MacKenzie wrote "It is incredible the great quantity of merchandise which the Missouri Indians have accumulated" (Masson 1889:I:334; II:87).

Jean Baptiste LaRoque, who met Lewis and Clark at the Mandan villages in 1804, was sent by MacKenzie in part to collect debts and close accounts at the villages. Although British trading would continue at the Missouri villages until 1821, that trade was incidental to the interests of the major fur companies.

Throughcut the period of French and British trade with the sedentary tribes, the nomadic tribes of the region were also receiving trade goods. French traders and missionaries had encountered eastern Sioux groups in Minnesota as early as 1636, and by 1700 French traders had established trading posts among the Sioux and the Minnesota River. As they moved westward onto the plains the Teton and Yanktonai groups retained social and trade contacts with the eastern Sioux. After 1770 British traders utilized those ties to extend their trade far to the west from posts on the Red and Minnesota rivers and at Lake Traverse in extreme northeastern South Dakota. In 1804 Lewis and Clark reported that a trade fair was held annually on the James River, to which the Tetons would bring horses, meat, and dressed skins to trade for European goods obtained by the Yankton and Yanktonai from British traders. The Sioux generally remained loyal to their British trading partners, especially during the War of 1812, and were generally hostile to American traders ascending the Missouri River until the British companies abandoned the area in 1821 (Hodge 1907:II:736; Thwaites 1905:94-95). In 1855 a wintering trading post was still in operation on the middle James River, apparently to serve the Sioux (Warren 1857:Map).

The British presence on the Missouri alarmed the Spanish, who in 1794 organized the Missouri Company at St. Louis to open Spanish trade and quell the British influence. Backed by the Missouri Company, Jean Baptiste Trudeau formed an expedition to build a fort among the Mandans and to

determine the distance to the Rocky Mountains. Trudeau's expedition only reached the mouth of the Grand River in 1795, and they returned to St. Louis without locating the Mandan villages. In the fall of 1796 another Missouri Company expedition, led by John Evans, reached the Mandan villages and forbade them trade with the British. The Spanish authority at St. Louis was too remote for maintenance of sovereignty on the Upper Missouri and the existing trade relations with the British were strong. The Spanish traders fell into disfavor and the Indians continued to trade with the British companies (Robinson 1966:36-38). The Missouri River drainage remained the property of Spain until ceded back to France in 1800. In 1803 France sold the Missouri River drainage to the United States as part of the Louisiana Purchase.

In January 1803, President Jefferson proposed a "scientific" expedition to the western ocean:

> While other civilized nations have encountered great expense to enlarge the boundaries of knowledge by undertaking voyages of discovery for other literary purposes, in various parts and directions, our nation seems to owe to the same object as well as to its own interests, to explore this, the only line of easy communications across the continent (Eide 1969:2).

Thus was the Lewis and Clark Expedition set in motion, at a time prior to this nation's somewhat unexpected acquisition of the territory which the expedition was to explore. The Louisiana Purchase in effect legitimized the true purpose of the expedition (Eide 1969:3-8).

The expedition assembled and wintered near the mouth of Wood River in Illinois, opposite the mouth of the Missouri. The group began its journey up the Missouri at 4:00 p.m. on Monday, May 14, 1804. Lewis and Clark reached what is now North Dakota on October 14, 1804 and between then and October 18 the explorers camped at at least three locations in or near the study area. The party had met several hunting parties of Arikara with whom

they visited and exchanged gifts. On the way to the October 16 campsite the expedition passed an old "Cheyenne fort," and also viewed large numbers of animals being driven in the Missouri where they were killed by Indians. At the October 18 campsite the Lewis and Clark party met two French hunters and trappers who had been robbed of their furs and traps by the Mandans. The hunters followed the party with the hope that they could recover their lost property (Mattison 1953:173-185). After a long, arduous, interesting and relatively peaceful summer, they managed to pull, paddle and sail their boats 1,610 miles up the Missouri to the cluster of five earth lodge villages grouped around the mouth of the Knife River. On November 5th the construction of Fort Mandan, their wintering post, was begun four miles below the first Mandan village, on the east bank of the Missouri (Robinson 1966:41-42; Eide 1969:40-44).

Ceremonies had been conducted with the river tribes the expedition had met along the river all the way from the Mississippi, during which the Indians were informed of their new, great "Father" in Washington and were invited to no longer trade with others than the Americans coming from St. Louis. Such ceremonies were also conducted at the Knife River villages, but here there was less immediate insistence on canceling trade with the British. Lewis and Clark both realized that it might be several years before the St. Louis traders might reach this area. At that time perhaps the greatest advantage to Americans was the competitive battle going on between the Canadian fur companies, as observed by Clark in his letter to William Henry Harrison on April 2, 1805:

> The trade of the nations at this place is from the N.W. and Hudsons Bay establishments on the Assiniboin River, distant about 150 miles; those traders are nearly at open war with each other, and better calculated to destroy them than promote the happiness of those nations to whom they have latterly extended their trade, and intend to form an establishment near this place in the course

of this year (Eide 1969:48).

Inter-company warfare notwithstanding, the Canadians did little to make the Americans welcome, and may well have had a hand in the stirring up of the various tribes against their new nation's citizens. It was not the antipathy of the Canadians, at least not directly, that hindered development of the American trade, but rather the hostility of the Arikara, Sioux and other tribes between the lower Missouri River and the Knife River, hostility that was to continue, in part, for another seventy years. Despite those hostilities, a number of people embarked from St. Louis and other points to trade on the Missouri. On their return to St. Louis, Lewis and Clark met eleven different parties enroute upstream to trade. John Coulter left the expedition at the Mandan villages on the return trip downriver to join a party from Illinois as a guide for a fur expedition up the Yellowstone (Robinson 1966:48; Eide 1969:218).

The following year, 1807, two major parties left St. Louis for the Upper Missouri, the Pryor-Chouteau group of traders, soldiers and Indians, including the Mandan chief Big White Man and his family, and Manuel Lisa's party bound for the Yellowstone. The Pryor-Chouteau party was forced to turn back at the Arikara villages, but the Lisa party was successful and, until the War of 1812, engaged in a profitable trade. Lisa and his group ascended the Yellowstone and built a fort at the mouth of the Big Horn, the first American fort in Montana. Lisa's success resulted in the combining of the St. Louis traders into the Missouri Fur Company. In 1809, on the upriver trip, Lisa stopped twelve miles upstream from the mouth of the Knife, south of where the town of Manhaven would later be located, and built Fort Lisa. One of the partners in the Missouri Fur Company was Reuben Lewis, younger brother of Meriwether Lewis, and it was he who managed Fort Lisa for the three years the post was occupied (Crawford

1931:119; Robinson 1966:48-50).

Blackfoot Indian hostilities forced abandonment of the post on the Yellowstone and most of the Montana trade in 1811. The War of 1812 brought increased British pressure in the Upper Missouri country, and most of the tribes switched their trade back to the Canadians. Fort Lisa was abandoned in 1813. In 1814 William Clark, head of Indian Affairs at St. Louis, appointed Manual Lisa subagent for the Missouri tribes above the mouth of the Kansas River. Lisa was successful with the tribes on the lower Missouri, but the funds and forces available did not permit him to organize activities into present North Dakota (Crawford 1931:119; Robinson 1966:52-53).

In 1804 the XY Company was absorbed by the North West Company, but actual warfare had broken out between the North West Company and the Hudson's Bay Company by that time. The trade war cost both sides many lives, a great deal of money and costly court battles that were not settled until the Hudson's Bay Company absorbed the North West Company in 1821 (Dunn 1963:175-177; Robinson 1966:34-35; Schweigert 1979:19-21).

The Upper Missouri tribes in Montana and North Dakota remained the almost exclusive trading domain of the Canadians until 1825. After the war of 1812, John C. Calhoun, Secretary of War, felt it urgent to reestablish American authority and route the British from the Upper Missouri. Forts were to be built at the mouth of the Minnesota River on the Mississippi, and at the Knife River on the Missouri. Colonel Henry Leavenworth reached the Minnesota River in 1819 and constructed what would become Fort Snelling, but Colonel Henry Atkinson, who was sent by steamboat up the Missouri, was able to ascend only as far as Council Bluffs, Iowa. The boats either broke down or drew too much water to advance farther upstream.

Congress cut the appropriations, and the military presence of the United States for the Upper Missouri remained at Fort Atkinson for many years (Robinson 1966:82-83).

In 1821 another attempt was made to reopen trade on the Upper Missouri. Joshua Pilcher built Fort Benton (not to be confused with the later American Fur Company post at the head of navigation on the Missouri), at the mouth of the Big Horn River on the Yellowstone, and reoccupied old Fort Lisa just north of the Knife River, rechristening it Fort Vanderburgh. In the spring of 1822 William H. Ashley sent party under Andrew Henry to the Three Forks of the Missouri in Montana. One keelboat sank with a large loss of trade goods shortly after the start of the trip, and Assiniboines above the Mandan villages stole many of the party's horses, but the party ascended the Yellowstone and had a very successful beaver hunt. Twenty-five thousand dollars in furs were sent down to St. Louis in the fall of 1822. The next spring Blackfeet, possibly encouraged by British traders, killed four of Henry's men near Great Falls. Seven more men were killed on the Yellowstone and horses, traps, and furs worth more than $15,000 were lost. On June 3, 1823, Arikaras attacked Ashley's party near the mouth of the Grand River in present northern South Dakota, killing fourteen men and taking their horses.

A message was sent to Col. Leavenworth at Fort Atkinson requesting help. Leavenworth set out at once to punish the Arikara with 220 soldiers. He was joined by 80 of Ashley's men, 40 of Pilcher's and 400 to 500 Sioux who joined to plunder their enemies, the Arikara. When the Arikara came out to fight, the Sioux left the white forces to plunder the Arikara villages and cornfields. Leavenworth fired a cannon the next day, doing little damage, but did not fight. The Sioux, contemptuous of Leavenworth's performance, stole many of his mules and horses and rode off. Leavenworth

signed a treaty with the Arikara, his only losses being seven men who drowned on the return to Fort Atkinson. The trappers were so angered by the colonel's performance that Pilcher wrote him:

> ...to 'open and make this great road'; instead of which you have, by the imbecility of your conduct and operations, created and left impassable barriers" (Robinson 1966:82).

Once again the Upper Missouri was abandoned to the Canadians and once more the Knife River villages were partners in trade with the British, not the Americans who held sovereignty over the region (Dunn 1963:179; Robinson 1966:82-85).

In 1825 an expedition under now General Atkinson, accompanied by Benjamin O'Fallon, Indian Agent, headed north from Council Bluffs in eight keelboats of unique propulsion. The boats were equipped with paddle wheels which were turned by hand by the soldiers (Chittenden 1962:383). Treaties were signed with sixteen tribes from Council Bluffs to the Knife River. Atkinson reported on his return that he found no British influence and that no fort was required above Council Bluffs. While occasional hostilities were to continue for another fifteen years, the Upper Missouri had, at least in part, been opened to the American fur trade (Robinson 1966:85; Dunn 1963:179).

The dominant trading firm of the United States was the American Fur Company, chartered in New York by John Jacob Astor in 1808 with a capital of a million dollars. The Company was the foundation for the great Astor fortune, the largest in the nation at his death in 1848. Astor was an able, shrewd and ruthless man, and those characteristics were reflected in the Company's policies. In 1822 the Western Department was organized in St. Louis, and in 1827 Astor entered a partnership with Bernard Pratte and Company. The Company furnished the goods and marketed the furs, and Pratte

supervised the actual trade. Profits and losses were to be shared equally. For the following forty years the Company, be it the American Fur Company or its successors, Pratte, Chouteau and Company, or Pierre Chouteau, Jr., and Company, would hold nearly complete control of all trade on the Upper Missouri River (Robinson 1966:86-87).

In 1821, three related events important to the Upper Missouri fur trade took place. The Hudson's Bay Company absorbed the North West Company and abandoned much of the trading area of the North West Company south of the Forty-ninth Parallel. Several former employees of the two British companies wished to remain in United States territory, and together formed the Columbia Fur Company. The Columbia Fur Company had its principal headquarters near Lake Traverse in far northeastern South Dakota, but quickly extended its trade over the area from Lake Superior to the Upper Missouri. In 1822 James Kipp and J. P. Tilton built Tilton's Fort across from the Knife River villages, a little above where Fort Clark would later be located. Hostile Arikara forced abandonment of the post in 1823, but Kipp stayed in the region and built another small post at the Mandan villages. In 1825 he was sent to the mouth of the White Earth River to set up a post for the Assiniboine trade (Chittenden 1902:956-957; Robinson 1966:87-88).

The American Fur Company, unable to drive out the Columbia Company, bought out the latter company in 1827 and reorganized it as the Upper Missouri Outfit of the American Fur Company. The Upper Missouri Outfit was led by Kenneth McKenzie, called "King of the Missouri", who was one of the most capable man to engage in the fur trade. In 1828, McKenzie sent Kipp to the mouth of the Yellowstone to construct a fort, first called Fort Floyd but changed to Fort Union in 1830. Fort Union was to dominate the Upper Missouri fur trade for many years and become one of the most

important posts in the entire American West. In 1831 Kipp was back at the Mandan villages and built Fort Clark a few miles below the mouth of the Knife River on the west bank of the Missouri (Chittenden 1902:956-957; Robinson 1966:88-90; Holland and Dill 1980).

The Company dominated the trade at the Knife, as it did over the rest of the Upper Missouri, but it did not go entirely unchallenged. In 1833 Sublette and Campbell built a post a little below the site of Fort Vanderburgh to the north of the Knife River villages and some fifteen miles northwest of Fort Clark. Harvey, Primeau and Company had a fort for a few years in the 1850's that stood only about three hundred yards from Fort Clark. Fort Clark itself was abandoned in 1861, but during its life was, with Forts Union and Benton, one of the most important posts on the Upper Missouri (Chittenden 1902:956-957; Larpentear 1898:227; Robinson 1966:106; Holland and Dill 1980).

The year 1837 was cataclysmically fateful for the Indians of the Upper Missouri. A smallpox epidemic which swept through some of the tribes fifty years earlier returned even more virulent than before, and resulted in a complete restructuring of the social and tribal organization and eventual abandonment of the Knife River villages. The disease arrived at Fort Clark and Fort Union aboard the American Fur Company St. Peter in June of 1837. By August the Mandans were dying at the rate of eight to ten per day. By the time the disease had run its course the following year, the Mandans had been reduced to probably less than one hundred individuals and ceased to exist as an independent tribe. Rather than bear the ravages of the disease, many either committed suicide or begged friends or relatives to kill them. Many other tribes were greatly reduced in strength; the Blackfeet of Montana lost as many as six thousand. The Hidatsa and Arikara

also sustained heavy losses, but the Mandans suffered the most, proportionately. In the spring of 1838 after wintering below Fort Clark, the Arikara moved into the abandoned Mandan villages. A few of the remaining Mandans stayed with the Arikara, the rest moved up with the Hidatsa. Due to continued disagreements with the Arikara, the rest of the Mandans moved to the Hidatsa villages in 1839. The combined tribes then moved up river. In 1845 Chardon established Fort James, which became Fort Berthold in 1846, to trade with the combined Mandans and Hidatsa. The Arikara were the sole residents of the Knife River villages after 1839. They had moved to the Fort Berthold vicinity by 1861, abandoning the Knife River region (Larpenteur 1898:132; Dunn 1963:186-188; Robinson 1966:97-98; McFarling 1955:188; Catlin 1867:48-51).

By 1838 the best years had passed for the American fur trade in the region. The streams of the northern plains had been profitably and destructively exploited, but accumulating suitable quantities of pelts had become difficult, at best, and the buffalo robe trade had not yet begun. After the Arikara moved from the Grand and Heart rivers, the Missouri valley in the study area was left to the Sioux, who were served by itinerant traders who either established short-term wintering posts or sought out the villages and traded there.

Two such wintering posts may have operated in the study area, but information is very scant about these establishments. Hiram Chittenden, on a map in his classic work A History of the American Fur Trade of the Far West (1902), shows a "Bouis Post" opposite the mouth of the Cannonball River and a "Mitchell's Post" on the west side of the Missouri some distance above the mouth of the Cannonball. The text of Chittenden's work does not contain mention of either of these posts, however. Gouverneur K. Warren of the Topographical Engineers noted an "Old Trading H." just above

the mouth of Long Lake Creek (Badger Creek) on an official 1857 map. Several popular maps in the years 1865 to 1879 apparently borrowed heavily from Warren's military map, but the location of the old trading house is shown variously as to the south of the mouth of Badger Creek and on the west side of the Missouri opposite the mouth of the creek. "Mitchell's Post" is indicated on only Chittenden's map. Neither post is indicated on General Land Office plats or other survey plats of the Missouri River (Warren 1857; Johnson 1865; Asher and Adams 1875; Petterman 1879; Mitchell 1871; Watson 1875). One secondary source for the area states that a Samuel E. McElry had a trading post just above the mouth of Badger Creek in 1863-1864, but that it was abandoned after being flooded in the spring of 1864 (Emmons County Historical Society 1974).

The Indian Wars Era

Events seemingly remote and unconnected in one part of the country can have an impact on another part. The pressures of westward white migrations were not felt directly, at least not immediately, along the Upper Missouri at the same time and to the same extent that they were farther to the south. Nevertheless, beginning with the California Gold Rush and the westward travel along the Oregon Trail after 1848, the effects of those pressures became apparent on the northern plains. Initially the whites were not much interested in the vast expanses of the Great American Desert, and lands west of the Missouri River. They only sought passage through those lands to reach the rich sources of furs in the mountains, the rich agricultural valleys of Oregon, and the goldfields of California. But east of the Missouri it was a different story; here the lands were fertile, well watered, and in some localities had abundant timber. Euro-Americans wanted those lands, especially if the lands could be obtained for little or

nothing. Minnesota Territory was organized in 1849, and in 1851 the Santee Sioux ceded most of southern Minnesota to the United States.

At the Laramie Treaty in 1851, the Northern Great Plains tribes agreed to let the whites travel the Oregon Trail through Nebraska and Wyoming in peace. The white man, however, had little understanding of the Indian tribal system, that any band not signing the treaty did not feel bound by the treaty. Many of the Indians resented the white encroachment into their hunting grounds and made their resentment known by attacking wagon trains and groups of travelers and trappers. To aid in policing the plains, the army bought Fort Pierre from the American Fur Company in 1855 and built Fort Randall farther downstream in 1857. With the settlement of Iowa and southern Minnesota, white interest in southeastern Dakota increased and in 1858 the Yankton Sioux ceded fourteen million acres in what is now southeastern South Dakota. Settlements sprang up at Yankton, Sioux Falls and Vermillion, and Dakota Territory was organized to include all of present North Dakota and South Dakota, most of Montana, and about the northern sixty percent of Wyoming (Robinson 1966:98-99).

The Santee Sioux along the Minnesota River, feeling justifiably that they were being dispossessed, grew frustrated and angry. Against the wishes of the older and wiser chiefs, who understood the futility of fighting the whites, a number of the less stable bands began a series of depredations on white farms and settlements in 1862 that became known as the Minnesota Massacre. Colonel H. H. Sibley quelled the rebellion in Minnesota. Many of the Santees fled to join other Sioux bands near Devil's Lake, and most of those remaining, who had no part in the uprising, had their lands and possessions confiscated and were unceremoniously moved to Crow Creek Agency in South Dakota.

The demand of Minnesota settlers for retribution and security from the Indians resulted in the Sibley and Sully campaigns of 1863 and 1864. In the summer of 1863 Sibley was to advance toward the Missouri from Minnesota with a force of 2,800 men while Sully with 2,000 men would come up the Missouri to cut the Sioux off. Sibley fought the Sioux along a route north of present Interstate 94 with battles north of present Tappen, Dawson and Driscoll, North Dakota. The artillery scattered the Indians, most of whom had not been involved in the Minnesota Massacre and were not overtly hostile to whites, and who were on a buffalo hunt with their families and belongings. The soldiers destroyed the Indian camps, food and utensils. Sully's upstream journey had been delayed by the low water and he had not reached the site of present Bismarck where the Sioux crossed the Missouri fleeing from Sibley. Sibley's troops were exhausted and did not pursue further. He estimated that he had killed 150 Indians with losses of only 9 of his own men, but he hoped that the destruction of their food and possessions would cause "many, perhaps most of them, to perish miserably in their utter destitution during the coming fall and winter" (Robinson 1966:100).

After Sibley's troops headed back to Minnesota, the Sioux recrossed the river to the east to hunt buffalo along the James River. Sully finally reached their camp south of present Merricourt in northwest Dickey County, North Dakota. The Indians offered some of their chiefs as hostages to demonstrate their good intentions, but Sully demanded unconditional surrender. The Sioux balked and started to abandon their camp. Sully's troops attacked, shooting down men, women and children, in a bloody battle. One hundred fifty Indians were killed and 156 were taken prisoner. Three hundred lodges and nearly half a million pounds of buffalo meat were [illegible], and the Indians' horses were shot (Robinson 1966:101). Sully lost

twenty of his troops.

Instead of pacification and docility, the repression bred resentment and hostility among the Sioux. The next year, 1864, Sully with 2,500 men ascended the Missouri to crush the Sioux. After building Fort Rice above the mouth of the Cannonball, Sully's forces marched west and found Sioux encamped in the Killdeer Mountains of present Dunn County, North Dakota (Mattison 1954:3-4). These were not the Indians of the Minnesota Massacre, but Teton and Yanktonai Sioux who apparently had nothing to do with the episode. Sully's artillery broke up the Indian camp and his men destroyed the abandoned property, but they were unable to successfully pursue the Indians in the rough, broken territory. Sully led a grueling march through the badlands while the Sioux sniped at them and stampeded their horses. At the Yellowstone River, Sully and his men were met by steamboats and returned downstream, leaving small detachments of soldiers at Fort Union and Fort Berthold.

A number of events took place which further disturbed the Sioux and other nomadic hunting tribes of the northern plains. Gold was discovered in Montana in 1862 and a massive gold rush began. Prospectors, miners, opportunists of every description gravitated to Bannock, Virginia City, Helena and Last Chance Gulch. Many went up the Missouri on canoes, keelboats and steamboats while others crossed the guaranteed lands of the Indians on the Bozeman Trail. Some of the Indian leaders dejectedly admitted that the white man could not be stopped. Others, like Sitting Bull, concluded that they would rather die fighting for their territory and traditional ways of life than lose their freedom and perish from starvation on a reservation. Sitting Bull also believed that he could not win, but became committed to armed and active resistance. As a mail carrier who

spoke to him reported at Fort Stevenson:

> His business, he says, is to kill whites, and he will kill them as long as he and his band last. He boasts that war is more profitable to him than peace; that it brings him arms, ammunition, clothing, and especially great numbers of horses and mules, while the tribes who have submitted are dying of misery and hunger in the places where the whites have penned them up (Robinson 1966:102).

The establishment of Fort Rice grew out of the government's realization that a permanent military force would be necessary to contain hostile Indians and protect overland and Missouri River transportation routes. General Sully had been ordered to build the post near Long Lake, probably due to an error in then-existing maps. Because he found no suitable spot there, he returned to the Missouri River and chose a site on the west bank which offered relatively high ground immediately above the river, good grazing, and timber. The site was six miles above the mouth of the Cannonball River, across the river from the abandoned McElry trading post. Fort Rice was named for Brigadier General James Clay Rice of Massachusetts who was killed in the Battle of the Wilderness in May 1864. The Fort Rice Military Reservation, comprised of about 175 square miles, was established by executive orders of September 2, 1864 and January 22, 1867 (Mattison 1953:179-180).

Fort Rice was originally built of logs and laid out in the traditional military plan with buildings arranged around a rectangular parade ground. The fort was enclosed with a log palisade, which had blockhouses at the northeast and southwest corners. By 1868 the log buildings had deteriorated and had become too small for the fort population; in that year frame buildings were constructed within the log palisade to replace the original buildings. In succeeding years other structures were built outside the palisade, including three ice houses on the river terrace edge

and a square corral enclosed by stables, a granary, and stockhouses (U.S. Department of War 1875:421-425; Mattison 1953:87-108). The State Historical Society of North Dakota purchased the actual fort and some of the surrounding area in 1913 and 1936, and has preserved the site as a State Historic Site since that time. Some areas which once contained ancillary structures are on Corps of Engineers property.

The presence of Fort Rice at first seemed to increase the hostility of the Sioux, and attacks on lone mail carriers, steamboats and woodcutters continued and increased after 1864. Direct confrontation between the soldiers and Indians rarely occurred near the fort, however. The officers and soldiers of the post also had to contend with poor living conditions and poor and infrequent supplies; factors far more dangerous to life than were the Sioux. Between October 1864 and May 1865 six companies of the First U.S. Volunteers, comprised mostly of former Confederate prisoners of war, were stationed at Fort Rice. During that period 81 men died, only eight of whom were killed by Indians, while 37 died of scurvy (Mattison 1953:180).

Beginning in 1865 the United States government attempted to forge treaties with the tribes of the Central and Northern Plains. Considering the growing white population in Colorado, Wyoming and Montana and the massive emigrations up the Missouri River and over the Oregon-California-Utah trails, the Fort Laramie Treaty of 1851 clearly was no longer adequate. Fort Rice was located in the heart of the Sioux country, and negotiations were held at the fort in 1866, 1867 and 1868. Although some Sioux leaders refused to attend the 1868 meetings, many of the bands accepted at Fort Rice the provisions of the Fort Laramie Treaty of that year. In exchange for annuities, closing of the hated Bozeman Trail, and other services, the Plains tribes for the first time accepted reservation

areas and agreed to allow construction of a railroad through the region (Mattison 1953:182).

Not all bands or headmen of the Sioux signed the agreement, and some who did sign clearly were not apprised of some of the provisions. Fort Rice would play a major role in orchestrating the disaffections of the Sioux into open war in the following years. In 1871 surveys for a route for the Northern Pacific Railroad reached the Missouri River at Edwinton (Bismarck), and in that year and the following two years surveys extended from Edwinton into the Yellowstone Valley in Montana. The latter surveys were led by General Stanley and Colonel Whistler, and large military escorts were provided to the survey crews in part from the garrison at Fort Rice. The fort also served as the provisioning depot and assembly point for these expeditions (Mattison 1953:182-184).

On June 14, 1872, a temporary military camp was established near the projected rail line on the west side of the Missouri River and on August 15, 1872, the camp was moved downstream and named Fort McKeen. In November of the same year the post name was changed to Fort Abraham Lincoln, and the original infantry detachment was joined by a large force of cavalry (Carroll and Frost 1976:3; Robinson 1966:102, 127). Fort Abraham Lincoln quickly supplanted Fort Rice as the most important military post in the Northern Plains. In part this was because it could be supplied not only by steamboat but also by railroad, which reached Edwinton in 1873. The railroad would not be built into the area west of the Missouri for until 1879, but in that time Fort Abraham Lincoln would play a central role in the development of the American West.

Colonel George Armstrong Custer assumed nominal command of Fort Abraham Lincoln in 1873. In the summer of 1874 Custer led a large "mapping"

expedition, including four companies from Fort Rice, to the Black Hills of South Dakota. Gold was discovered there in paying quantities by miners with the party. News of the discoveries reached the booming railroad town of Cheyenne, Wyoming, almost immediately and a considerable prospecting rush began. The Black Hills were not only considered sacred by the Sioux and Cheyenne Indians, but had been guaranteed to the Sioux by the 1868 Fort Laramie Treaty. The Army removed several groups of prospectors from the Black Hills in 1874, but by mid-summer of 1875 hundreds of miners were prospecting there. Indians and whites made numerous attacks on each other during that summer, both in the Hills and to the south. Faced with massive public pressure and increasing violence, the government demanded that all Sioux present themselves at the agencies on the Missouri River in November 1875 or be considered hostile. Many bands could not be contacted before the deadline, especially those who were engaged in traditional bison hunting in what would become northern Wyoming and Montana.

Many Sioux and Cheyenne who went to the agencies found short rations, virtually no game, and mounting apprehensions that the Army would confiscate their horses and firearms. Throughout the winter and into the spring of 1876, groups of Sioux left the agencies to join the "hostiles" in the best remaining hunting territory near the Bighorn River. In May 1876, the United States Army began a campaign against the wandering Sioux and other non-agency Indians who were reported to have met in a grand encampment near the mouth of the Little Big Horn River. Two companies of the Seventh Cavalry from Fort Rice took part in this campaign. Although the major battle ended rather surprisingly for Custer and his immediate command, the hostile Indians were hounded by the army until they either surrendered or, like Sitting Bull, escaped to Canada (Hanson 1909:290-376;

Robinson 1966:178).

Many of the Sioux who escaped to Canada had formerly lived near the confluence of the Grand River and the Missouri, and northward into the Oahe area of North Dakota. Under provisions of the 1868 treaty an Indian agency was operated on the Grand River, which principally served as a distribution point for annuities and an intelligence gathering point for the government. In July 1873, Major Palmer, the Indian Agent at Grand River, was given orders to build a new agency on a new site. Palmer selected a site 32 miles south of Fort Rice. The post was named Standing Rock Agency for a nearby stone prominent in Sioux and Arikara mythology (Mattison 1953:159-160).

The military contingent which had been stationed at the Grand River Agency was transferred to Standing Rock Agency, and Grand River became a sub-agency. With military posts at Standing Rock and Fort Abraham Lincoln, and with the hostile Sioux chased into Canada, the need for Fort Rice diminished and it was abandoned in early 1878. In accordance with General Order No. 9, the name of the garrison at Standing Rocky Agency became Fort Yates on December 30, 1878. The new fort was named for Captain George W. Yates of the Seventh Cavalry, who died in the Battle of the Little Big Horn. After 1880 Fort Yates would be one of the largest military posts on the Northern Plains. The fort was located on the site of the present town of Fort Yates, and very little, if any, original integrity remains of the fort site (Mattison 1953:163-164).

Starvation and a desire to return home led Sitting Bull and his followers to surrender at Fort Buford, Dakota Territory, in 1881. These Indians were sent to Fort Yates and eventually they settled at Standing Rock and Grand River. Efforts of the Indian agent at Standing Rock were directed at "civilizing" the Sioux through replacement of traditional

lifeways and social structures with agricultural subsistence, controlled democratic government, and Christian religion. By 1890 Sitting Bull and other traditional leaders had embraced the Ghost Dance in part to regain their positions of leadership, in defiance of the Indian agent's express orders. In December of 1890 Agent James McLaughlin ordered Indian Police to arrest Sitting Bull at this cabin on Grand River; Sitting Bull and several of his followers were killed while resisting arrest. The Wounded Knee Massacre and several other minor incidents occurred after Sitting Bull's death, but the era of Indian-white military confrontation was essentially ended. Fort Yates was the last of the Indian wars forts to be abandoned in North Dakota when it was closed in 1903 (Mattison 1953:166; Robinson 1966:178).

Reservation Settlement

The Fort Laramie Treaty of 1868 established the Great Sioux Reservation; it was the 26th treaty with the SIoux between 1815 and 1868, but the first to actually guarantee land rights to the western Sioux. The treaty defined occupation areas for each band and tribe, and further defined extra-reservation hunting rights in huge areas. The Upper and Lower Yanktonai, Hunkpapa, and Blackfeet bands of the Sioux claimed occupation of that area that would become Standing Rock Reservation (Milligan 1976:6-11).

Although some of the Indians apparently believed the northern limit of the reservation to be the Heart River, the boundary was actually some distance to the south of the Cannonball River. The boundary was later changed by Executive Order to be the Cannonball to increase the distance between the major settlement around the agency and liquor salesmen operating at the edge of the reservation. Contact with liquor salesmen

also resulted in an Executive Order of July 13, 1880, which prohibited the Yanktonai from legally living anywhere east of the Missouri River in North Dakota. Finally in 1882 the Great Sioux Reservation was formally broken into five separate reservations, of which Standing Rock was by far the largest (Milligan 1976:14, 18, 107; Royce 1899:848-849).

The Fort Laramie Treaty of 1868 and the Dawes Severalty Act of 1877 provided for patent of lands on the reservation to individuals who would take up agricultural subsistence. A person who was head of a household could claim up to 320 acres, and a single person could claim up to 80 acres. The land would be patented after three years residence and certain improvements had been made, and the patentee would become a full citizen of the United States (Milligan 1976:11). By 1874 about 800 people were engaged in raising crops on 800 acres in all areas served by the Standing Rock Agency and in that year 1280 bushels of corn were harvested. The Indians also owned 3,000 horses, 9 mules, and 148 head of cattle; figures which illustrate their dependence on hunting for subsistence at that date (U. S. Commissioner of Indian Affairs 1874:116).

Most of the planted acreage was within the floodplain on the Grand River some distance from the subagency. In late 1874, the Secretary of the Interior issued an order that all Indians must live within 15 miles of an agency, so that the Indian agent could keep track of his wards and the Indians would be further removed from white liquor salesmen. That order caused the abandonment of most of the cultivated lands on Grand River and further discouraged the Sioux from settling down on the reservation. In the following years the agricultural base at Standing Rock would diminish significantly because lands near the agency and subagencies that were conducive to large-scale farming were limited, and because many former residents of Grand River would leave to join Sitting Bull in hunting areas

to the west (U.S. Commissioner of Indian Affairs 1874, 1875, 1876).

The total land under cultivation did not exceed the 1874 level until 1880 when 1,142 acres were planted in individual tracts and another 267 acres were planted in three common fields by 180 Indians. The agent also hired Indian employees to plant 300 acres of wheat for the agency bakery and to serve as an example to other the Indians. By 1880, however, other sources of income were available to residents of the Standing Rock Agency. All timber had been cut within five miles of the agency, and Indians and white contractors were hired to haul fuel to the agency and Fort Yates. The agency and military garrison also had large herds of horses and cattle, and in that year Indians cut 2,069 tons of hay for winter feed (U.S. Commissioner of Indian Affairs 1880; Milligan 1976:96, 98).

By 1881 two hundred eighty-four families had taken allotment claims on the reservation, and 243 families were living in log houses built by government employees. Most Indians who had not chosen allotments by that time were planting crops in two large common fields. In July 1881, Sitting Bull's band surrendered at Fort Buford and were brought to Standing Rock. Sitting Bull himself would remain under arrest at Fort Randall until 1883, but the arrival of his followers encouraged a movement toward revival of traditional tribal organization and religion that would end in 1890 with Sitting Bull's death and the Wounded Knee Massacre. Some of the newcomers settled near the Standing Rock Agency, but most returned to the Grand River area (U.S. Commissioner of Indian Affairs 1881, 1882, 1883).

In 1882 when the Standing Rock Reservation was officially carved from the Great Sioux Reservation, the population had reached 3,775 persons and was on the increase. The next year 4,472 persons were counted on Standing Rock and nearly 1,400 acres were planted. Conditions on the reservation

were depressing: virtually all of the Indians depended on government rations for their main livelihood and disease was rampant. In 1881 there were 111 deaths and only 105 births reported for the reservation. An estimated 2,000 cases of tuberculosis affected half of the reservation population (Milligan 1976:101-104). The net increase in population resulted from movement from Indians to Standing Rock from agencies and reservations where conditions were worse.

Alternatives to reservation life had ceased to exist for the Sioux by 1882. In that year Agent James McLaughlin received permission to accompany a general bison hunt by residents of Standing Rock, in areas far to the west of the reservation. Although a large number of bison were killed during that hunt, the herds were gone forever and only a few animals would be found by commercial hunters in 1883. Euro-American settlement had begun along the east side of the Missouri and on drainages to the west river as open range ranching became impossible. Homestead settlement spread with the building of the Northern Pacific Railroad to Bismarck in 1873, and westward in 1879-80. Although one incident of violent conflict between Indians and settlers is known to have occurred on the east side of the Missouri River, most of the reservation population remained near the agency or a subagency at Cannonball where they were isolated from Euro-American settlement. In 1886 a railroad company proposed to remove that isolation by building a railroad from a point ten miles south of Fort Yates to the Black Hills, but the Indians resoundingly rejected permission for the project (Milligan 1976:116, 118).

The lands of the Standing Rock Reservation were well suited for stock range, and several Euro-Americans developed large ranches on the edge of the reservation and leased non-alloted Indian lands after 1880. The range stock industry has remained the most viable economic activity from that

date to present, but the nature of that industry changed with the opening of the non-alloted lands to general entry. On February 10, 1890, President Benjamin Harrison proclaimed acceptance of legislation by Congress to return about half of the lands on the Standing Rock Reservation to the public domain. Those "excess" lands were opened to general entry on a lottery basis in 1908, which brought a virtual land rush to the area (Great Sioux Reservation Information Bureau 1908).

Steamboat Navigation

The Missouri River was the artery of commerce for the fur trade of the entire region. Until 1832 the great bulk of the trade goods were moved up the river from St. Louis on keelboats which were poled, rowed, pulled, or sailed up the river depending on the conditions at any particular time and location. The furs and hides received in the trade were returned downstream by the same vessels and by Mackinaws constructed at the posts. The Mackinaw was inexpensive, easy to build, and generally carried a greater cargo than the keelboat, but was good only for downstream travel (Robinson 1966:90; Lass 1962:90-109). Canoes or pirogues, which were essentially canoes with a squared stern, were used for sending messages and small items between posts (Lass 1962:91-94).

A tremendous change in transportation on the Upper Missouri occurred in 1832. After the disasters that befell the Atkinson expedition steamboats in 1819, it was generally assumed that use of such boats was impractical above Council Bluffs. Frustrated by the inability to move merchandise by keelboat in the quantity and with the speed desired, the American Fur Company had for several years considered developing a special craft for the Upper Missouri navigation. Finally construction of a small, broad beamed steamer of shallow draft was commissioned. In 1831 that boat, the

Yellowstone, ascended the river as far as Fort Pierre, and in 1832 it reached Fort Union, opening the upper river to comparatively rapid and dependable transportation for the first time. Although it would be more than twenty years before a steamboat got significantly farther upstream than Fort Union and nearly thirty years until one reached Fort Benton, the head of navigation on the Missouri, the steamboat was destined to be the principal means of freight hauling throughout the valley from 1832 until the arrival of the Northern Pacific Railroad at Bismarck in 1873. It remained important to the overview region until the arrival of a railroad branch line in the following century. All of the forts, whether fur posts, military posts or Indian agencies, depended on the river steamers. The boats were vital to military campaigns from Sibley and Sully in the 1860's, to the Battle of the Little Bighorn in 1876 and the winter campaign of 1876-77.

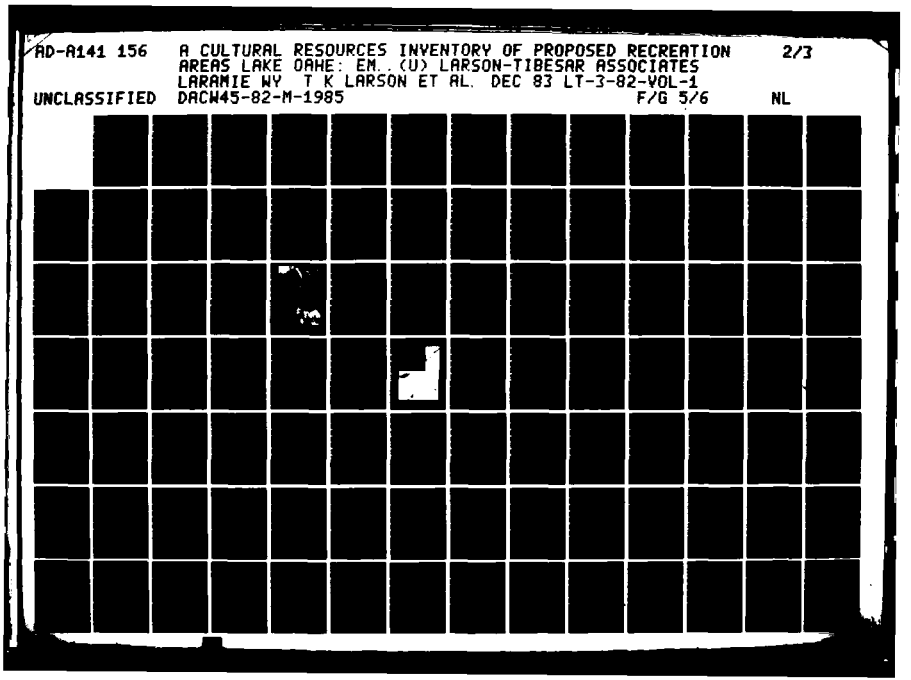
Noted visitors who recorded the life and scenes along the river for posterity followed the river before the advance of steamboats. Henry Brackenridge, a lawyer, author, diplomat, and jurist, ascended the Missouri with Manuel Lisa in 1811. John Bradbury, a Scotch botanist, also traveled to the Knife River villages in 1811 and returned to St. Louis in company with Brackenridge. Their writing brought to the civilized world some of the first literate reports of life along the Missouri (Robinson 1966:90-91; McFarling 1955:27, 29).

It was travel by steamboat, however, that opened the upper river to the visits by some of the more celebrated personages of the era. George Catlin, the noted artist and chronicler of the American Indian, was on the first voyage of the Yellowstone to Fort Union. Catlin stopped at Fort Clark both on his way up to Fort Union and on his return. Through the

efforts of James Kipp, Catlin was privileged to witness the Mandan ceremony called O-Kee-Pa which resulted in a book of that name and a number of paintings (Catlin 1867:4 and passim; Robinson 1966:321). The following year Prince Maximilian of Wied-Neuwied and his artist, Karl Bodmer, arrived at Fort Clark and spent the winter there (Robinson 1966:321; Catlin 1867:vii). John James Audubon sailed to and from Fort Union in 1843. According to captain Joseph LaBarge, on whose boat "Omega" Audubon made the upstream trip, he was less than an ideal passenger and guest (Lass 1962:141, 150; Robinson 1966:321). The beloved Jesuit priest, Father Pierre Jean DeSmet, was a passenger on LaBarge's boat in 1851 en route to Fort Union (Lass 1962:189).

Although steamboats had little to do witn permanent settlement in most of North Dakota, they were a primary factor in the early settlement of the Oahe area because the boats were the primary means of commercial transportation until 1914. The first steamboat came to the area in 1832 when the Yellowstone continued it voyage upriver from Fort Tecumseh, where Fort Pierre, South Dakota, now stands. The Yellowstone and other vessels continued to serve the military, fur and reservation posts for the next half century or longer, but the real boom in steamboat transportation on the Missouri developed after the sizeable gold discoveries in Montana in 1862.

By the 1860's the trading posts and stores had become more general merchandise houses than fur trading establishments. Rather than trading for furs, they were selling goods to the military, the Indian agencies, and the travelers on the river. In 1864 Pierre Chouteau, Jr., suspected by the U.S. Government of being a Confederate sympathizer, lost his license to trade on the Missouri. He sold out most of his remaining posts to Hubbel and Hawley, who operated under the name of Northwestern Fur Company.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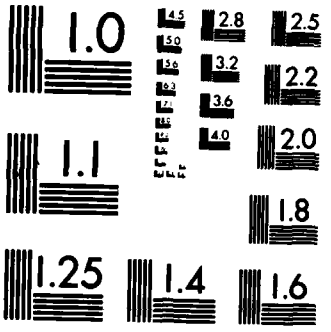


Hubbel and Hawley, headquartered in St. Paul, Durfee and Peck in Sioux City, and I. G. Baker of Fort Benton controlled the upper river trade until its end. No longer simply merchandisers, they all operated their own transportation companies and owned or leased their own steamboats (Robinson 1966:106-107). By 1873 the character of the trading companies had changed; they were primarily transportation and steamboat operators rather than fur traders. Regardless of where their companies were headquartered, they basically operated out of three points: Yankton and Bismarck in Dakota Territory, and Fort Benton in Montana Territory (Robinson 1966:107; Lass 1962:89-104).

In 1877 the total value of the Fort Benton river commerce was reported at $3,458,536.60, definitely a significant volume in 1877 dollars. In 1878 upriver shipments totaled 8,764 tons, including 200 tons of military supplies and between 200 and 300 tons of Indian freight. Among the cargo carried on the return trips from Fort Benton was gold dust, silver bullion, ore, wool and 696,000 pounds of wood in 1878. In the late 1870's approximately thirty-six boats operated out of Yankton, and the same number out of Bismarck. The Fort Benton trade was not exclusively for the Montana mines, however. The community served a wide territory from the mining regions to the south all the way up to Canada on the north. In 1880, Bismarck reported the arrival and departure of 172 vessels during the summer. With that kind of volume on the Missouri, it is no wonder that woodyards became numerous and important, and in some cases resulted in the establishment of small settlements in the vicinity of these fuel depots (Lass 1962:130-136; Williams 1961:187-188).

One such woodhawk was Andy Marsh who started a woodyard in Emmons County in 1872. Marsh also provided a ferry crossing of the river near his

woodyard. Another woodhawk, James B. Gayton, came to North Dakota in 1868 and became a commissary clerk at Fort Rice. By 1874 he operated a woodyard in partnership with Andy Marsh. Gayton operated another woodyard below the mouth of Cattail Creek and later one on Horsehead Flat. In 1883 he had a trading store in the latter vicinity and the nearby townsite of Gayton was named for him. Another woodhawk, Mull Huran, ran a woodyard four miles below Fort Rice. Woodhawks apparently sold more than wood. Andy Marsh and Tom Foley were ordered to stop selling whiskey on the east side of the river by Indian Agent Palmer in 1875. They ignored the order, as did the Kelly brothers who were bold enough to set up shop directly across from the agency (History of North Dakota Grazing File n.d.a:6; Weeden n.d.:24, 36; Milligan 1976:26-27).

By 1880 the "Indian problem" had been resolved and the military presence greatly reduced, which correspondingly reduced the highly profitable military trade of the steamboat transportation companies. The Northern Pacific Railroad had completed a line from Duluth, Minnesota to Bismarck, North Dakota on June 3, 1873 and in 1879 began pushing westward (Robinson 1966:127, 184). After 1883 Bismarck was the only port that could readily serve the remaining area not already provided with railroads. In 1885 what had long been the largest shipping company on the Upper Missouri, the Coulson line, quit the business. Thereafter the bulk of boats handling freight belonged to the Fort Benton Transportation Company, an organization owned largely by Fort Benton merchants, incorporated in Iowa, but with operating headquarters in Bismarck (Lass 1962:101-102, 137).

After 1885 the Upper Missouri steamboat trade was mostly of a local nature, with the exception of 1887 when a brief boom occurred that was to be responsible for the end of the steamboat era. This boom was caused by the record breaking construction of the St. Paul, Minneapolis, and Manitoba

Railway (soon to become the Great Northern) line from Minot to Great Falls. While the season offered a great deal of work and profits to the steamboat lines hauling construction supplies from Bismarck to points such as Williston and Fort Benton, the completion of the railroad to Great Falls that year marked the finale for long haul steamboat transportation on the upper river (Lass 1962:154-157).

The Fort Benton Transportation Company and its successors remained unwilling to face the inevitable end and, although the long haul business was over, did manage to continue operating for many years thereafter. By 1895 the river traffic out of Bismarck was confined to the area from Fort Yates to Williston, and the Fort Benton Transportation company operated only two boats, the Rosebud and the F. Y. Batchelor. The final era of river traffic began in 1900 with the advent of the gasoline packet. This was a much smaller boat, usually less than 100 feet long and 20 feet wide, that carried 2,000 to 3,000 bushels of grain in a hull that drew only about three feet of water. The engine was small, and the superstructure only occupied a small portion of the aft end of the boat, leaving the rest for cargo. Fuel costs for the gasoline packets were only about twenty percent of those for a steamboat, and they operated with a crew of about six, instead of thirty to fifty for a steamboat. This small, maneuverable, efficient vessel in effect saved river transportation for another two decades (Lass 1962:153-161).

While river and rail travel carried freight and prospectors to major settlements, the overland stage coaches and freight wagons allowed access to those regions not served by boat or train. In 1877 the Northern Pacific Railroad, Minnesota Stage Company, N. P. Clark of St. Cloud, and Peter Steims and his associates formed the Northwestern Express and

Transportation Company (known as the E. T. Company) to transport freight and passengers from Bismarck to Deadwood, South Dakota, in the heart of the Black Hills gold fields. This company bought horses, mules and wagons and built quarters for their men along the 210 mile route. The first stages left Bismarck on April 11, 1877. In 1880 the Chicago and Northwestern Railroad reached Pierre, South Dakota, and the E. T. Company sold out and moved to Pierre (Larson 1931:60).

Other regions, however, did not receive rail service for many years and stage lines were an essential link to trade and communication centers. Daily stages ran from Bismarck to Winona and Fort Yates. Charles Copitz ran this line, and his drivers were John Eastwood and LaBrock. The route was only passable during the dry months. The first stop was five miles south of Bismarck at the small village of Stewartsdale; which included a grain elevator, stockyards and a church. The next stop was Glenco where the stage was ferried across the river to Huff and Fort Rice, then ferried back to Glenco. After the Glenco stop, the stage continued to Livonia where mail was distributed at the Baker post office. The fourth stop was at the Casey post office at Gayton. The remaining stops were at the Hampton and Emmonsburg post offices, with the stage ending the days' journey at Winona. At Winona the stage was ferried across the river to Fort Yates. The following day the route was reversed (Sprunk 1976:8; Oder 1976:24). These stages operated during daylight hours, weather permitting, and changed their routes to adapt to changes in the locations of post offices. The Emmonsburg post office changed its location at least seven times from 1883 to 1934, and the Livonia post office seven times from 1883 to 1942.

The half-way house for a stage line operating between Mandan and Fort Yates was located at the ranch headquarters of Henry S. Parkin. Noted

visitors to this stopping place include the Bishop of Canterbury of England, Duke Boris of Russia, Major James McLaughlin, Sitting Bull and "Buffalo Bill" Cody. A telegraph station on the line from Fort Yates to Fort Lincoln was also located at the ranch headquarters (Emmons County Record 1939:1; Mattison 1953:177).

Most communities on the river had ferries to allow crossing. The Winona-Fort Yates ferry was operated by Andy Marsh. Marsh lost his license and the ferry crossing was operated by H. M. Douglas in 1884. The following year Marsh regained his license from Douglas. Fred Carrow operated a ferry on Big Beaver Creek until 1884, when H. A. Archambaut took over the operation. John Leach operated a ferry on the Cannonball in 1895. A boat landing for the ferry operation said to have been operated by Edward Donahue west of Linton, North Dakota (32MO54), may have been located in 1980 (Robson and Parish 1981).

Euro-American Settlement

The first Euro-American settlers to the region, other than fur traders, military men and wood hawks, were the open range ranchers. The taming of the Indians, extermination of the buffalo, and the great reduction in the size of the Indian reservations after 1877 opened a tremendous expanse of land to cattle and sheep raising. One of the first ranchers in the project area was Henry S. Parkin. Parkin came west from Pennsylvania in about 1873 and by 1876 had established his headquarters on the Cannonball River. Like many ranchers who combined their ranching activities with other economic activities, Parkin operated a stage stop and telegraph station from his ranch headquarters. His brother, Walter S. Parkin, in partnership with Mandan meat retailer, W. C. Badger, operated the Horsehead Ranch in Emmons County. During the summer months their cattle fed on the "free range" in

Sioux County, then in January were herded across the frozen Missouri River to the Badger-Parkin corral. Here the cattle were protected from the harsh northern winds in the timbered floodplain until March, when they were driven back to Sioux County (History of North Dakota Grazing Files n.d.b:1; Mattison 1953:177; Fristad 1970:47).

Don Stevens, another well-known rancher, operated a corral in the Glenco vicinity on the east side of the Missouri River. Stevens also worked as a freighter and delivered feed supplies to army posts including Fort Rice, Fort Ransom, Fort Lincoln, Fort Yates, Fort Stevenson, Fort Custer and Fort Buford. His ranch, the Cannonball, was in operation by 1885 and was located at the point where the Bismarck-Deadwood stage crossed the Cannonball River (History of North Dakota Grazing Files n.d.b:13).

Many factors contributed to the influx of homesteads in the early 1880's commonly called the "Great Dakota Boom." Steamboat and rail transportation had made the area easily accessible, the "Indian problem" had been resolved, and the land was either free or inexpensive. Settlers who selected non-railroad grant lands could homestead on 160 acres for filing and proof fees amounting to $16.00. The Northern Pacific, which had been given large land grants by the federal government, sold land to settlers at $2.50 an acre and up. Typically, the sizes of the homesteads were small. The type of structures the settlers constructed varied according to available materials and ethnic preferences. On the timbered river bottoms, log structures were common, while on the rolling plains, structures were built of milled lumber or earth, often banked into a hillside. Where few construction materials were available from nature, lumber was hauled in by railroad and freight wagon (Woods and Wenzel 1976a:16).

Early settlements in the area also occurred as a result of the restrictive military laws at the government agency at Standing Rock. Some of the forty men who had been employed to construct the Standing Rock Agency in 1873 built a colony for themselves east of the Missouri in Emmons County. Shortly thereafter, sixteen houses were built near the Andy Marsh woodyard. The dwellings had antelope hides stretched tight across window frames, doors and split logs, and chimneys constructed of logs plastered with mud. Marsh had a larger building where he put in a stock of whisky and also provided entertainment for the men. This settlement was soon called Hard Scrabble or Devil's Colony (Weeden n.d.:37-38; Barett 1975:1). As a result of the increased military operation at Fort Yates, in 1884 Devil's Colony was surveyed, platted and renamed Winona (Williams 1961:110). On April 30, 1884, a medical officer at Fort Yates reported:

> The steamers from Bismarck have brought with other freight, a good deal of lumber for the new town opposite [the] post. The town has been named 'Winona'. At this date, a large number of claims have been taken in the vicinity of the townsite and all desirable land occupied (Medical History of Fort Yates 1878-1903:Vol.I:212).

During its heyday, Winona was claimed to be the largest city between Bismarck, North Dakota and Pierre, South Dakota, with two hotels, two stores, two restaurants, nine saloons, a race track, and a post office run by James G. Pitts (Winona Times 1884:4; Barett 1975:1). Winona's reputation as a "fort town" and an offspring of Devil's Colony continued, and in May 1884, the medical officer at Fort Yates complained:

> Owing to the ease with which whiskey can be obtained at the new town of Winona opposite the post since pay day 15 inst. ... there have been several desertions from the post during the month (Medical History of Fort Yates 1878-1903:215).

Towns like Winona were called "hog" or "whiskey ranches" and were the subjects of many complaints by Indian agents and post commanders. Winona had an especially bad reputation for treachery. For example, one man

reportedly killed by a saloon girl was buried in the cellar. Although the body was later discovered, no mention was made of its removal or a subsequent investigation (Barett 1975:4). In December 1885, a soldier was accused of killing a woman in the town and was held on a charge of murder. He was later acquitted. On two occasions the bodies of frozen soldiers were found near Winona (Medical History of Fort Yates 1878-1903:Vol.I:164, 258, Vol.II:2). As the population increased and families moved into the town, businesses flourished and crime became less of a problem. In 1885 a newspaper, the Winona Lancet began publication followed in 1887 by the Winona Times. By 1888 a literary club, dramatic club and yearly July 4th celebrations, which included racing horses, provided entertainment for the "cultured" of Winona (Winona Times 1888:1).

In the mid-1880's Emmons County was the scene of a colonization of Hollanders from the Netherlands, Michigan, Illinois, Iowa and New York. Pifer Bakker, a Hollander himself, came to North Dakota as a land agent and promoted the "free lands" which would enable his friends and relatives in the east to become landowners. These settlers founded the town of Hope. Pieter Ellenbroek also contributed to the colonization of Hollanders in Emmons County. Ellenbroek also worked as a real estate agent for the Chicago, Milwaukee and St. Paul Railroad which advertised the area in "De Volksvriend," a Dutch language newspaper published at Orange City, Iowa. The Chicago, Milwaukee and St. Paul Railroad named two of the area communities with a view toward attracting these settlers: Hauge in Emmons County, and Zeeland in MacIntosh County. By April 1886, the Hollander settlement had grown to two hundred persons and was still expanding (Woods and Wenzel 1976:14; De Jong 1967:256; Strausburg Diamond Jubilee 1976:34).

Ethnic ties were strong and a sense of identity prevailed over the Emmons County colony, often called "The Wooden Shoe Settlement." Religion

was an important part of this ethnic identity, and the Dutch and Christian Reformed Churches were soon established. Many of the Hollanders reportedly constructed their initial homes and outbuildings of sod (Strausburg Diamond Jubilee 1976:35; De Jong 1967:254).

Another ethnic settlement in the region, Hekton, was established in the late 1880's on the south bank of the Cannonball. During the 19th Century the population consisted mostly of Indians and the community was centered around the subagency post. Hekton was the name given to the settlement and post office established there by Rich M. Johnson and the site was said to be the location of an earlier village of the same name. The name Hekton was derived from the Sioux word "Hecta," which means "set back" or "away from," a reference the distance of the village from the Missouri River. The Cannonball post office was moved and in 1915 the residents of Hekton changed the name of their village to Cannonball (Williams 1961:186).

In the late 1880's and early 1890's German-Russian immigrants began to expand northward from South Dakota into the Emmons County region. These settlers built substantial mud dwellings similar to those they had left in Russia. The mud was mixed with straw, formed into bricks and allowed to bake in the sun. The completed walls of the structure would be plastered with mud, producing a well-insulated building able to withstand the extreme Dakota temperatures (Woods and Wenzel 1976:16; Trinka 1920:188).

Early farmers of the region suffered the hardships of adapting to new environmental, economic and social pressures. Many of the small homesteads could not sustain a family and often these settlers sold their land and moved on to homestead in a less hostile environment. Those settlers who could afford to buy out the less fortunate were able to increase their lands to a supportable level. National economic declines and local

climatic disasters in the 1890's dealt crushing blows to many settlers and discouraged would-be settlers from coming to the region (Robinson 1959:15).

In the first decade of the 20th Century many of these discouraging elements eased. Railroads began to expand and build branch lines to smaller communities, a new milling process and the creation of an increased food market stimulated by the Industrial Revolution in the East favored the grains grown on the northern plains, and encouraging climatic conditions all contributed to a new surge in settlement in North Dakota. By 1910 the Northern Pacific had begun to extend their track down the west bank of the Missouri, and on May 12, 1910, the townsite of Huff was platted at the location of the Nineteenth Siding. The town was named for John S. Huff who had homesteaded the land. Emmet W. Dobs became the post master of the new town (Williams 1961:199). The village of Fort Rice was platted in 1909 about one mile north of the old fort site. Originally called Gwyther after the former owner of the site, Robert Gwyther, the village quickly became a minor trade center for the area. By 1916 the town contained a general store and post office, at least one lumber yard, two other general merchandise stores, two hardware stores, a bank, a jewelry store, a butcher shop, and a grain elevator. The town reached its zenith about 1920 with a population of over 300, but began to decline rapidly after that date. Many of the original buildings of the townsite were destroyed in a tornado on May 29, 1953 (Peterson 1975:181).

Towns not blessed with railroad service soon experienced a loss of population and commerce. When the military troops withdrew from Fort Yates in 1903, the town of Winona, which was not served by the railroad, gradually declined until 1913 when it was virtually a ghost town. In 1935 the last building in the town was removed. Historic debris, pits, cellar depressions and roads are all that remain there today (Williams 1961:110;

Mattison 1954:173).

In the depression years of the 1920's and 1930's drought brought added difficulties to the farmers and ranchers of the region. Land and farm prices reflected the economic difficulties and resulted in many foreclosures on farm mortgages. From 1921 to 1934 probably one-third of North Dakota families lost their farms through foreclosures (Robinson 1966:400). Improved weather conditions and growing farm size eased many of these difficulties in later years. Although average farm size continues to grow slightly in the region, the rural economy and settlement population have been fairly stable since 1950. The German-Russian and Hollander ethnic groups are still identifiable in Emmons County although they have been largely assimilated into the mainstream society of the region. The Indians of the Standing Rock Reservation remain distinct from the general regional society, in part due to the continued existence of the reservation and its corresponding societal insulation, and in part due to a genuine desire of some Indians to maintain a separate identity and cultural patterns.

CHAPTER SIX

HISTORY OF ARCHEOLOGICAL INVESTIGATIONS

by

W. Raymond Wood

The Native Americans most closely related to the general area of the project are the Mandan, a group famed in the Northern Plains since their discovery in the early 1700's by La Verendrye. The lure of their relationship to the mythical, medieval Welsh explorer, Madoc, although effectively debunked in 1795 when they were visited by the Welshman John Evans (Williams 1980), has led to continued popular interest in them and their history. The first major study of their archeology, however, did not commence until 1896 with the investigations of J. V. Brower, of the Minnesota Historical Society, whose work was partly stimulated by the Madoc legend. Brower's collection consisted of some 30,000 artifacts from documented and putative Mandan sites in the vicinity of Bismarck, not one of which could Brower ascribe to this legendary origin (Brower 1904: xi). Brower's work, however well regarded in its time, was nevertheless superficial and is cited today principally for historical purposes. Much of the work (and most of the collections made from the sites in Brower's work) was in fact conducted by Ernst R. Steinbrueck of Mandan, North Dakota, at sites between the North Cannonball site (32MO1) and the vicinity of the mouth of

Knife River.

In 1904, the same year Brower's study was published, George F. Will became interested in the history and culture of the Mandan and prepared a brief sketch of them. The following year, a small group of fellow students from Harvard University carried out excavations at Double Ditch, which Will and his friend Herbert J. Spinden jointly published. The Mandans: A Study of their Culture, Archaeology, and Language (Will and Spinden 1906) was to become a classic study in Northern Plains archeology. For a full fifty years it remained the only comprehensive study of a Plains village site in North Dakota. This drought of reporting was broken by the modest report prepared on a house excavated at Grandmother's Lodge in Garrison Reservoir by Alan R. Woolworth (1956).

The State Historical Society of North Dakota (SHSND) was formed by legislative enactment in 1905. During the next five years Orin G. Libby, first secretary of the society, undertook a number of archeological projects, including the mapping of many of the more spectacular earth lodge sites along the Missouri River, although no systematic excavations were carried out. A. B. Stout, a professional surveyor, actually made most of the maps which, in the project area, included only the Shermer site. In the Bismarck area, Boley, Motsiff, and Double Ditch were mapped.

Ernst R. Steinbrueck, in collaboration with the SHSND, continued the work he had begun with Brower, visiting and collecting widely at village sites along the Missouri River in North Dakota. By 1907, he had prepared two maps which pinpointed the major earth lodge villages along the Missouri within the state (Wood 1978: 78-79). The legal descriptions of the sites on these maps were published many years later (Will 1924: 333-334).

In 1911, accompanied by H. J. Spinden, then with the American Museum of

Natural History in New York, George F. Will spent a month along the Missouri River accumulating data on a variety of archeological sites (Will 1924). He commented briefly on sites between North Dakota-South Dakota state boundary and the Double Ditch site (1924: 311-316). In the fall of 1919, Spinden again joined Will to spend another ten days investigating village sites below the mouth of Heart River, principally in the project area itself (1924: 334-344). Among their other activities, they prepared new maps of the Huff and Motsiff sites (1924: Figs. 11-13).

During the 1930's and 1940's Thad C. Hecker, a new and active member of the staff of the SHSND, conducted numerous studies of village sites along the Missouri River, including some in the project area. Hecker excavated one house at the Huff site and tested others, reporting this work together with other investigations at sites along the river in North Dakota in a monograph published by the SHSND (Will and Hecker 1944). Although George Will's name was appended as senior author to this study, he was in fact responsible for almost none of it (Russell Reid, personal communication). His name on it, however, gave it professional weight well beyond its real value. Principally a catalog of village sites in the state, it also contained the first taxonomy of village sites in the area: Archaic Mandan (principally now including Extended Middle Missouri variant sites); Middle Mandan (which includes the Huff phase of the Terminal variant of the Middle Missouri); Later Heart River (basically the present Post-Contact Coalescent Heart River phase sites); Decadent (including many of the post-1780 village sites of the Coalescent tradition); and Cheyenne and Arikara villages (Will and Hecker 1944). The only work reported for the project area was the 1938 excavation of the house at Huff (1944: 19-23, Plate 6).

The year 1938 also marked the year William Duncan Strong and his students from Columbia University excavated at the protohistoric Mandan

village, On-a-Slant, at the mouth of the Heart River. The site material, analyzed by Carlyle S. Smith was reported in Stong's famous paper, "From History to Prehistory in the Northern Great Plains" (Strong 1940: 360-365).

During World War II, like the rest of the United States, archeological work ground to a halt in the Missouri valley. In the two decades following the war, archeologists more than made up for the lost time. Passage of the Pick-Sloan plan, and the construction of a series of massive dams on the middle reaches of the Missouri River, stimulated state and federal agencies to investigate archeological sites at an unprecedented pace (Lehmer 1971). One of the reservoirs on the Missouri mainstream, Oahe, occupies the river valley in the south central part of North Dakota: it is this part of the reservoir which contains the project area. Gordon W. Hewes, an anthropologist from the University of North Dakota, resumed archeological work in the project area in 1947 with the excavation of site 32SI4 (Hewes 1949), later named the Paul Brave site. This site is one of the type sites for the Fort Yates phase of the Extended Middle Missouri variant.

The year 1948 witnessed the appearance of a Ph.D. dissertation by Alfred W. Bowers at the University of Chicago entitled "A History of the Mandan and Hidatsa." This study reported Bowers' investigations between 1929 and 1931, for the Logan Museum of Beloit College, along the Missouri River in North Dakota and in central South Dakota, in an area centering on the project area. A second taxonomy for the principal sites in the project area is contained in this study: the Cannonball focus (roughly equivalent to the Fort Yates phase); the Huff focus (basically the Huff phase); and the Heart River focus (now the Heart River phase) (Bowers 1948). It was, however, Donald J. Lehmer who, in 1954 formulated the taxonomic scheme which has matured to provide the standard for the area (1954, 1971).

The first systematic survey of the Oahe Reservoir area was conducted from 1948 to 1952 by the Smithsonian Institution's Missouri Basin Project (MBP). From this time on, in conjunction with the National Park Service, these federal agencies would assist and support the archeological work conducted in the project area through the late 1960's.

Work in the project area resumed in 1955 with the arrival of a party from the SHSND headed by A. R. Woolworth and W. R. Wood. Three houses at the Paul Brave site (tested eight years earlier by Hewes) were excavated, and brief tests were also made at the Robert Zahn site, 32SI3 (Wood and Woolworth 1964). The SHSND, again headed by Woolworth and Wood, continued its work in the Fort Yates area in 1956, focusing most of its attention on the Demery site, 39CO1, which lay just across the state boundary in South Dakota (Woolworth and Wood 1964). The same season saw the excavation of Mound 1 at the Boundary Mound Group by Wood as part of the season's efforts (Wood 1960). The following year Daniel J. Scheans resumed work in the area for the SHSND, investigating Woodland and historic Dakota Sioux Indian sites along the river north of the town of Fort Yates (Scheans 1957). The changing personnel at the SHSND next led James H. Howard to excavate the Tony Glas site in 1958 (Howard 1958), and the Huff site in 1959 (Howard 1962). In the summer of 1960 another party, under the direction of W. R. Wood, returned to the Huff site to salvage that part of the site along the edge of the river bluff; the resulting study formed the background for his Ph.D. dissertation (Wood 1967). The skeletal material he recovered from Huff also prompted the first [illegible] putative Mandan physical remains since the brief comments by Strong in 1940 (Bass and Birkby 1962).

During the summer of 1960, while Wood was excavating the Huff site, a MBP party headed by Robert W. Neuman investigated several local Woodland mound sites from their joint field camp at the Huff site. Neuman tested

the Schmidt mound, a probable component of the Sonota complex (Neuman 1975: 79), a mound of uncertain (but probably Woodland) affiliation (Neuman 1961); and the three remaining mounds at the Boundary Mound Group (Neuman 1975: 64-77).

Between 1961 and 1963 no work was done in the project area, but the period 1964 to 1969 saw the most intensive archeological investigations there to date. In the summer of 1964, Donald J. Lehmer investigated the Fire Heart Creek site under the auspices of the SHSND; it is a two component (Fort Yates phase and protohistoric Arikara) site (Lehmer 1966). A secondary project by the same party that summer was the excavation by Darrell D. Henning of the Sonota complex Alkire Mound (Henning 1965). Later in the summer, Lehmer transferred his operation further upriver to the Boley site, 32MO37, a large Heart River phase earth lodge village. Under the auspices of Dana College, a single house depression was excavated there, the northernmost such depression of those at the site. This work has yet to be reported (Lehmer n.d.).

The next year, 1965, witnessed the arrival of James E. Sperry on the staff of the SHSND. For the next four years he devoted his energies to the excavation of the Terminal Middle Missouri variant Shermer site, in 1965-66 (Sperry 1965); and to the excavation of the Extended Middle Missouri variant Havens site, in 1967-68 (Sperry 1981). During the mid-1960's the MBP also continued its work in the project area. Under the direction of J. J. Hoffman and Richard B. Johnston, MBP parties excavated two Extended Middle Missouri variant sites: the Ben Standing Soldier site in 1965 (Hoffman n.d.), and the South Cannonball site in 1965 to 1967 (Griffin n.d.). In 1969, a party from the Midwest Archeological Center (the successor to the MBP), headed by Richard B. Johnston, extensively tested the Bendish site, 32MO2, another component of the Extended Middle Missouri,

Fort Yates phase (Thiessen 1975).

By this date, the Oahe reservoir was at its present level, and work in the project area ended, although Richard E. Jensen had prepared a supplement to the 1953 Cooper survey of the reservoir area, discussing about 100 sites in the upper reaches of the reservoir which had not been inundated (Jensen 1965). The only major publication for the next few years was a monograph by Donald J. Lehmer (1971) in which he elaborated and refined his cultural taxonomy (1954) of the Northern Plains village peoples. Other studies during the same period included Thomas D. Thiessen's M.A. thesis, "Middle Missouri Tradition Occupational Sequences for the Cannonball and Knife Heart Regions," later published in synoptic form (Thiessen 1976, 1977); and Ted J. Adamczyk's 1974 "Archeological Inventory: Missouri River Reach Between Fort Benton, Montana and Sioux City, Iowa" (Adamczyk 1975).

Work in the general area of the project area resumed briefly in 1979, when the University of North Dakota conducted limited testing at On-a-Slant village (Ahler et al. 1981). For many years, even before the Oahe reservoir was completed, Ralph S. Thompson, of Bismarck, had been surveying parts of western North Dakota, particularly the Missouri River valley south of Bismarck. His extensive and cataloged collection contains a great variety of artifacts from the project area. One site, at which he has been particularly active, is in the vicinity of Sugarloaf Butte, a prominent cone-shaped eminence a few miles below the town of Mandan. His collection from this site is presently being analyzed; it contains both Besant and Pelican Lake projectile points (Johnson et al. n.d.).

In spite of the work already accomplished in the project area, a great deal remains to be learned there. We have a beginning in understanding the local Woodland tradition, and the Extended and Terminal Middle Missouri

occupation, but the thousands of years of history prior to these cultures is virtually unknown. It is for this reason that the present study is a crucial one, for it will aid in further focusing our attention on the lesser known periods in the prehistory of the project area.

CHAPTER SEVEN

METHODS

by

Thomas K. Larson

Research Design

Due to the relatively small size of the project area, the research design for the Lake Oahe survey is quite general in nature. The intent of the survey effort was to record and present data in a manner which would be compatible with and complementary to previous research in the region. It is believed that the true significance of a cultural property cannot be determined in a vacuum. It must, instead, be evaluated with respect to current research interests and with an understanding of the known resources outside of the project area.

The primary objectives of this project include the location and evaluation of cultural resources within the Lake Oahe project area. The goal of locating sites is usually met through an on-the-ground inventory in conjunction with an extensive documents search. Although survey may utilize a variety of field techniques, collection of detailed information is necessary for an accurate evaluation of site significance.

The second goal, evaluating the significance of cultural resource sites, is more complex. Aside from determining the presence or absence of additional archeological deposits (usually buried), the evaluation must

include a judgment about the characteristics of the deposit. This judgment must consider: 1) the relevance of a site to one or more research questions, i.e. the site's information potential (Broilo and Reher 1977:458); 2) the relevance of the information that further investigation might yield (Schiffer and Gummerman 1977:241); and 3) the integrity of the site (Glassow 1977). All of this is ultimately used to determine significance and whether or not a particular site is eligible for nomination to the National Register of Historic Places.

The evaluation requires making propositions about past cultural systems, statements that can be made on the basis of surface survey and the excavations of others, and proposing questions to be examined should mitigation be necessary. These goals are basically those of a first stage of regional research design (Redman 1973).

Chapters Three, Four and Five of this report outline previous investigations in and near the project area. They also present the currently accepted chronological and thematic frameworks utilized by researchers within the Cannonball region of the Middle Missouri subarea. These same cultural periods, variants and eras were used to categorize the new sites found whenever the data were available to make such assessments.

The potential research topics for the study area are nearly unlimited. Those which are believed of the most relevance and which are addressable within limitations of this current study, are given as follows:

1) Lehmer (1971) has placed a number of the previously recorded village sites in the study area into either the Extended or the Terminal Middle Missouri variants. Only two of these sites (Bendish, 32MO2 and South Cannonball, 32SI19) have been extensively excavated however. Two interrelated questions regarding the other sites must be asked: Can "variants," as defined by Lehmer, be determined on the basis of surface evidence alone and, if so, does this evidence substantiate Lehmer's original interpretations of the sites?

2) There have been a number of newly recorded Woodland sites and site complexes excavated in the immediate vicinity of the project area. How do the assemblages from Woodland sites compare to these excavated materials?

3) There should be additional types of sites in the study area other than village sites and burial mounds. Where are these sites found; what are their apparent functions; and what is the apparent time span of these low visibility sites?

These questions will be addressed further in the latter chapters of this report. This project and any subsequent mitigation which follows from it, will not yield all the answers about past cultural systems that are of interest. We can only ask and begin to answer some of the more relevant questions, build on past investigations, develop new areas of inquiry, and leave others for future investigation. This process is essentially the basic structure of scientific investigation.

Documents Search

Prior to the initiation of field work an extensive documents search was conducted to determine the location and nature of previously recorded cultural properties in the study area. In addition to the information supplied by the Corps of Engineers at the time of the contract award, two main institutions contained the bulk of the pertinent information. These were the State Historical Society of North Dakota and the National Park Service Midwest Archeological Center. Together, the files of these two agencies contain the site report forms, field notes and site leads for the northern end of the Lake Oahe.

Duplicate copies were made of all previously recorded site forms concerning sites in or adjacent to the project area. These forms were used extensively in the field and proved to be very useful. Without exception, all previously recorded sites were those first assigned Smithsonian numbers by River Basin Survey (RBS) personnel. Although several individuals and

agencies have recorded a number of new sites near the survey parcels, none of these actually are contained within them.

Will and Hecker's (1944) monograph on the Missouri Valley was also used as a primary source of data. While much of this information was incorporated into the RBS site forms, the original descriptions which often contain a pre-reservoir description of the site, were useful.

The original listing and subsequent updates of the National Register of Historic Places were also consulted to determine if any of the previously recorded cultural properties were listed or determined eligible for nomination. None of the sites are currently listed. The Huff Indian Village (32MO11) is the only listed property in the immediate vicinity of the project area. The Fort Rice military post (32MO102) is currently in the process of being nominated by the State Historical Society of North Dakota.

Field Inventory Techniques

The 1982 inventory of portions of Lake Oahe was carried out using systematic pedestrian survey. The area was surveyed in segments by crew members spaced a maximum of 30 meters apart. Spacing was varied depending on the vegetation cover. The orientation of individual transects was adapted to the terrain of each segment.

Many of the steep bank areas were also inspected by boat. While this technique was useful in a few areas, access by boat was hampered to a large degree by heavy concentrations of floating driftwood along the shore. In many areas this wood prevented getting any closer than 20 to 50 meters from the shore.

For the purposes of this report, a "site" (either historic or prehistoric) is considered as a point (or locus) of human activity. All

cultural materials associated with other cultural materials or features were considered sites, with the following four exceptions: 1) contemporary transportation routes; 2) refuse deposits obviously associated with these routes (i.e. litter along active roads and trails); 3) fence lines; and 4) contemporary recreational camps. These exceptions were not recorded since they were not believed to contain significant information content for any areas of current scientific investigation. All other cultural materials observed in the field were classified as sites. No isolated finds, which are single cultural items not found in association with other cultural items, were recorded during this study.

All sites found during this investigation were recorded on North Dakota Cultural Resources Forms. These forms describe the site's location, age, function, environmental parameters, management recommendations and potential significance (if any). The site descriptions included in this report are essentially taken from certain segments of these site report forms. In addition to these written data, all sites were mapped, photographed, and plotted on field maps. Site maps were made using either Hewlett-Packard total mapping station or portable transit and chaining tape or stadia rod.

In certain instances, cultural materials were collected in the field if it was believed this would aid in the interpretation of the site or if the materials were in imminent danger of destruction. In all cases, systematic collection strategies were employed and the locations of items collected were noted on the field maps and mapping forms. Whenever artifacts were not collected, an in-field analysis was done on at least a sample of the materials observed. Further information on these collections is available on the site report forms submitted to the Corps of Engineers and the State Historical Society of North Dakota (SHSND). All materials collected will

be deposited with the SHSND.

Minor Testing

The Corps of Engineers contract to perform the Lake Oahe survey specifically stated that subsurface testing should be confined to small diameter testing and occasional shovel testing. The contract also stated that shovel testing "shall be limited to areas with heavy vegetation" and "shall be confined to the verification of presence or absence of cultural resources, or on occasion, to establish boundaries for cultural resource sites" (Plng-82-37).

Of the sites encountered, only a few were ameanable to the types of testing specified. At village sites, surface distributions of artifacts generally provided accurate site boundary definition. At those lodge sites where it was not the case, lodge features, bank exposures and, in some instances, fortification ditches provided accurate assessments of site area. No attempts were made on-the-ground to accurately determine the extent of site area on private land.

Historic site boundaries were generally established using the distribution of historic features and activity areas. Shovel testing was usually not necessary because historic cultural materials were exposed on the surface.

Many small buried prehistoric levels were too deep to be explored through shovel testing or small diameter coring. At other sites, the density of cultural materials in the bank were very sparse, thus indicating that shovel testing would have little chance of encountering items.

In retrospect, shovel testing might have been productive at three sites where this was not attempted: 32SI17, 32SI27 and 32SI28. Such testing might have been an aid in determining site size. The testing would not,

however, have been very useful in determining the significance or integrity of the sites.

Some type of testing activities were attempted at eight sites. Except in cases of exploring materials exposed in cutbanks these testing efforts yielded very little information. Brief site-by-site descriptions of the testing are given below.

32EM72:

Bank facing and collection of charcoal sample from the bank were undertaken.

32EM74:

Dirt in the slump area was troweled through and closely examined to recover any cultural materials that might be present. The results of this were negative. Loose dirt was also shoveled back over the exposed bison bone in an attempt to camouflage it.

32EM69:

The larger of the two historic depressions was tested with a trowel to a depth of approximately 30 centimeters in order to recover a sample of artifactual material. The results of this test were negative.

32EM204:

Approximately 1/2 of the exposed cutbank at this site was smoothed with shovels and trowels in order to obtain an accurate profile of the exposed features. During this work, a carbon-14 sample, two stone tools and a small amount of bone were also collected.

32MO5:

A depressed area in the southeastern corner of the site was tested in three places to a depth of approximately 30 centimeters. This testing was done with a trowel and revealed no cultural materials.

32M0106:

Dirt from the slumped pit was screened through 1/4 inch hardware mesh to recover sherds from a single ceramic vessel and a radiocarbon sample.

32M0107:

Trowel testing was conducted in three places, inside and outside of the historic features, to determine the extent and nature of cultural artifacts and building materials. None of these small test holes, approximately 30 centimeters deep, revealed any cultural materials.

32M098:

Mound three, within the plowed field, was explored with a small diameter coring tool. Two transects of core holes approximately 1.5 meters apart were placed over the mound area. Results were completely negative.

CHAPTER EIGHT

SITE DESCRIPTIONS

by

Thomas K. Larson

Introduction

The following site descriptions are intended to be brief summary statements concerning the cultural resources encountered during Larson-Tibesar's 1982 inventory. Only those sites which could actually be substantiated in the field are discussed in this chapter. Those sites which have been previously recorded or suggested to exist in the study area, but could not be located, are discussed in Chapter Nine, Study Area Evaluations.

The following discussions also contain brief statements, on a site-by-site basis, of National Register Eligibility and site recommendations. More explicit recommendations for the cultural resources encountered are given in Chapter Ten, Conclusions and Recommendations.

Descriptions of the artifact assemblages from the prehistoric sites within the project area are given in Appendix A of this report. Appendix B, contained in a separate volume, is composed of the site report forms, maps and site photos. Readers interested in detailed information on individual sites are referred to these two appendices.

The following site descriptions have been partitioned into individual survey areas. The sites have been subdivided further into new sites and previously recorded sites. Figure numbers following the area names refer to the maps contained in Chapter One, Introduction (no sites were found in the Cannonball River or Cattails parcels).

Beaver Creek (Figures 10 and 11):

New Sites:

32EM70 is exposed in a cutbank north of Little Beaver Creek. The site consists of a concentration of bison bone and fire-cracked rock approximately 50 centimeters below the ground surface and extending for 15 meters along the bank. No lithics or ceramics were observed.

A site lead from Mr. Ralph Thompson indicates that a large village site, probably 32EM4, is located south of the present site area. This village was entirely under water at the time of the 1982 survey. Mr. Thompson also reported finding Woodland ceramics on the surface on or near the site area.

The National Register eligibility of this site is presently undetermined. The site could be extremely important if it represents a large Late Period occupation on the east bank of the river. Testing is recommended.

32EM71 is located just north of the confluence of Lake Oahe with Little Beaver Creek. Site materials are visible in the cutbank and in trail ruts. The majority of materials in the cutbank are approximately one meter below the present ground surface. Plain body sherds, bone fragments and a single bifacial tool were noted in the road cut.

This site appears to be a very extensive and well buried Late Prehistoric habitation area. The age of the site is unknown but the plain

body sherds seem indicative of a Plains Village age of occupation. The site may also be associated with previously recorded site 32EM4 which is totally inundated. Further work in the form of test excavation is recommended in order to determine the site's total extent, significance and integrity. The site has definately incurred some damage from wave action, but the extent of this damage is difficult to determine.

32EM72 is a site of unknown horizontal extent. At present, the only exposed portion of the site is a four meter cutbank revealing at least four stratified cultural levels (Figure 16). The upper two levels both consist of fire hearths with associated cultural levels. The upper level (Level 1) is thickest of the four levels (approximately 30 centimeters).

A radiocarbon sample was collected from Level 3 and submitted for dating. The resultant date is 3000 ± 120 years B.P. (Beta - 6438). This would indicate that the level is either a Late Archaic (Pelican Lake ?) or Middle Archaic (McKean ?) component. Keith Dueholm of the Rocky Mountain Herbarium, University of Wyoming, identified a sample of the charcoal as American elm (Ulmus americana).

Level 4 is approximately 30 centimeters below Level 3 (see Figure 16) and is the thinnest of the four exposed components. It is approximately five centimeters thick and composed of charcoal, burned and unburned bone fragments. A single Tongue River Silicified Sediment flake was also seen within Level 4.

Additional cultural levels below Level 4 are likely to exist, but are not visible due to a considerable bank slump deposit starting approximately 4 meters below the present ground surface. An attempt was made to clear away some of this slumpage but no evidence of lower levels was seen.

This site is believed to be eligible for nomination to the National Register of Historic Places. There is little doubt that the four strata

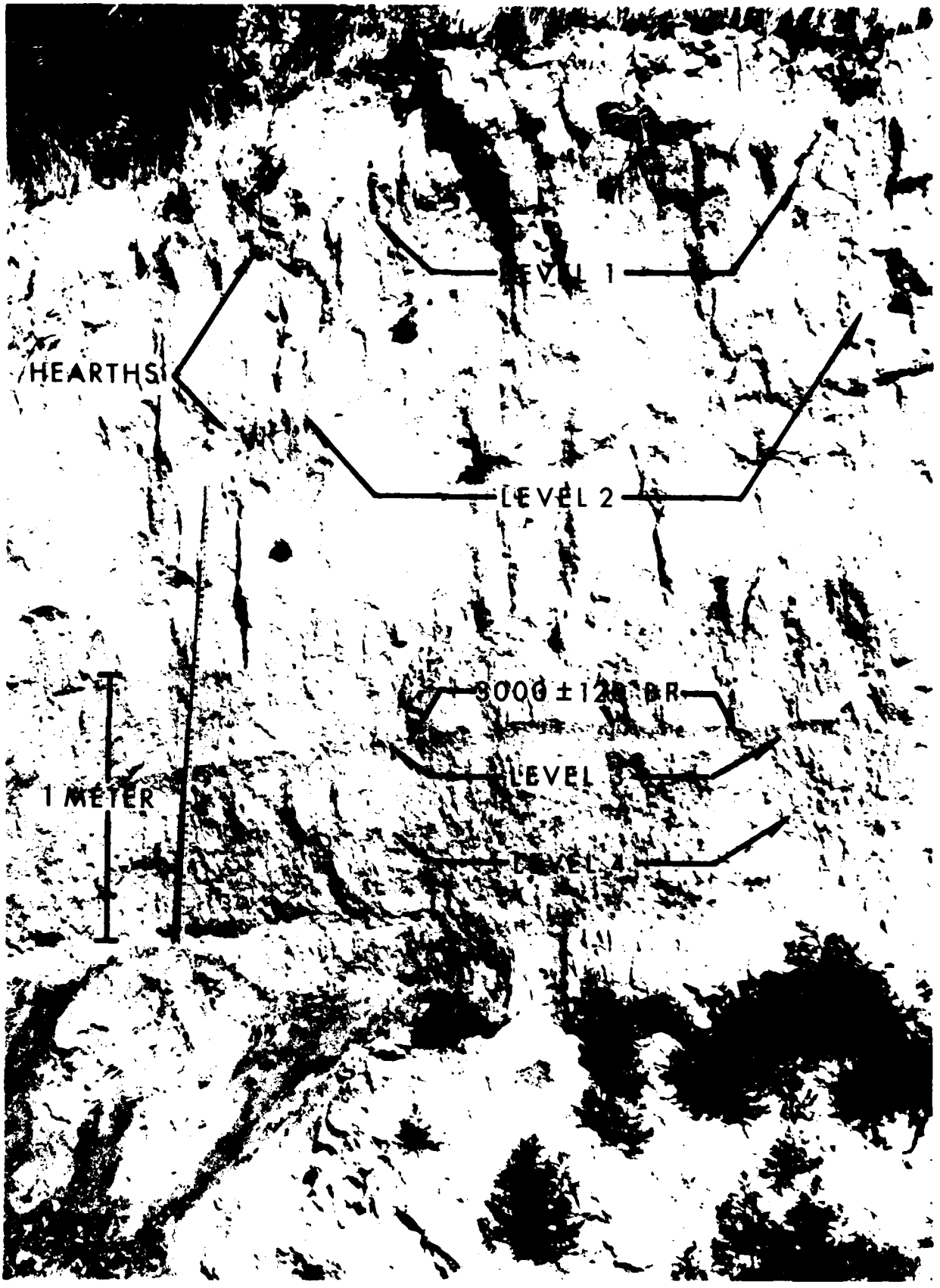


Figure D-. Profile photo of 45SR22.

observed in the cutbank are separate, stratified cultural components, the lower two of which are probably Archaic in age. Both stratified sites and Archaic deposits are extremely rare along the northern portions of Lake Oahe. This site offers an unique opportunity to learn more about pre-Plains Village occupation of the region. Additionally, the soil matrix in and surrounding these cultural levels contains valuable information for paleoenvironmental reconstruction. Gastropods were noted at several places in the soil profile.

There is a large vertical crack through the site approximately one meter back from the cutbank. Water saturation and freeze-thaw action could therefore cause slumpage of a large portion of this site at any time. Prompt excavation of that portion of the site nearest the cutbank is therefore recommended in order to mitigate this potential damage.

32EM74 is a buried bone bed exposed by the natural bank erosion of a tributary of Beaver Creek. Bison bone from at least two separate individuals has slumped out of the bank. An articulated vertebral column is in place in the bank.

The bone deposits could easily be interpreted as a natural death situation except for the presence of small flecks of charcoal in the same stratum as the bone. No definite cultural material was seen.

The significance of this site cannot be determined on the basis of surface evidence alone. Testing is recommended to determine the age, function and physical integrity of the site. At present, erosion to the site appears to be quite gradual. There is no evidence of any vandalism at the site.

Badger Bay (Figure 12)

New Site:

32EM69 consists of two historic depressions located approximately 50 meters southeast of a small knoll within the heavily grassed valley of Badger Creek. Feature 1 is a rectangular depression 7 meters east-west by 5.5 meters north-south. Feature 2 is a small oval depression approximately 2.5 meters in diameter. There is no cultural material exposed on the surface of the site.

The origin and function of this site are unknown. An 1887 General Land Office survey plat shows a settlement on this site by a person named Souverle and there was a building on the site at that time. By 1916 the property was owned by William Wray and an atlas of that year shows no structures at the site.

If this site is the remains of a homestead, it may have good subsurface integrity. Testing is recommended in order to determine the sites eligibility to the National Register of Historic Places. The site is currently not endangered by either vandalism or erosion.

Hazelton (Figure 12)

Previously Recorded Site:

32EM204 was originally recorded by R. C. Farrell and J. J. Hoffman in 1952. At that time, the site was described as a bone lens under heavy overburden. During the 1982 Larson-Tibesar inventory enough of a face had been exposed to reveal a fairly clear profile of a portion of the site (Figure 17). There are at least two large, subsurface features exposed in the bank. The largest of these extends to two meters below the present ground surface. This same feature has been excavated through a dark level which also contains more cultural material.

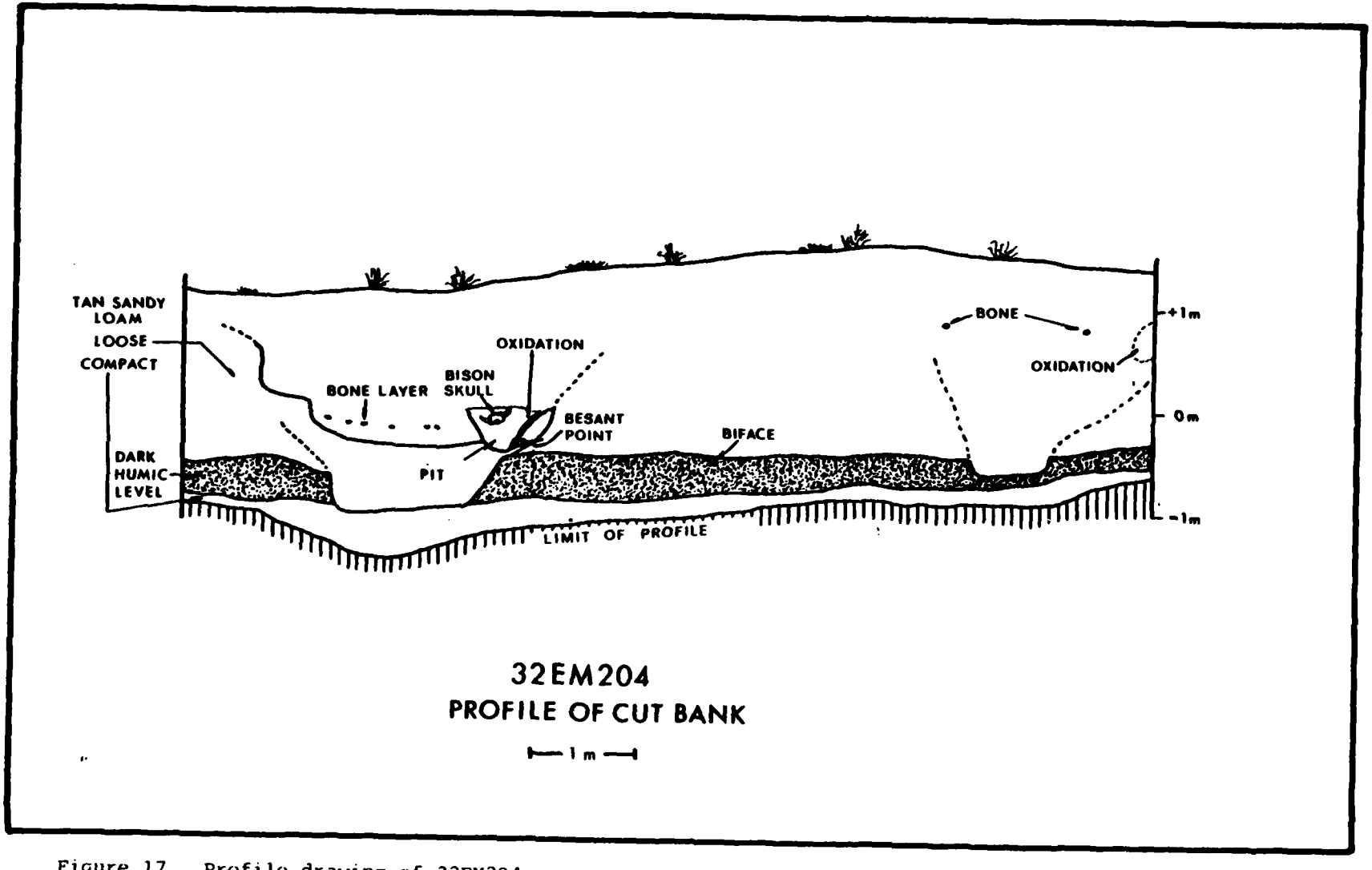


Figure 17. Profile drawing of 32EM204.

A charcoal sample was collected from an apparent fire pit within the largest of the two features. The wood from this sample was identified as burr oak (Quercus macrocarpa) by Keith Dueholm at the Rocky Mountain Herbarium, University of Wyoming. The sample has been carbon-14 dated at 1180 ± 270 years B.P. (Beta 6439) using extended counter time due to an extremely small carbon content (.15 gram). The date would seem to indicate a late Plains Woodland manifestation.

The dated fire pit also contained a portion of the bison skull and other bone fragments. At the contact between the bottom of the feature and the matrix surrounding it was an apparent Besant point. The two larger pits contain a scattering of bone, mostly bison.

The function of the large features exposed at 32MO204 is unknown. Initial appearances are very similar to excavated Woodland ossuary pits from the Central Plains (e.g. Kivett 1953). No human skeletal material has been found at the site, however, and Woodland ossuary pits, without mounds, are virtually unknown in the Cannonball region.

While the site is eroding rapidly and has been disturbed by burrowing animals, the integrity of the remaining cultural deposits appears quite good. 32MO204 is considered eligible for nomination to the National Register of Historic Places due to ability to yield further significant scientific data. The presence of at least two intact cultural components earlier than Plains Village is highly significant. Immediate mitigation of areas closest to the eroding cutbank is recommended.

New Site:

32EM68 consists of a light scatter of lithics, bone and ceramics in a trail which parallels the edge of Lake Oahe. Potentially diagnostic materials noted on the site include one plain and one cord-roughened body sherd, a Late Prehistoric period side-notched projectile point and a Late

Archaic corner-notched point found in a rodent burrow in the cutbank.

It appears that most of this site has already slumped into the river. Cultivation in the past, use of the trail and planting of a shelterbelt have also reduced the site's integrity. The site is not believed eligible for nomination to the National Register of Historic Places.

It should be noted that the legal location of this site roughly matches that originally recorded for 32EM206. This site is not, however, 32EM206 as that site was recorded as two burial mounds. These mounds are visible to the south of the present site location in a field on private land.

Fort Yates (Figure 8)

New Site:

32SI25 is a sparse scatter of lithics and bone on the northern-most tip of the Fort Yates peninsula. No features were observed on the site. Cultural material consists of flakes of Tongue River Silicified Sediment and Knife River Flint.

The site is believed to be totally a surface manifestation which is considerably disturbed. No further work is recommended and the site is not considered eligible for nomination to the National Register of Historic Places.

Cannonball Village (Figure 7)

Previously Recorded Sites:

32SI17 is the Redstone site first noted by Will and Hecker (1944:92). Cultural material is visible in a cutbank of a terrace remnant. These materials include bone, charcoal, fire-cracked rock and a metate, or grinding platform, which was collected. None of the rectangular lodge depressions noted by Will and Hecker were observed. The lodge features observed by Metcalf in 1951 were in a railroad bed which is presently

inundated.

The extent and significance of the remaining cultural deposits at the Redstone site is unknown. Testing is recommended to determine the site's eligibility for the National Register of Historic Places. New vegetation growth and soil development does seem to be stabilizing the cutbank and no recent vandalism was observed.

32SI18 is the former location of part of the village of Cannonball. The site consists of several cellar holes, planted trees, concrete foundation, car bodies and other refuse and three trails which once served as streets for the settlement. The previously recorded prehistoric component of this site was not located. All cultural material observed on the site appears to date after A.D. 1900.

The original Cannonball townsite was platted in 1910 and an addition was platted in 1915. The present site comprises northern portions of the 1915 addition. According to Williams (1961):

> Hekton was the name given to the settlement and post office established here by Rich M. Johnson, an early settler of 1877. This was the site of an earlier Indian village of the same name. The word is said to derive from hecta in the Sioux language, which means "set back" or "away from"; the village is set back some distance from the Missouri River. June 21, 1880 the post office name was changed to Cannonball for the river which empties into the Missouri at this point. The Cannonball River took its name from the limestone concretions resembling cannon balls, found in its bed and along the banks. The Cannon Ball post office was removed August 1881 to the eastern shores of the Missouri River landing of Gayton in Emmons County; J.L. Kennedy was appointed postmaster. On October 1889 the Cannon post office with Robert B. Gondreau, postmaster, was established on the west side of the river near the old site, but soon after on Nov. 19, 1889 the post office was renamed Cannon Ball and operated as such until it was discontinued March 31, 1915. Residents of Heckton changed the name of their village to Cannon Ball Dec. 3, 1915.
>
> Cannon Ball, Cannonball or Hekton was one of the subagencies of the Standing Rock Agency, and at least by 1893 a post trader and government farmer were located there. Records of the Federal Writers Project (ca. 1938) indicate "The population of this little village is mostly Indian. It has two stores, a grain elevator, and a fine new brick school quite modern...One of the traders

stores now stands on the only spot that showed any evidence of a (prehistoric) lodge, all other marks have been obliterated by erosion and other buildings.

The location of the prehistoric village, the subagency and the pre-1910 village mentioned above are not known at this time. Mr. Ralph Thompson of Bismarck does report finding prehistoric materials within the old townsite. Further work on this site should include interviews with former residents and limited testing to determine the existence, nature and integrity of subsurface remains.

32SI19, the South Cannonball site, is an extensive Extended Middle Missouri village site above the confluence of the Cannonball River with Lake Oahe. The site covers approximately six hectares in size and contains approximately 40 lodge depressions.

The South Cannonball site was tested between 1966 and 1968 first by J. J. Hoffman and later by R. B. Johnson. David E. Griffen of the University of Missouri - Columbia is currently preparing an extensive report on these excavations for the National Park Service (Griffen n.d.).

The South Cannonball site is unique in that it is one of the few remaining uncultivated lodge sites in the Cannonball region north of the South Dakota state line. The site is considered eligible for nomination to the National Register of Historic Places due to its high degree of integrity, significant information contents and importance in the study of the prehistory of the Middle Missouri subarea, especially with respect to the Extended Middle Missouri variant.

New Sites:

32SI26 is a thin level of bison bone and fire-cracked rock exposed approximately 50 centimeters below the present ground surface. This level extends for about 20 meters along the cutbank of Lake Oahe. No other cultural materials were observed on either the surface or in the cutbank.

A portion of this site has been eroded. An unknown percentage of the site is presently intact but subject to further erosion. The significance of this site is presently unknown. Subsurface testing is recommended to determine the extent of buried deposits as well as to establish the function and period of occupation.

32SI27 is similar in appearance to 32SI26 in that it consists of a buried cultural level approximately 20 to 30 centimeters below the present ground surface. Bison bone, fire-cracked rock and a single flake of Knife River Flint were observed.

In order to establish the site's significance, subsurface testing is recommended to determine if additional cultural materials are present and what their horizontal extent and function are.

32SI28 is a buried level of bone and fire-cracked rock eroding from a cutbank of Lake Oahe. Areas of the site have been skim-shoveled by pot hunters to a depth of 10 centimeters. A plain body sherd and additional fire-cracked rock were observed in these excavated areas. No lithics were seen.

The significance of this site is undetermined. The areas of vandalism on the site suggest that additional buried cultural materials are present. Testing is recommended to determine the National Register eligibility of this site.

Fort Rice

Previously Recorded Sites:

32MO2, the Bendish site, is an Extended Middle Missouri village south of Rice Creek. The site was tested in 1969 by the National Park Service under the direction of Richard B. Johnson. Information from these excavations was subsequently incorporated into a master's thesis written by

Thomas D. Thiessen (1976).

Thiessen's manuscript, in addition to describing the cultural materials from the 1969 excavations, is also a chronological and taxonomic synthesis of the Extended and Terminal variants of the Middle Missouri tradition in the Cannonball and Knife-Heart Regions. Because of this, the Bendish site has become a critical element in the refinement of our understanding of Middle Missouri prehistory.

The Bendish site has been cultivated extensively in the past but it is currently vegetated by prairie grasses. Thiessen (1976:24-26) notes that the construction of the railroad in 1910 and earth-moving activities by the Corps prior to 1969 excavations has probably destroyed western and northwestern portions of the site. Bank erosion is occurring at the site, but apparently at quite a slow rate.

Evidence of both recent and old pot hunting was seen at the site, especially in areas on or near the bluff edge.

The significance of the information gathered to date from the Bendish site clearly makes the site eligible for nomination to the National Register of Historic Places. Although the site has been disturbed by a number of actions, the 1969 excavations clearly demonstrated that intact cultural deposits are present at the site. Additionally, there is evidence of both an older, preceramic, component and a historic component at the site (Thiessen 1976:138-140). Continued avoidance and monitoring of this site is recommended.

32MO3, the Lower Fort Rice site, is a large village site which is surrounded by a bastioned fortification ditch. Although the site has never been radiometricly dated, Lehmer (1971:121) assigns it to the Terminal Middle Missouri variant.

The Lower Fort Rice site is currently covered with a sod of prairie grasses but has been cultivated in the past. Cultural materials are visible in the cutbank and in a trail passing through the center of the site. Slight linear depressions are still visible at places and are probably remnants of the fortification ditch.

The integrity of the site is believed to be quite good. 1981 aerial photography of the site indicates that both the fortification ditch and many of the lodge features are still intact, although obscured. The site is considered eligible for nomination to the National Register of Historic Places due to its ability to contribute significant data concerning Middle Missouri prehistory especially with respect to *Extended* and *Terminal Middle Missouri variants*.

32M04 and 32M0206 are discussed here as one site due to a lack of spatial separation in surface cultural materials. The Upper Fort Rice site, 32M04, is a large Extended Middle Missouri village while 32M0206 was a number of human burials encountered during the excavation of a basement in 1954. Occupation materials appear to overlap the area of burial and may be contemporary with them.

A large portion of the site is currently in pasture. The southern end of the site is in an informal picnicing, camping and fishing area. Wave action from Lake Oahe is the primary adverse force affecting the site.

This site represents a significant village site with a considerable amount of intact cultural deposits. It is believed eligible for nomination to the National Register of Historic Places.

32M05, *the Gwyther Farm site*, is listed by Lehmer (1971:67) as an Extended Middle Missouri village. Little further information was obtained at this site during the 1982 inventory due to the lack of observable features and artifacts on Federal surface. A large portion of this site is

on private land to the west of an abandoned railroad bed.

A very small amount of bison bone was observed in the bank below the site location. Most of the cutbank is heavily vegetated and visibility over the entire site was extremely poor.

It is possible that the Gwyther Farm site is eligible for nomination to the National Register of Historic Places. Any consideration of this site must, however, take into account that the majority of the site is on private land. The site is not currently endangered by either erosion or vandalism.

32MO7, the Cadell Homestead site, makes up one-half of a confusing situation involving several sites south of 32MO8. The Cadell Homestead site was originally described by Will and Hecker (1944:93-94):

> Considerable evidence of a site shows on 10 or 12 acres here and a number of lodge pits can be plainly seen. The area has been under cultivation during the past 30 years and the surface is fairly level today...No indication of a ditch shows today.

Lehmer (1971:121) later referred to the Cadell Homestead site as Terminal Middle Missouri and states "fortifications are definitely present at the Terminal Middle Missouri sites south of Square Buttes, and they were the strongest and most elaborate ones provided by and of the village groups in the region" (Lehmer 1971:122). Lehmer therefore seems to be stating that the Cadell Homestead site is fortified.

All of this confusion seems to stem from the fact that there are two separate sites in the same general vicinity. One of these, however, more closely matches the legal location and general description given by Will and Hecker. It is this site which is referred to here as 32MO7. The fortified site alluded to by Lehmer is to the south of 32MO7 and has been assigned the new Smithsonian number of 32MO104 (see below).

The Cadell Homestead site is described by Will and Hecker as a Middle Mandan village. Lodge depressions were visible at that time both in the river bank and on the surface. The site was under cultivation in 1982 and no lodge features were visible. The remains of several caches were observed in the bank and the surface was scattered with ceramics, bone and lithics.

This site has been subjected to pot hunting along the cutbank and wave action is rapidly destroying other features. Testing is recommended to determine if 32M07 is eligible for nomination to the National Register of Historic Places.

32M08, Watson Homestead, is a very large Extended Middle Missouri village site extending approximately 300 meters along the edge of Lake Oahe. Numerous lodge and cache pit features are visible in the cutbank.

The Watson homestead contains the most intensive surface artifact scatter of any site visited during the 1982 Larson-Tibesar survey. Intensive cultivation for many years has brought thousands of cultural items to the surface. Although lodge depressions are no longer visible, concentrations of bone and ceramics are very obvious.

Pot hunting and amateur collecting are common activities at this site. Continued cultivation and extensive bank slumpage are also endangering the site. Despite these actions, there is still believed to be an extensive amount of intact subsurface deposits. The Watson Homestead site is considered eligible for nomination to the National Register of Historic Places. A mitigation plan for the site should be developed which will reduce the adverse impacts to the site and halt intentional destructive actions.

32M09 is apparently the remains of a village site. Will and Hecker (1944:94) state that "this is one of the few sites that have been

completely cut away by the river...only three lodge floors showed in the cutbank and about 200 yards of original village surface could be traced along the cut." This is essentially the appearance of the site today, although the lodge features noted by Hecker were not seen and less than 100 meters of cultural deposits were observed.

If a significant portion of the site remains intact, the majority of it is on private land since the Corps land is only a few meters wide at this location. Any determination of National Register eligibility for 32M09 would, therefore, be more dependent on the information content on private surface then that on the Federal property. No vandalism was apparent at the site but wave action may be slowly eroding the cutbank.

32M0102 is the remains of the military post, Fort Rice. Since the majority of the site is currently a state historic site, much of the fort was not surveyed during the 1982 Larson-Tibesar inventory. A number of outlying features are, however, on Corps land. The remains of two icehouses and a blacksmith's shop are located south of the parade grounds. These have been well recorded by the State Historical Society of North Dakota and were not examined further in 1982.

On the east side of the site, along the river bank, several features were observed both in the bank and in a trail crossing through the site. These materials included an apparent trash scatter of unknown age, another extensive scatter of historic cultural material and four depressions. These latter materials are believed to be the remains of the Sutler's store complex and Arikara scout lodgings which are known to have existed in that part of the site.

The Fort Rice historic site is in the process of being nominated to the National Register of Historic Places. This nomination includes all areas in which historic cultural materials were located during the 1982

inventory. Continued avoidance and monitoring of the site are recommended. Additionally, the destruction of historic materials in the trail on the east side of the site should be mitigated either through excavation or by closure of this trail and revegetation.

32M0207 consists of three Woodland burial mounds, one of which is on Corps land. This latter mound was tested by Robert W. Neuman during 1960. During these excavations "a poorly preserved secondary human burial of one individual was found in the mound fill. A few fragmented bison bones were the only associated specimens" (Neuman 1961:58).

It seems likely that more cultural materials are contained within the mound tested by Neuman. Due to the site's potential for yielding significant information concerning the Plains Woodland, 32M0207 is considered eligible for nomination to the National Register of Historic Places. The mound on federal property seems to be in fairly good condition and is not currently endangered by erosion or vandalism.

New Sites:

32M099 is the apparent remains of a farmstead including a large poured concrete foundation, a poured concrete cistern, two circular depressions and the remnants of a metal windmill. Pieces of concrete were observed in the field south of the foundation and may indicate that another foundation once existed on the site.

This site was patented to Michael O. Laughlin in 1906, was sold to Robert Gwyther in 1907, was sold to the Missouri Railway Company/Northwest Improvement Company in 1911, was returned to Robert Gwyther by 1916 and has remained in the Gwyther family until sold to the United States of America. The date of the farmstead is not known, but it probably was established after the railroad was built along the east side of the site in 1913. This site exhibits no physical distinctions and archival sources do not indicate

special historical significance for the site or the persons who have owned the site.

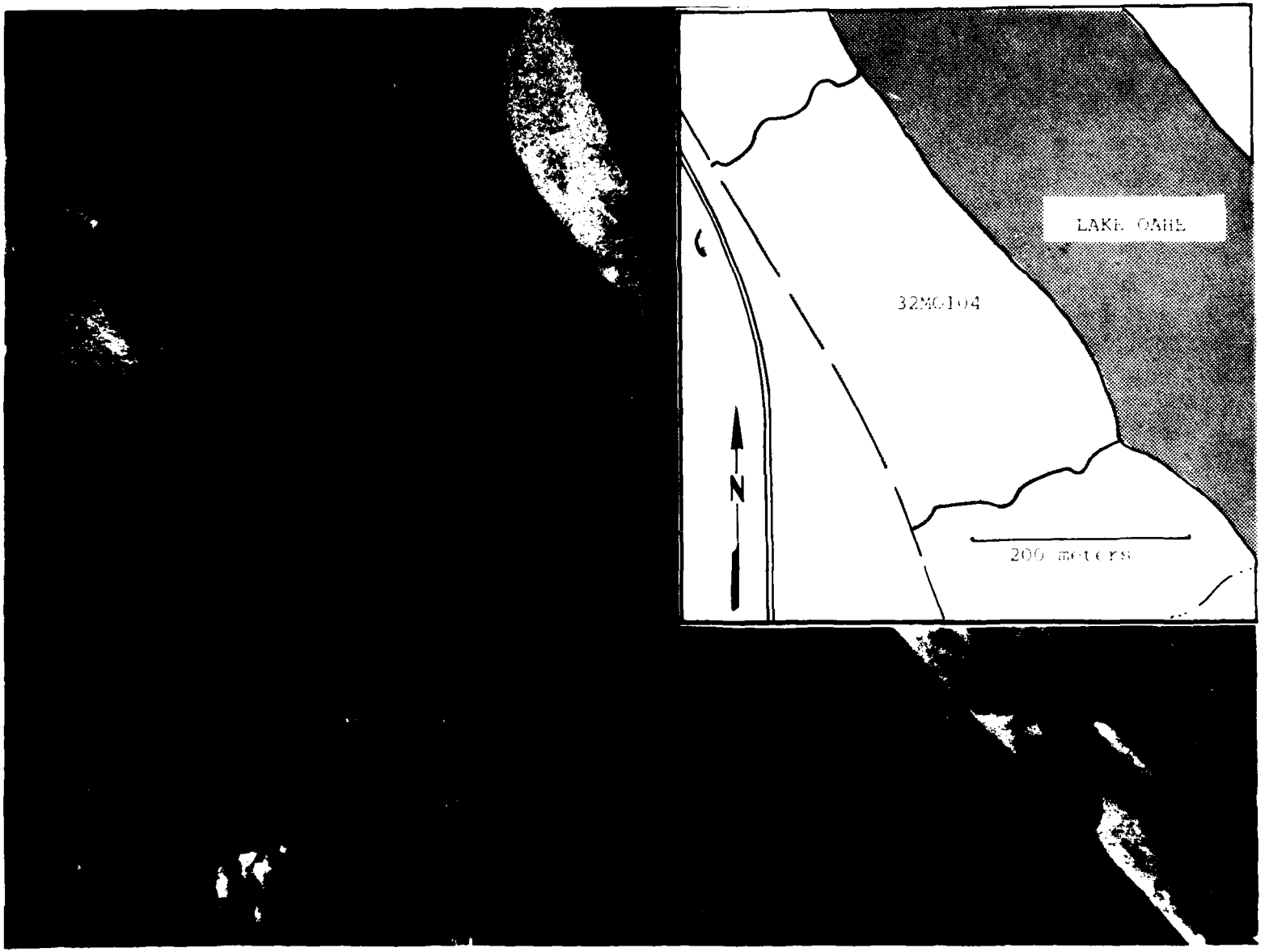
32M0100 consists of a small scatter of lithics, fire-cracked rock and a few pieces of bone in a hay meadow west of the Missouri River floodplain. The site has been plowed in the past and is highly disturbed.

It is believed that the spatial integrity of the cultural material is poor. It is not believed that further investigations would yield additional significant scientific information.

32M0103 is the remains of a farmstead including two poured concrete foundations and a refuse dump. Large numbers of unidentified machinery parts, shards of window glass, machine-made bottle glass, wire nails and modern seam cans cover the site.

This site exhibits no structural, artifactual or other physical distinction and archival sources indicate no particular historical significance for the site itself. Title passed from the United States government to John B. Steen on April 10, 1917; Herman Bliese and Emma Bliese on June 5, 1924, and to the United States government on November 11, 1963. Farmland to the west and south of the site apparently is owned by the First Northwest National Bank of Mandan, North Dakota. No further work is recommended at this site.

32M0104 is a very large lodge site surrounded by a bastioned fortification ditch. All indications are that this is probably the largest fortified earth lodge village in the Middle Missouri subarea. Due to the fact that much of the site is on private land, extensive examination of this site was not undertaken. The fortification ditch is hard to discern on the surface but is very visible in aerial photos (Figure 18). Other features, including lodge floors, cache pits and refuse areas are also exposed in the bank. There are indications that the site has been



[illegible] and expanded drawing of [illegible]

cultivated in the past.

Vegetation on the site has obscured much of the ground surface. No lodge depressions could be conclusively identified. The trail which passes through the site has exposed numerous concentrations of bone, flakes and ceramics.

This site has been known by many archeologists for a number of years but was believed by many to be the Cadell Homestead site (32MO7 see above) originally recorded by Thad Hecker. During 1970, Ralph Thompson visited both sites, examined aerial photos, consulted Hecker's report (Will and Hecker 1944), and corresponded with Donald J. Lehmer concerning the apparent confusion concerning these two sites. Much of the correspondence has been attached to the new site form completed for the fortified site.

Only a limited amount of vandalism was noted at this site. Bank erosion is slowly destroying the eastern edge of the site. The site is extremely important to the study of Middle Missouri prehistory and is considered eligible for nomination to the National Register of Historic Places.

32MO106 consists of a single prehistoric pit exposed in the cutbank of Lake Oahe. Within the pit and slumped from it were the remains of a single simple-stamped ceramic vessel, ash and charcoal. A sufficient amount of charcoal was collected for a radiocarbon date but has not been submitted. A sample of this charcoal has been identified by Keith Dueholm of the Rocky Mountain Herbarium, University of Wyoming, as bur oak (Quercus macroparpa).

The partially reconstructed vessel from this site was shown to J. J. Hoffman and Ann M. Johnson of the National Park Service, Denver Service Center. Both agreed that the vessel is probably quite late, possibly historic Mandan. The physical characteristics of the vessel are described in Appendix B.

The exact function of the pit is unknown at this time. Very little is known about storage structures located outside of village areas. Unfortunately the Corps of Engineers has reported that, since the discovery of this site, the pit has slumped completely out of the bank. Because of this, no physical integrity remains of the site and no further work is recommended.

32MO107 consists of a prehistoric and a historic component. The prehistoric component consists of a fire hearth and an associated level of bison bone eroding from the cutbank of an unnamed tributary of the Missouri River. Bone, charcoal and fire-cracked rock are highly concentrated in a level approximately 1.5 meters below the present ground surface. No lithic tools or ceramics were seen in the level.

The historic component of the site consists of four depressions on the east side of an abandoned railroad bed. This site is apparently the 1907 homestead of Michael Caddell, although the 1878 General Land Office Survey Plat indicates an occupation of the general vicinity by "T. Caddell." Archival sources do not indicate any special significance for the site itself. Without testing it is difficult to determine the physical integrity of the historic component.

Testing of both the prehistoric and historic components of this site is recommended in order to make National Register eligibility determinations. Immediate work at the prehistoric component is needed due to the very loose nature of the soil deposits containing the cultural level and their high susceptibility to erosion.

Huff

Previously Recorded Sites:

32M012, the Jenny Graner site, is an Extended Middle Missouri village just north of the Huff site (32M011). In addition to the previously recorded prehistoric component the remains of a historic farmstead and an apparent sewage system were also recorded in 1982.

The prehistoric component of the site has been damaged by cultivation, roads, a railroad, construction of the farmstead and construction of a large sewage lagoon for the community of Huff. Cutbank exposures indicate that portions of lodges and cache pits are still intact. Surface visibility at the site was very poor due to thick grass cover. Wave action from Lake Oahe is currently the major destructive force affecting the site. Testing is recommended at 32M012 in order to determine the site's eligibility for nomination to the National Register of Historic Places. The historic component of the site is probably the remains of the farmstead of Martin Graner which later became part of the townsite of Huff. The historic component exhibits no physical distinction and has no likelihood to yield important cultural information.

32M013 is a large village site north of the town of Huff. Will and Hecker (1944:96) referred to the site as Middle Mandan. Lehmer (1971) makes no mention of this site. The 1982 Larson-Tibesar survey of the site area discovered two interesting aspects of the site which do not appear to have been noted in the past studies. The first of these is an apparent fortification ditch near the north end of the site. This feature is exposed in the cutbank. While it may be a cache pit, the size and depth of the feature suggest otherwise.

The second discovery is an apparent second prehistoric cultural component at the site. This cultural component is composed of bison bone

and fire-cracked rock exposed in the cutbanks. These materials occur in a dark brown strata approximately two meters below the present ground surface and are well separated from the upper village component.

The historic component at 32M013 consists of a large excavated depression and concrete house foundation. There is also an extensive debris scatter including building materials, sheet metal and various pieces of unidentified machinery. The historic component contains several excavated pits which probably represent the activities of bottle hunters.

The historic component appears to date from after 1900 and seems to have been a residential extension of the townsite of Huff. Archival sources do not indicate special significance for the site.

The prehistoric components of 32M013 appear to possess a fairly high degree of physical integrity and are believed to have significant information potential. 32M013 is, therefore, considered eligible for nomination to the National Register of Historic Places. Mitigation measures are recommended to protect the cutbank areas of the site, explore possible fortification ditch and date both of the prehistoric cultural components.

New Sites:

32M098 is a large Woodland site composed of three burial mounds and at least two areas of occupation. Two of the burial mounds are exposed in the cut made for an abandoned railroad bed. The third mound and the two occupation areas are within a plowed field.

The areas of occupation are quite large and appear to be two separate components. Both are assumed at the present to be Woodland because the majority of ceramics in both areas are cord-roughened body sherds. Area A, to the south of the mounds, also contains quite diagnostic Besant projectile points similar to those found by Neuman (1975) in Sonota complex

sites.

Area B, to the north of the mounds, contains cord-roughened body sherds similar in appearance to Area A, but a very different form of projectile points. All points collected from Area B are small side notched and unnotched arrow points (see Appendix A). This type of Woodland component is very unique for the Middle Missouri subarea. While Woodland components containing small arrow points are known for the Central and Northwestern Plains, no information has ever been published on such sites from the Middle Missouri.

32M098 is considered eligible for nomination to the National Register of Historic Places. The two burial mounds along the railroad cut are known to contain intact cultural materials. It is very likely that undisturbed materials remain in place below the plow zone in both area A and B. The third burial mound, located in the plowed field should be tested to determine its condition. If the mound still retains significant information, measures should be taken to either stabilize or completely excavate it.

32M0105 is a small scatter of prehistoric cultural material, mostly flakes, at the confluence of an unnamed intermittent drainage with the Missouri River. The density of cultural materials is very low. They are evident only in a trail passing through the site and in the cutbank of the river. No temporally diagnostic materials were observed. The site area has been plowed in the past.

This site is not considered eligible for nomination to the National Register of Historic Places due to the lack of cultural integrity. The site appears to have been quite small and shallow to begin with. Cultivation, roads and other historic activities have disturbed this site to a high degree.

Winona

Previously Recorded Site:

32EM211 is the historic Winona townsite which had its beginnings in 1874 as a construction camp. The activities at the town were tied first to the development of the military post at Fort Yates and later served the needs of local farmers and ranchers.

Fieldworker Darwin H. Lamb compiled the following information about Winona by means of interviews and use of published sources as part of the WPA Historical Data Project in 1937-39 (Lamb n.d.):

> Winona was located on the east side of the Missouri River across from Fort Yates, Dakota Territory. It was a boom town because of the soldiers in Fort Yates and because the people expected a railroad to be built along the Missouri River from the south. Winona received its name in 1884. Winona is an Indian name meaning "First Girl Born"
>
> McClorry started a ranch on the site of Winona in 1872. By 1882 there were several saloons on the site. One was called the Long House. The first store was built by Mr. Mers in 1884. Shortly after, it was taken over by Douglas and Meade of Fort Yates. About 1900, it was taken over by Robinson of Fort Yates. It was managed by Major Pitts -- also of Fort Yates. This store burnt down about 1897.
>
> Winona became a stage and freight point. More people moved in and two more stores were built in 1890 by John Brown and Clint Wagher. These stores were all built of rough cottonwood lumber, which was cut by a small local sawmill. The first post office was located in the Douglas and Meade store. The Waldron Hotel was built in 1884. It was headquarters for salesmen, travelers, and freighters. The W. A. Patterson Hotel was built about 1887. It was patronized by cowboys and drifters. As high as ten saloons and gambling dens were located in a row on a street running south. Some of the saloon-keepers were: O. Black, now of Shields, N.Dak., Jerry Hart, an old soldier, now of Linton, N.Dak., John Stiles, now deceased, R. Colville, deceased, Ed Wescott, an old soldier, now deceased. These saloons did a thriving business on week-ends and for three days after the soldiers received their pay in Fort Yates. These saloons paid handsomely for a federal license. In case of a raid by the State Marshall, the saloons were usually tipped off in time to remove their liquors. No one was ever convicted on a liquor charge.
>
> Indians from the Standing Rock Reservation bought liquor from bootleggers in Winona during the summer months as they could not get across the river. The flat boats would not take them across

unless they had a permit and usually the superintendent of the Indian Agency would not give the Indians a permit to go to Winona. However, during the winter months many of the Indians crossed the ice. After the Spicer assassination by the Indians in 1895, the river was patrolled by policemen for a few years to keep the Indians out of Emmons County. A few brawls broke out among the soldiers, cowboys, ranchers and Indians. They were taken care of by a deputy sheriff, town constables and a justice of peace, all living in Winona. Winona did not have a jail. Prisoners were taken to the jail at Williamsport, the County Seat of Emmons County at that time.

School was held in vacant buildings during the years 1885-1890. The business men of Winona donated money to build a one room schoolhouse. Some of the men who donated money were: Jack McClorry, H. F. Douglas, and Mr. Robinson. The school did not go by grades, but by readers. The beginners were the chart class, then came the 1st, 2nd, 3rd, 4th, and 5th readers. In 1895 the pupils numbered about fifty. This school was also used as a church. Some of the preachers were: Tome Spicer, Goodroom, Rev. May, Rev. Hardenbrook, and Rev. Lemray.

In the year 1900, John and Charley Carson established a steam ferry service across the Missouri River between Winona and Fort Yates. Previous to 1900, one or two flat-boats were used to transfer freight, people, teams, cattle, and horses across the river. The boats were pushed through the water with poles. It required six or sever men to handle a boat. The boats could accomodate two teams and wagons or ten head of horses or cattle. One dollar was charged for a team and wagon. Horses, cattle, and people were charged twenty-five cents a head. Freight was ten cents a pound.

Freight for Winona and Fort Yates was hauled from Eureka, Dakota Territory and Bismarck, Dakota Territory by freighters using two or four horse teams depending on the weight of their loads. During the summer months part of the freight came by steam-boat from Bismarck to Winona and Fort Yates.

Very little farming was done around Winona up to 1900. Most of the people were engaged in business or working for someone else. Many of the people had government contracts to furnish hay and cord wood to the Army post and Indian Agency at Fort Yates. Oak-wood sold for nine dollars a cord and soft wood brought about four dollars a cord. Oxen were used to haul huge loads of wood across the ice to Fort Yates. Most of the wood was cut during the winter months, but a few men cut wood during the summer, piling it up, and hauled it over to Fort Yates when the river froze over. Laborers and cowboys who were unemployed during the winter made a dollar a day and board and room cutting wood.

In 1895 the population of Winona was about three hundred. After the Army Post in Fort Yates was abandoned in 1900, the population dwindled to about sixty in 1901. The people in Winona moved out on homesteads or moved away to other parts of the country. Some

of the buildings burned down. Many of the frame buildings were taken down and moved to Linton, N.Dak. or Pollack, S.Dak. The homesteaders bought or took the remaining buildings out to their homesteads. The last store in Winona was managed by John Stiles. In 1910, he terminated all business activities and moved to Fort Yates and entered business there. The school-house was the last building to remain. It burned down in 1918.

Visible portions of the site today consist of several cellar depressions along what used to be the main street of Winona. Very little artifactual material is visible on the surface. The closing of Winona Island to vehicular activity seems to have greatly aided in the preservation of the site. Natural soil deposition appears to be extremely rapid. Some of the townsite, especially western and southern outlying buildings, has probably been inundated. Although portions of the site have been vandalized, this is not recent activity and most of the site appears to have good subsurface integrity.

The Winona townsite is believed to be eligible for nomination to the National Register of Historic Places. This is due to its importance in local and regional history and the likelihood of the site yielding important historical cultural materials relating to the operation of the town.

CHAPTER NINE

STUDY AREA EVALUATIONS

by

Thomas K. Larson

Adequacy of Previous Inventories

An extensive discussion of previous cultural resource work in or near the study area is presented in Chapter Six of this report. In addressing the adequacy of these previous studies, the intent and scope of the projects must be kept in mind.

Many of the regional studies (e.g. Will and Spinden 1906, Will and Hecker 1944, Bowers 1948, and to a great extent, Lehmer 1971) deal almost exclusively with the Plains Village tradition. Pre-Plains Village are not mentioned at all, or only mentioned briefly.

Another factor involving previous investigations relates the scope of and intensity of previous surveys. In 1950, George Metcalf compiled Smithsonian Institution, River Basin Survey site forms on the known sites in the area of the then proposed Lake Oahe. Using today's terminology, this effort would be considered a Class I or Level I documents search. Apparently no field checks were made at that time. Without exception, the previously known sites for the area were those previously reported by Will and Hecker (1944) and were, therefore, all Plains Village sites.

The survey work by Farrell and Hoffman in 1952 was more wide ranging in interests than previous investigations. However, the scope of their survey was more restricted in that it was limited to land within or very near to the projected maximum pool level of the reservoir. New site types recorded during this stage of investigation included Woodland burial mounds and associated habitation areas, small "campsites," buried bone deposits and ceramic scatters (Cooper 1953).

Also during 1953, an appraisal of the historical resources along Oahe reservoir was issued (Mattison 1953). Historic sites mentioned in the Mattison report generally fall into three categories: military posts, townsites and the probable locations of Lewis and Clark campsites.

The assessment of "adequacy" presented here is in relation to the findings of the 1982 Larson-Tibesar inventory and current regional research interests. The first basic question that can be asked is did these previous inventories find most of the sites? Most (73.3%) of the newly recorded prehistoric sites found in 1982 are cultural levels which probably were not exposed at the time of the original surveys. Of four sites which were not newly exposed levels (32EM74, 32M098, 32M0100 and 32M0104), three are in areas some distance away from the actual shoreline of Lake Oahe and probably have never been surveyed before. The one remaining prehistoric site, 32M0104, is a unique situation in that it was probably known to previous investigators but had been referred to by the wrong site number (see discussion of sites 32M07 and 32M0104 in Chapter Eight). In the areas that were inspected by previous field crews, it can be stated that most of the visible prehistoric cultural properties were recognized and recorded.

Many of the historic sites encountered during the 1982 inventory had not been previously recorded. All new historic sites are comparatively recent in age. It has only been in the last ten years that any researchers

would have regarded these manifestations as cultural properties. The increased density of historic sites can therefore be viewed more as a product of shifting research interests rather than an inadequacy of the original studies.

Locational information on previously recorded sites, while somewhat vague by today's standards, was found to be generally accurate. Previously recorded site locations were actually found to be in error on original forms for only three sites. Many more errors seem to have entered into the locational information due to transposition mistakes in the later manuscripts.

Original site forms were often found to be quite sketchy and many information categories were left blank. It is quite apparent the major goals of the investigators were to 1) locate the sites; 2) determine if they would be damaged or destroyed by the reservoir and 3) if this was the case, to determine if they would be worthy of testing and/or salvage excavations. Considering time and cost limitations, this approach seems quite understandable. The irony of this procedure is that site data are often times much more complete for sites that have been totally destroyed than for those which are still above water.

Unlocated Sites

Prior to the initiation of the 1982 Larson-Tibesar inventory, 33 sites were known or believed to exist within the areas to be inventoried. Of these, 16 were relocated in the process of the survey. The presence of the remaining 17 sites could not be substantiated in the field.

Table 4 lists those previously recorded sites which could not be located. The table also gives the most likely reasons for the inability to find these sites. In many cases it is likely that the site has been

TABLE 4

Unlocated Sites

AREA	SITE	DESCRIPTION	REMARKS
Beaver Creek	32EM4, Little Beaver Creek site	Village site	Inundated; new sites 32EM70 and 32EM71 may be related to this site in some way.
Hazelton	32EM203	Probable village site	Off survey to the north and partially destroyed, the bone in bank which was noted by the Corps near the boat dock could not be located.
	32EM206	Mounds	Off survey to the south; one mound observed from the highway.
Fort Yates	32SI121	Grave of Sitting Bull	Off survey to the east.
	32SI201	Fort Yates military post and trading post village	Inundated, partially destroyed and partially covered by modern townsite off survey.
Cannonball Village	Lewis and Clark 10/17/1804	Historic campsite	Inundated.
	32SI18 Cannonball Village	Village site	Portions of the prehistoric component of this site has been inundated. Other portions are probably covered by historic debris.
	32SI206	Occupation site	Inundated.
	32SI213	Mound	This site could not be found. The site probably still exists and was obscurred by heavy grass cover.

TABLE 4 (continued)

AREA	SITE	DESCRIPTION	REMARKS
Fort Rice	Lewis and Clark 10/18/1804	Historic campsite	Inundated.
	32MO6	Probable site	Probably off survey to the west.
	32MO10 Smithsonion form	Village site	Off survey to the west.
	32MO204	Village site	Inundated.
Huff	32MO14	Village site	Inundated.
Winona Island	32EM2	Probable village site	Inundated.
	Winona Burials	Historic Native American burials	Inundated.
Cattails	32EM209	Arikara hunting camp	Inundated.

completely inundated. With other sites, the problem seems to be that the original location given is vague and the site is actually outside of the areas inventoried.

It should be noted that the site described in Chapter Eight as 32SI18 is a historic component. No evidence of the prehistoric component originally recorded as 32SI18 could be found. For this reason, 32SI18 is listed in Table 4 as an unlocated site.

Cultural Components Represented

Table 5 details the 38 cultural components encountered at the 34 sites recorded. Eight of the prehistoric sites recorded contained no chronologically diagnostic artifacts. Three other sites contain undiagnostic ceramics and/or Late Prehistoric period projectile points. These three have been listed as "general" Late Prehistoric sites since there is no evidence that they either are or are not related to the Plains Village tradition. Two sites, 32MO9 and 32MO13, have been categorized as Extended Middle Missouri sites, but the evidence for this is very limited. At both sites there are no surface features, no exposed lodge or cache features and, perhaps, very little left of the site. Both are listed as Extended Middle Missouri because of the descriptions given in Will and Hecker (1944). Subsequent studies (e.g. Lehmer 1971) make no mention as to which variant these two sites belong to.

Site Density

Thirty-four sites were recorded in approximately 1,140 acres (461 hectares) of inventory. This equates 1 site for every 33.5 acres surveyed, or 19 sites per section. Of the ten parcels of land inspected only two, Cattails and Cannonball River, were found to contain no cultural resources.

TABLE 5

Cultural Components Represented

		Total
Archaic:	32EM68, 32EM72	2
Woodland:	32EM204, 32MO98, 32MO207	3
Plains Village		
Extended Middle Missouri:	32MO2, 32MO4, 32MO5, 32MO7*, 32MO8, 32MO9(?), 32MO12, 32MO13(?), 32SI17, 32SI19	10
Terminal Middle Missouri:	32MO3, 32MO104*	2
Post-Contact:	32MO106	1
General Late Prehistoric Period:	32EM68, 32EM71, 32SI28	3
Unknown Prehistoric:	32EM70, 32EM74, 32MO105, 32MO100, 32MO107, 32SI26, 32SI27, 32SI25	8
Historic Military:	32MO102	1
Historic Townsites:	32EM211, 32SI18	2
Historic Farmsteads:	32EM68, 32MO12, 32MO13, 32MO99, 32MO103, 32MO107	6
	TOTAL	38

* See site descriptions for sites 32MO7 and 32MO104

Impacts to Sites

Table 6 lists the nature of adverse impacts which were found to be affecting the sites at the time they were inspected. It should be noted that all sites must be assumed to be subject to erosion to some degree. In Table 6, erosion is listed as an impact to the site only in those cases where cultural materials had obviously been recently displaced due to bank erosion. The same case is true for vandalism. Only in those cases where vandalism was recent and/or ongoing was it listed as an impact to the site. Because of these factors, the assessments of impact as they are shown in Table 6 must be considered quite conservative. Even using these figures, however, it is clear that a large proportion of the sites inspected (53%) are being subjected to some form of adverse impact.

TABLE 6

IMPACTS TO SITES*

Beaver Creek:

32EM70 (N)
32EM71 (E)
32EM72 (E)
32EM74 (E)

Badger Bay:

32EM69 (N)

Hazelton:

32EM204 (E)
32EM68 (E)

Fort Yates:

32SI25 (N)

Cannonball Village:

32SI17 (E)
32SI18 (N)
32SI19 (N)
32SI26 (E)
32SI27 (N)
32SI28 (V)

Fort Rice:

32M02 (N)
32M03 (V)
32M04 and 32M0206 (E, V)
32M05 (N)
32M07 (C, V, E)
32M08 (C, V, E)
32M09 (N)
32M0102 (V)
32M0207 (N)
32M099 (N)
32M0100 (C)
32M0103 (N)
32M0104 (N)
32M0106 (E)
32M0107 (E)

Huff:

32M012 (E)
32M013 (E)
32M098 (C)
32M0105 (N)

Winona:

32EM211 (N)

* No significant impact = 'N'
Vandalism = 'V'
Bank Erosion = 'E'
Cultivation = 'C'

CHAPTER TEN

CONCLUSIONS AND RECOMMENDATIONS

by

Thomas K. Larson

Introduction

Table 7 presents the National Register eligibility statements for all cultural resource sites encountered during the 1982 Larson-Tibesar Associates' Lake Oahe inventory. Thirteen sites are believed to be eligible for nomination to the National Register of Historic Places, seven sites are not believed eligible and the eligibility of 14 of the sites could not be determined.

This concluding chapter presents our reasons for believing that 13 of the sites are eligible. It also contains recommendations concerning what additional work is necessary to either protect the eligible sites or recover data to make determinations of eligibility at the 14 sites for which eligibility could not be accessed.

Significance of Eligible Properties

Historic Sites:

The statement of significance for the Fort Rice military post, 32MO102, has been presented as follows:

TABLE 7

NATIONAL REGISTER ELIGIBILITY ASSESSMENTS

Beaver Creek:	
32EM70	Undetermined
32EM71	Undetermined
32EM72	Eligible
32EM74	Undetermined
Badger Bay:	
32EM69	Undetermined
Hazelton:	
32EM204	Eligible
32EM68	Not eligible
Fort Yates:	
32SI25	Not eligible
Cannonball Village:	
32SI17	Undetermined
32SI18	Undetermined
32SI19	Eligible
32SI26	Undetermined
32SI27	Undetermined
32SI28	Undetermined
Fort Rice:	
32M02	Eligible
32M03	Eligible
32M04/32M0206	Eligible
32M05	Undetermined
32M07	Undetermined
32M08	Eligible
32M09	Undetermined
32M0102	Eligible
32M0207	Eligible
32M099	Not eligible
32M0100	Not eligible
32M0103	Not eligible
32M0104	Eligible
32M0106	Not eligible
32M0107	Undetermined
Huff:	
32M012	Undetermined
32M013	Eligible
32M098	Eligible
32M0105	Not eligible
Winona:	
32EM211	Eligible

> Fort Rice (1864-1878) played a significant role in the frontier military history of the Northern Plains. Troops from Fort Rice guarded communications on the Missouri River and overland along the trails leading to the mines in the Rocky Mountains. The garrison at Fort Rice provided supplies, troops and a base for some of the more important military and exploratory operations in the Northern Plains. The fort was also the scene of attempts to bring peace to the area during the era of Indian-White conflict.
>
> Fort Rice was built as one of a series of forts established to secure the Northern Plains and guarantee access to the Montana gold fields. Built on the order of General Alfred Sully, it served as a base for General Sully's first and second Northwest Expeditions against the Sioux in 1864 and 1865 (Mattison 1953:87). Soon after it was built, Fort Rice had the distinction of being garrisoned with a unit of "galvanized Yankees," confederate prisoners of war who took the oath of alligence to the United States and served in the Union Army (Franke 1980: Item 8).

This brief statement summarizes the historical significance of the post. Additionally, it is believed that some portions of the site contain extensive archeological deposits. Such materials are of considerable research interest, especially since they come from a relatively early military post on the Northern Plains.

The townsite of Winona, 32EM211, is believed to be a significant historic property on the basis of its importance in local and regional history and the likelihood of the site to yield important historical cultural materials related to the operation of the town as a recreational center for soldiers at Fort Yates. The town also was an important pre-settlement steamboat landing, stage station and provisioning point.

Village sites (32MO2, 32MO3, 32MO4/32MO206, 32MO8, 32MO13, 32MO104, 32S19):

The village sites mentioned above are all believed to be either Terminal or Extended variants to the Middle Missouri tradition. From excavations, bank exposures and/or surface indications, it is obvious that all of these sites contain intact cultural materials and some degree of spatial integrity. As such, all of these villages, either individually of as a group, offer the opportunity to yield data for three of the current

research topics for the Middle Missouri subarea:

> Studies of intra-site utilization patterns need to be developed. Such studies would identify spatially associated tool classes and related debris classes, and would identify activity areas within, around, and among specific dwelling units in an earthlodge village....Spatial aspects of tool manufacture, utilization, curation, recycling, and disposal should be determined; the procurement, processing, storage, and consumption patterns should be developed for consumable elements in the prehistoric cultural systems.
>
> The character of subsistence activities associated with specific villages and time periods should be determined, and an explicit evaluation of the hypothesis of subsistence stability through time should be made. Seasons of occupation should be determined, and quantified estimates of relative dependence on multiple animal resources, cultigens and gathered plant foods should be made through controlled recovery and detailed analysis of relevant debris classes. The question of environmental change in the Middle Missouri subarea should be examined through intensive analysis of microfaunal and botanical materials, including pollen, and the dynamic relationship between subsistence strategies and environment should be studied (cf. Lehmer 1970).
>
> The relationship between intra-village stylistic variability and inter-village stylistic variability should be quantified. In such a study, stylistic variability in both male-related and female-related classes of material culture should be examined independently, and taxonomic classifications in the Middle Missouri subarea should be re-evaluated accordingly (Ahler 1977:147).

These three areas of archeological research are fairly general and could essentially be explored at any or all intact village sites within the Middle Missouri subarea. When dealing with the Middle Missouri tradition in the Cannonball region, however, the sites listed above are in a chronological and geographic position to be of more specific interest.

As stated in Chapter Three, the Middle Missouri tradition is divided into three sequential variants: Initial Middle Missouri (A.D. 900-1400), Extended Middle Missouri (A.D. 1100-1550) and Terminal Middle Missouri (A.D. 1550-1675). The Cannonball region is believed to contain only the latter two of these variants. Within the Cannonball region, the traditional characteristics which have been used to distinguish Terminal

Middle Missouri sites from the earlier Extended Middle Missouri sites are larger village size, the presence of fortifications and higher proportions of Fort Yates ware in the ceramic assemblage (Lehmer 1971:121-124). Additional studies of sites in the Cannonball region have demonstrated that fortifications are not exclusively a Terminal Middle Missouri trait but are also present at sites now believed to be components of the Extended variant (Falk and Calabrese 1973, Ahler 1977; see also Calabrese 1972:39).

Concerning the transition from the Extended to the Terminal variant, there are generally two hypotheses:

1) Settlement patterns, subsistence systems, and technological systems were in essentially stable equilibrium from the time the Northern Plains was first settled by representative of the Plains Village pattern....Stability in settlement patterning does not necessarily carry with it stability in community patterning. Villages assumed many forms in the Northern Plains, from open and dispersed to fortified and compact. That is, community patterning was modified by contact with outside populations, with attendant modification of internal social systems, but the overall disposition of sites and activities over the landscape seems not to have been changed (Wood 1974:3, 8).

2) The Cannonball sequence as depicted...clearly suggests that a gap exists in the occupational record for that region on approximately the same time level as a similar hiatus postulated for the Bad-Cheyenne Region. If this gap is a relatively accurate reflection of the intensity of prehistoric inhabitation of the Cannonball Region during the fourteenth century A.D., a need exists to reassess the currently accepted taxonomic structure for the Cannonball Region, a construct which has been established on the assumption of uninterrupted occupation of the region by aboriginal groups from Extended Middle Missouri through Post-Contact Coalescent times (Thiessen 1976:163-164).

At first glance it seems that these two hypotheses are in direct contradiction to each other. This is not necessarily the case however. Movement of groups within the Middle Missouri subareas is, to some extent, accepted by most researchers. Wood's (1974) hypothesis deals primarily with cultural continuity, not necessarily complete spatial immobility. Conversely, while Thiessen's (1976) hypothesis proposes a chronological gap which may exist in the region; it does not necessarily imply a shift in the

subsistence patterns. It seem that either of these hypotheses could be substantiated or modified without necessarily affecting the other.

With these two hypotheses in mind, the regional placement of the sites listed above becomes quite important. As stated in Chapter Three, all Extended Middle Missouri sites excavated to date in the Cannonball region have been classified as belonging to the Fort Yates phase, while all Terminal Middle Missouri sites have been assigned to the Huff phase. With the exception of the Bendish site, all excavated Extended Middle Missouri sites in the region are in areas south of the Cannonball River and the majority of these are in the southern one-half of the region (see, for example, Figure 13 and Table 2 in Chapter Three of this report). On the other hand, all Terminal Middle Missouri sites in the region, either excavated or unexcavated, are north of the Cannonball. With the possible exception of the Ben Standing Soldier, 32SI7, the few radiometricly dated Extended variant sites in the region seem to indicate a general pattern of older sites in the south and increasingly younger sites as one proceeds up river to the north (e.g. Thiessen 1976, 1977; Ahler 1977; Griffin 1981; Sperry 1982). Although not an exact correlation, there also seems to be a general tendency within the region for northern Extended variant sites to be larger in size then southern ones.

The sites listed above are believed eligible for nomination to the National Register of Historic Places not only because of their physical integrity but also because of there ability to contribute further data to test Wood's and Thiessen's hypotheses. Two of the sites, Bendish and South Cannonball, have already been partially excavated and dated, but clearly have more information to offer. As a group, all of these sites constitute a data base which can be utilized to investigate the transition from the

Fort Yates phase to the Huff phase. If the proposed regional pattern of sites being younger the further one goes up river is correct, then some of these untested sites in the northern end of the Cannonball region could yield dates which would "close the gap" in the fourteenth century hiatus proposed by Thiessen.

Whether or not there is an unbroken chronological continuum from early Extended sites to the later sites of the Terminal variant, the sites believed eligible for nomination to the National Register of Historic Places also offer an excellent opportunity to test Wood's hypothesis of cultural stability in the Plains Village pattern, at least as this relates to the Middle Missouri tradition. All of the sites listed above are in fairly close proximity to one another. By employing the excavation methods proposed by Ahler (see above), in conjunction with controlled surface observations, it should be possible to evaluate the degree of stability in settlement patterns, subsistence systems and technological systems in a fairly consolidated area known to contain sites from two different variants of the Middle Missouri tradition.

Woodland sites (32EM204, 32M098, 32M0207):

Although the Woodland sites have been more intensively studied in the Cannonball region than any other place in the Middle Missouri subarea (e.g. Scheans 1957; Neuman 1961, 1975; Wood 1960; Johnson et al. n.d.) questions remain. Subsistence patterns, population characteristics, external relationships and the relationship of Woodland to later cultures of the region are believed to be some of the most important research topics.

Middle Missouri Woodland populations apparently lacked horticulture and were highly dependent on bison hunting and the collection of wild plant foods for subsistence. Beyond this, however, very little is known about the specifics of the subsistence pattern. Refined techniques including

water screening, flotation, pollen analysis and detailed faunal analysis at occupation areas, such as those discovered at 32MO98, would greatly increase our understanding of Woodland subsistence patterns.

It has been postulated that Middle Missouri populations entered the area from the south and east. While there is little question that the cultural characteristics of this tradition were the direct influence from outside areas, the contribution of earlier residential populations of Plains Woodland groups is unknown. Recently, Jantz and Willey (1983:65) have proposed that there may be an actual lineage of physical characteristics linking Woodland, Initial Middle Missouri, Extended Middle Missouri, Terminal Middle Missouri and historic Mandan populations. One of the primary weaknesses of this hypothesis is the relative paucity of skeletal material from Middle Missouri Woodland populations (Jantz and Willey 1983:65). For this reason, any Woodland skeletal material from the Middle Missouri subarea must be considered significant.

Although Jantz and Willey are dealing with the metric characteristics of cranial elements, it can be argued that <u>any</u> skeletal elements are valuable. The development of noncranial and nonmetric indices (e.g. Finnegan 1978) will eventually lead to studies which are capable of utilizing a much wider variety of bone elements and thus a potentially larger data base. Additionally, nonmetric characteristics may actually be more sensitive to biological distances between groups (Finnegan and Marcsik 1979).

Another critical question regarding the Woodland populations relates to the presence or absence of late Woodland sites in the Cannonball region. Projectile point characteristics at 32MO98 and the radiocarbon dates from 32EM210 indicate that Woodland components may exist which are later than the currently accepted time range. If this is the case, these types of

undertaken to excavate those areas which are in danger of slumping and to terrace back and revegetate the remaining portions of the sites to make them less susceptable to damage. At 32EM72 this would require the excavation of a block area at least 1.5 by 8 meters in size. At 32EM204 an excavation block at least 2 by 2 meters in size would be necessary. A detailed research design and data recovery plan, specific to each site, should be completed and approved by the Corps of Engineers and the North Dakota State Historic Preservation Officer (SHPO) prior to excavation.

The destruction of cultural features exposed in cutbanks either through vandalism or erosion is a major problem at sites 32M03, 32M04, 32M08, 32M013 and 32M0102. Minimumly, sufficient excavation should be done at these sites to recover three radiocarbon samples from each. These excavations should be performed in a manner which will recover associational data as well as the charcoal itself. Matrix samples from features should be subjected to flotation and resultant botanical and faunal analysis. Based on the finding of these studies, recommendations should be made concerning further mitigation procedures. These sites should also be monitored on a monthly basis during the summer of the year to discourage vandalism and detect the degree of erosion.

Cultivation is currently active at sites 32M08 and 32M098 (see preceding paragraph for additional recommendations for 32M08). While this cultivation can be viewed as destructive to the sites, it also offers an opportunity to gather fairly large surface collections from the sites. Continued controlled surface collections from both sites have the potential for yielding a great deal of information concerning intrasite spatial patterning, ceramic traditions and lithic tool assemblages. If the funding is available to continue controlled surface collections at these sites on a periodic basis than it is believed that this is an effective mitigation

strategy. If funding is not available for such studies, then cultivation should cease and the areas should be allowed to revegetate naturally.

Regardless of the mitigation strategies taken at the occupation areas of 32M098, the three burial mounds at the site should either be stabilized or excavated. At this time it seems advisable to attempt stabilization of the two mounds in the railroad cut and to excavate the mound which is in cultivation.

Recommendations for Sites of Undetermined Eligibility

Beaver Creek:

32EM70: Site testing should consist of three 1 by 2 meter test units, one adjacent to the exposed cutbank and two positioned back from the bank at either end of the site. An attempt should be made to recover and date at least one radiocarbon sample. Testing should examine the extent and spatial integrity of the site.

32EM71: One 1 by 1 meter test unit should be placed adjacent to the cutbank and another should be excavated near the trail passing through the site. The latter test unit should be placed near the location where cultural material was observed in the trail cut. Testing should be geared toward determining the physical integrity of the remaining portions of the site.

32EM74: A minimum of two 1 by 3 meter test units should be excavated at this site. These units should be positioned so as to form a "T" approximately one meter back from the exposed cutbank. If an intact bone level is encountered, the area of excavation should be expanded to form a block excavation. Any large articulated skeletal units should be plaster jacketed before removal. The primary goals of the test excavations should be to substantiate that this site is actually cultural in origin, evaluate

the condition of the faunal materials at the site and, if possible, establish the age of the deposits. One radiocarbon date for this site is recommended as part of the initial testing.

Badger Bay:

32EM69: It is recommended that this site be tested to determine the age and composition of historical materials at the site. The most likely area to recover such materials would be from Feature 2, which is believed to be an outhouse. A 2 by 2 meter test unit should be positioned in a manner so that approximately 1/4 of Feature 2 is excavated. Once the exact shape and dimensions of Feature 2 have been determined, the size of the excavation could be reduced. A metal detector sweep, aligned along parallel transects, is also recommended for the site area.

Cannonball:

32SI17: This site should be tested to determine if it is a village site and, if so, what remains of it. A combination of mechanical testing and hand excavation is recommended. Two backhoe trenches should be excavated perpendicular to the cutbank. The aim of these trenches would be to establish the existence and nature of features at the site. Hand excavations should precede the backhoe work. Excavation units should be positioned at places along the proposed backhoe trenches and along the cutbank. At least two radiocarbon samples should be recovered from this site.

32SI18: An oral history study should be conducted with former residents of this portion of the village of Cannonball. This study should be aimed at gathering additional information on the development, function and time depth of this portion of the village. Additionally, archival research should be conducted to specifically determine the families who

resided in this area and what types of buildings, other than family dwellings, were present. Two separate areas where prehistoric cultural materials have been should also be examined through archeological testing. At the same time of this testing, the area should again be examined to locate the mound recorded as 32SI213 (see Unlocated Sites in Chapter Eight).

32SI26: This site should be tested using six 1 by 1 meter test units spaced evenly over the site area. The major goal of this testing should be to discover if an intact cultural level is present at the site.

32SI27: Three 1 by 1 meter test units should be excavated at this site to determine the nature and extent of any remaining cultural deposits.

32SI28: This site should be tested using both 1 by 1 meter test units (four recommended) and a series of shovel tests positioned along a ten meter grid system. Efforts should also be made to backfill and revegetate the potholes on the site and remove any evidence of cultural materials from the cutbank. At least one radiocarbon sample should be submitted from this site.

Fort Rice:

32MO5: Determination of eligibility for nomination to the National Register of Historic Places at this site would be highly dependent on that portion of the site which is on private surface. Additional recommendations are, therefore, beyond the scope of the present project.

32MO7: This site should be explored through a combination of feature excavations along the cutbank and test excavations spaced regularly over the remainder of the site area. At least 12 test units are recommended at this site. This testing should have the goal of establishing the nature, condition and extent of site deposits. Analytical techniques and recovery methods similar to those used by Ahler (1977) are recommended.

32M09: Determination of eligibility for nomination to the National Register of Historic Places at this site would be highly dependent on that portion of the site which is on private surface. Additional recommendations are, therefore, beyond the scope of the present project.

32M0107: Excavations should be undertaken to stabilize and explore the nature of the prehistoric material exposed in the creek edge at this site. A minimum of one 2 by 2 meter test unit should be excavated over the heaviest concentration of cultural material. Additionally, all other cultural material exposed in the bank should be carefully removed and a layer of sterile soil and vegetation should be used to cover the exposed portion of the site.

32M012: It is believed that a significant portion of the remaining prehistoric component is near the present cutbank. Excavation efforts should be aimed at excavating portions of at least three features exposed in the cutbank. Material recovered from this testing effort should be sufficient to determine the eligibility of this site. Based on the results of this proposed testing, other bank stabilization measures should be undertaken as needed.

General Regional Recommendations

It is highly recommended that inventory work be completed for the remaining portions of Lake Oahe in North Dakota. Should this not be possible in the near future an attempt should be made to at least relocate and assess the previously recorded sites in the region. Those areas which are believed to be in greatest need of further inventory are the entire left bank of the lake and the right bank from Fort Yates to the North Dakota-South Dakota state line.

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APPENDIX A

ARTIFACT DESCRIPTIONS

APPENDIX A

ARTIFACT DESCRIPTIONS

by

Thomas K. Larson

Introduction

The descriptions which follow are an attempt to quantify and qualify the artifact assemblages encountered at the sites visited by Larson-Tibesar Associates during the 1982 inventory. To varying degrees, this analysis is based on both collected and uncollected materials from the sites. However, no attempt has been made to incorporate the collections of previous investigations into this study. Lithic material types represented, debitage analysis and intrasite/intersite spatial distribution of artifactual material have been presented in detail in another manuscript (Larson n.d.).

In most cases, collections made at prehistoric sites were done only because the artifacts were believed to be in danger of destruction (materials in roads, plowed field, eroded from cutbanks, etc.). At many sites, sod and brush cover have obscured much of the site area. For these reasons, most surface observation and collections cannot be considered a representative sample of the total site assemblage.

Two notable exceptions to these problems are the assemblages from 32M08 and 32M098. At both of these sites recent plowing has brought a great deal of cultural material to the surface. While there is still no way of

stating that these materials are completely representative, at least the sample size is sufficient enough to make some inferences about the sites. It is for this reason that much of the discussion and illustrations which follow involve these two sites.

Table A1 presents the artifact coding categories used by the State Historical Society of North Dakota. Because the artifacts collected during this study will be stored under this system, all materials were coded according to it. Table A2 presents a listing of collected artifacts. These have been sorted by site (SITE #), artifact category from Table A1 (CTG, SUB, SSB) and assigned accession/catalog numbers (ACC .#/CAT.#). These are followed by a description of the item(s) and locational information. The locational information relates the items to locations shown on the site maps (MN = map numbers; CU = collection units; # = material in profile drawings). As can be seen by comparing Tables A1 and A2, there are some problems in applying the artifact categories as they presently exist in the state system. Many of these could easily be resolved by adding new categories and it is strongly recommended that this be undertaken by the Society in the near future.

Concerning the artifact photos which accompany this appendix, all photos are actual size unless an added scale appears in the picture. Accession/catalog number which are given in the figure captions relate the item back to Table A2. Material types and locational information are given in that table.

Brief descriptions of uncollected artifactual materials observed may be found in the site forms contained in Volume II of this report. Further coded information has been gathered on these materials and is available from Larson-Tibesar Associates along with an explanation of the coding scheme utilized.

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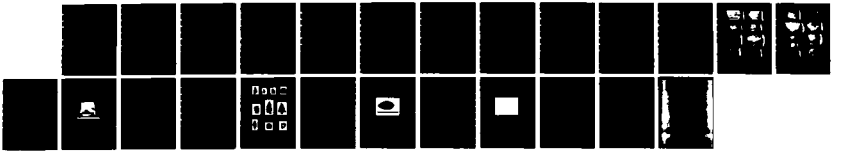

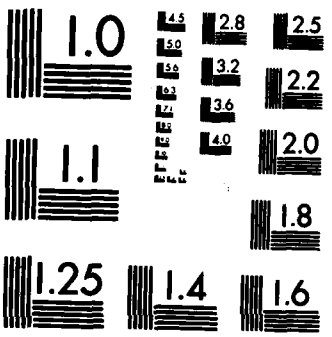

Table A1

Artifact categories used by
the State Historical Society of North Dakota

A-03 ARTIFACT COLLECTION

A-06 BONE ARTIFACT
- -03 Awl
- -06 Digging Tool
- -09 Effigy
- -12 Fishhook
- -15 Flaker
- -18 Flesher
- -21 Gaming Piece
- -24 Hoe
- -27 Knife Handle
- -30 Ornament
  - -05 Bead
  - -15 Bracelet
- -33 Paint Bone
- -36 Polisher
- -39 Projectile Point
- -42 Shaft Wrench
- -45 Spatula
- -48 Squash Knife
- -51 Whistle

A-09 CLAY TABLET

A-12 CONTACT MATERIAL

A-15 GLASS/PORCELAIN
- -05 Bead

A-18 HORN
- -05 Bracelet
- -25 Flaking Tool
- -35 Flesher
- -45 Gaming Piece
- -55 Projectile Point

A-21 METAL
- -05 Axe
- -15 Bead
- -25 Bracelet
- -35 Fishhook
- -45 Ornament
- -55 Projectile Point

A-24 POTTERY
- -05 Effigy
- -15 Gaming Piece
- -25 Ornament
- -35 Pipe
- -45 Pot (Restored)
- -55 Sherd
  - -05 Rimsherd

A-27 SHELL
- -05 Bead
- -15 Gaming Piece
- -25 Ornament
- -35 Projectile Point

A-30 STONE
- -03 Axe
- -06 Bead
- -09 Celt
- -12 Ceremonial Stone
- -15 Drill
- -18 Effigy
- -21 Fragment
  - -05 Flint
- -24 Gaming Piece
- -27 Grinder
  - -05 Pestle
- -30 Hammers and Mauls
- -33 Hoe
- -36 Knife
- -39 Ornament
- -42 Painting Equipment
- -45 Pecking Stone
- -48 Petroglyph
- -51 Pipe
- -54 Plaque
- -57 Polisher
- -60 Pottery Mold
- -63 Projectile Point
  - -05 Spearpoint
- -66 Scraper
- -69 Shaft Smoother
- -72 Sinker
- -75 Whetstone

A-33 TOOTH

A-36 VEGETABLE REMAINS

A-39 VERTEBRATE REMAINS
- -05 Bone, Human
  - -05 Skull

Table A2

Collected Artifacts

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
EM204	A-30	-63	0	83. 273.	1	PROJ. PT., BESANT, TONGUE RIVER SILICIFIED SEDIMENT	#1
EM204	A-30	-63	0	83. 273.	2	PROJ. PT./BIFACE MIDSECTION, KNIFE RIVER FLINT	#2
EM204	A-39	0	0	83. 274.	1	BONE FROM PROFILED PIT, MOST BISON, ONE SMALL CARNIVORE	PIT
EM204	A-39	0	0	83. 274.	2	BONE FROM SLUMP, MOST BISON, SOME W/ RED STAINING	SLUMP
EM68	A-30	-63	0	83. 275.	1	PROJ. PT.,LATE PLAINS ARCHAIC, KNIFE RIVER FLINT	MN18
EM68	A-30	-63	0	83. 275.	2	PROJ. PT. LATE PERIOD SIDE NOTCHED, KNIFE RIVER FLINT	MN3
EM68	A-30	-63	0	83. 275.	3	PROJ. PT./BIFACE MIDSECTION, KNIFE RIVER FLINT	MN5
EM71	A-24	-55	-05	83. 276.	1	RIM SHERD, RIGGS PUNCTATE	MN7
EM71	A-24	-55	-05	83. 276.	2	RIM SHERD, UNIDENTIFIED WARE, CORD IMPRESSED	MN9
EM71	A-24	-55	-05	83. 276.	3	RIM SHERD, RIGGS PUNCTATE (?)	MN10
EM71	A-30	-36	0	83. 277.	1	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN3
EM71	A-30	-36	0	83. 277.	2	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN3
EM71	A-30	-63	0	83. 278.	1	PROJ. PT., LATE PERIOD SIDE NOTCHED BASE, TRSS	MN15
EM71	A-30	-63	0	83. 278.	2	PROJ. PT., LATE PERIOD TRIANGULAR, BASE, TRSS	MN13
MD106	A-24	-45	0	83. 279.	1	PARTIALLY RESTORED VESSEL, UNNAMED PROTOHISTORIC WARE	CACHE
MD100	A-30	-21	0	83. 280.	1	DEBITAGE SAMPLE, 6 TERT. KRF, 3 SEC. KRF	CU
MD100	A-30	-27	0	83. 281.	1	MANO/HAND STONE FRAGMENT, GRANITE	MN14
MD100	A-30	-36	0	83. 282.	1	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN12
MD100	A-30	-36	0	83. 282.	2	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN11
MD100	A-30	-36	0	83. 282.	3	BIFACE/PREFORM, WHITE CHALCEDONY	MN3
MD100	A-30	-66	0	83. 283.	1	END SCRAPER, KNIFE RIVER FLINT	MN10
MD100	A-30	-66	0	83. 283.	2	END SCRAPER, KNIFE RIVER FLINT	MN14
MD100	A-30	-66	0	83. 283.	3	END SCRAPER, KNIFE RIVER FLINT	MN13
MD100	A-30	-66	0	83. 283.	4	END SCRAPER, KNIFE RIVER FLINT	MN11
MD12	A-24	-55	-05	83. 284.	1	RIM SHERD, RIGGS DECORATED LIP	MN9
MD12	A-24	-55	-05	83. 284.	2	RIM SHERD, RIGGS PUNCTATE	MN9
MD12	A-24	-55	-05	83. 284.	3	RIM SHERD, RIGGS FILLETED RIM	MN9B
MD12	A-24	-55	-05	83. 284.	4	RIM SHERD, FORT YATES CORD IMPRESSED	MN20
MD12	A-24	-55	-05	83. 284.	5	RIM SHERD, RIGGS PLAIN	MN10
MD12	A-30	-63	0	83. 285.	1	PROJECTILE PT.,LATE PERIOD TRIANGULAR, KNIFE RIVER FL.	MN2
MD12	A-30	-63	0	83. 285.	2	PROJ. PT., LATE PERIOD TRIANGULAR, TONGUE RIVER SS	MN20
MD13	A-24	-55	0	83. 286.	1	9 PLAIN AND SIMPLE STAMPED BODY SHERDS FROM POTTED AREA	CACHE
MD13	A-30	-63	0	83. 287.	1	PROJ. PT. FROM POTTED AREA, LATE PER. SIDE NOTCHED KRF	CACHE
MD3	A-24	-55	0	83. 288.	1	11 PLAIN BODY SHERDS FROM POTTED CACHE	MN28
MD3	A-24	-55	0	83. 288.	2	CORD IMPRESSED BODY SHERD	MN9
MD3	A-24	-55	-05	83. 289.	1	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN9
MD3	A-24	-55	-05	83. 289.	2	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN12
MD3	A-24	-55	-05	83. 289.	3	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN37
MD3	A-24	-55	-05	83. 289.	4	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN8
MD3	A-30	-36	0	83. 290.	1	BIFACE FRAGMENT, GREY PORCELLANITE	MN26
MD3	A-30	-63	0	83. 291.	1	PROJ. PT.,LATE PERIOD SIDE NOTCHED, RED PORCELLANITE	MN20
MD4	A-06	-45	0	83. 292.	1	BONE SPATULATE, FRAG., MADE FROM BISON RIB	MN15
MD4	A-24	-45	0	83. 293.	1	ONE RIM SHERD AND 12 BDY SHERDS, 1 VES.,RIGGS DECOR.LIP	MN23
MD4	A-24	-55	0	83. 294.	1	PLAIN SHERD, SHOULDER	MN42
MD4	A-24	-55	0	83. 294.	2	CORD IMPRESSED BODY SHERD	MN38
MD4	A-24	-55	0	83. 294.	3	PLAIN BODY SHERD	MN40
MD4	A-24	-55	-05	83. 295.	1	RIM SHERD, RIGGS PUNCTATE	MN29
MD4	A-24	-55	-05	83. 295.	2	RIM SHERD, FORT YATES CORD IMPRESSED	MN34
MD4	A-24	-55	-05	83. 295.	3	RIM SHERD, FORT YATES CORD IMPRESSED	MN33
MD4	A-24	-55	-05	83. 295.	4	RIM SHERD, UNIDENTIFIED WARE, SIMPLE ROUNDED LIP FRAG.	MN22
MD4	A-24	-55	-05	83. 295.	5	RIM SHERD, RIGGS PUNCTATE	MN56
MD4	A-24	-55	-05	83. 295.	6	RIM SHERD, UNIDENTIFIED WARE, SMALL FRAG OF DECOR. LIP	MN51
MD4	A-24	-55	-05	83. 295.	7	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN57

Table A2 (cont.)

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
MD4	A-24	-55	-05	83. 295.	8	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN40
MD4	A-24	-55	-05	83. 295.	9	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN40
MD4	A-24	-55	-05	83. 295.	10	RIM SHERD FRAGMENT, UNIDENTIFIED WARE	MN40
MD4	A-30	0	0	83. 296.	1	LARGE CORE TOOL, TRSS, USE ROUNDED ON END	MN37
MD4	A-30	-09	0	83. 297.	1	CELT, DIORITE, DISTAL END	MN29
MD4	A-30	-21	0	83. 298.	1	UTILIZED FLAKE, TONGUE RIVER SILICIFIED SEDIMENT	MN56
MD4	A-30	-21	0	83. 298.	2	UTILIZED FLAKE, KNIFE RIVER FLINT	MN32
MD4	A-30	-21	0	83. 298.	3	UTILIZED FLAKE, KNIFE RIVER FLINT	MN5
MD4	A-30	-66	0	83. 299.	1	END SCRAPER, VERY LARGE, TONGUE RIVER SILICIFIED SED.	MN50
MD7	A-06	-24	0	83. 300.	1	SCAPULA HOE FRAGMENT	MN22
MD7	A-24	-55	0	83. 323.	1	INCISED BODY SHERD	MN18
MD7	A-24	-55	-05	83. 301.	1	RIM SHERD, RIGGS DECORATED RIM	MN1
MD7	A-24	-55	-05	83. 301.	2	RIM SHERD, RIGGS PUNCTATE	MN5
MD7	A-24	-55	-05	83. 301.	3	RIM SHERD, UNIDENTIFIED WARE, CORD IMPRESSED	MN6
MD7	A-24	-55	-05	83. 301.	4	RIM SHERD, FORT YATES INCISED	MN6
MD7	A-24	-55	-05	83. 301.	5	RIM SHERD, UNIDENTIFIED, CORD IMPRESSED	MN6
MD7	A-30	-66	0	83. 302.	1	END SCRAPER, CLEAR CHALCEDONY	MN1
MD7	A-30	-66	0	83. 302.	2	LARGE END SCRAPER/CUTTING TOOL, KNIFE RIVER FLINT	MN11
MD8	A-06	-03	0	83. 303.	1	BONE AWL TIP	10X10 CU
MD8	A-06	-24	0	83. 304.	1	SCAPULA HOE FRAGMENT	MN74
MD8	A-24	-55	0	83. 305.	1	SHOULDER	MN78
MD8	A-24	-55	0	83. 305.	2	SHOULDER	MN18
MD8	A-24	-55	0	83. 305.	3	SHOULDER	MN68
MD8	A-24	-55	0	83. 305.	4	SHOULDER	MN111
MD8	A-24	-55	0	83. 305.	5	SHOULDER	MN60
MD8	A-24	-55	0	83. 305.	6	SHOULDER	MN6
MD8	A-24	-55	0	83. 305.	7	SHOULDER	MN16
MD8	A-24	-55	0	83. 305.	8	FOUR SHOULDER FROM COLLECTION UNIT	10X10 CU
MD8	A-24	-55	0	83. 305.	9	CHECK STAMPED BODY SHERD	MN15
MD8	A-24	-55	0	83. 305.	10	BODY SHERD WITH SINGLE INCISED LINE ON IT	MN125
MD8	A-24	-55	0	83. 305.	11	BODY SHERD WITH SINGLE CORD WRAPPED OBJECT IMPRESSION	10X10 CU
MD8	A-24	-55	0	83. 305.	12	PLAIN BODY SHERD	MN48
MD8	A-24	-55	0	83. 305.	13	PLAIN BODY SHERD	MN60
MD8	A-24	-55	0	83. 305.	14	70 PLAIN BODY SHERDS FROM 10X10 COLLECTION UNIT	10X10 CU
MD8	A-24	-55	0	83. 305.	15	22 SIMPLE STAMPED BODY SHERDS FROM 10X10 COLLECION UNIT	10X10 CU
MD8	A-24	-55	0	83. 305.	16	SIMPLE STAMPED BODY SHERD	MN80
MD8	A-24	-55	0	83. 305.	17	5 RED (OXIDIZED) BODY SHERDS, 10X10 COLLECTION UNIT	10X10 CU
MD8	A-24	-55	0	83. 305.	18	RED BODY SHERD	MN137
MD8	A-24	-55	-05	83. 306.	1	RIM SHERD, FORT YATES CORD IMPRESSED	MN46
MD8	A-24	-55	-05	83. 306.	2	RIM SHERD, FORT YATES CORD IMPRESSED	MN118
MD8	A-24	-55	-05	83. 306.	3	RIM SHERD, FORT YATES CORD IMPRESSED	MN45
MD8	A-24	-55	-05	83. 306.	4	RIM SHERD, FORT YATES INCISED	10X10 CU
MD8	A-24	-55	-05	83. 306.	5	RIM SHERD, FORT YATES CORD IMPRESSED	MN93
MD8	A-24	-55	-05	83. 306.	6	RIM SHERD, FORT YATES CORD IMPRESSED	10X10 CU
MD8	A-24	-55	-05	83. 306.	7	RIM SHERD, FORT YATES CORD IMPRESSED	MN119
MD8	A-24	-55	-05	83. 306.	8	RIM SHERD, FORT YATES CORD IMPRESSED	MN17
MD8	A-24	-55	-05	83. 306.	9	RIM SHERD, FORT YATES CORD IMPRESSED	MN113
MD8	A-24	-55	-05	83. 306.	10	RIM SHERD, FORT YATES INCISED	MN71
MD8	A-24	-55	-05	83. 306.	11	RIM SHERD, FORT YATES INCISED	MN121
MD8	A-24	-55	-05	83. 306.	12	RIM SHERD, FORT YATES CORD IMPRESSED	MN132
MD8	A-24	-55	-05	83. 306.	13	RIM SHERD, FORT YATES INCISED (?)	MN133
MD8	A-24	-55	-05	83. 306.	14	RIM SHERD, RIGGS PUNCTATE	MN61
MD8	A-24	-55	-05	83. 306.	15	RIM SHERD, RIGGS PUNCTATE	MN138

Table A2 (cont.)

SITE #	CTG SUB SSB ACC .# /	CAT.#	DESCRIPTION	LOCATION
MDB	A-24 -55 -05 83. 306.	16	RIM SHERD, RIGGS PUNCTATE	MN124
MDB	A-24 -55 -05 83. 306.	17	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	18	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	19	RIM SHERD, RIGGS PUNCTATE	MN32
MDB	A-24 -55 -05 83. 306.	20	RIM SHERD, RIGGS PUNCTATE	MN47
MDB	A-24 -55 -05 83. 306.	21	RIM SHERD, RIGGS PUNCTATE	MN109
MDB	A-24 -55 -05 83. 306.	22	RIM SHERD, RIGGS PUNCTATE	MN12
MDB	A-24 -55 -05 83. 306.	23	RIM SHERD, RIGGS DECORATED LIP	MN7
MDB	A-24 -55 -05 83. 306.	24	RIM SHERD, RIGGS PUNCTATE	MN141
MDB	A-24 -55 -05 83. 306.	25	RIM SHERD, RIGGS PUNCTATE	MN139
MDB	A-24 -55 -05 83. 306.	26	RIM SHERD, RIGGS PUNCTATE	MN106
MDB	A-24 -55 -05 83. 306.	27	RIM SHERD, RIGGS PUNCTATE	MN43
MDB	A-24 -55 -05 83. 306.	28	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	29	RIM SHERD, RIGGS PUNCTATE	MN70
MDB	A-24 -55 -05 83. 306.	30	RIM SHERD, RIGGS PUNCTATE	MN144
MDB	A-24 -55 -05 83. 306.	31	RIM SHERD, RIGGS PUNCTATE	MN11
MDB	A-24 -55 -05 83. 306.	32	RIM SHERD, RIGGS PUNCTATE	MN129
MDB	A-24 -55 -05 83. 306.	33	RIM SHERD, RIGGS PUNCTATE	MN83
MDB	A-24 -55 -05 83. 306.	34	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	35	RIM SHERD, RIGGS PUNCTATE	MN42
MDB	A-24 -55 -05 83. 306.	36	RIM SHERD, RIGGS PUNCTATE	MN57
MDB	A-24 -55 -05 83. 306.	37	RIM SHERD, RIGGS PLAIN, INTERIOR BRUSHING	10X10 CU
MDB	A-24 -55 -05 83. 306.	38	RIM SHERD, RIGGS PLAIN, INTERIOR BRUSHING	MN39
MDB	A-24 -55 -05 83. 306.	39	RIM SHERD, RIGGS PLAIN	MN28
MDB	A-24 -55 -05 83. 306.	40	RIM SHERD, RIGGS PLAIN	MN81
MDB	A-24 -55 -05 83. 306.	41	RIM SHERD, RIGGS PLAIN	MN72
MDB	A-24 -55 -05 83. 306.	42	RIM SHERD, RIGGS PLAIN	10X10 CU
MDB	A-24 -55 -05 83. 306.	43	RIM SHERD, RIGGS PLAIN	MN105
MDB	A-24 -55 -05 83. 306.	44	RIM SHERD, UNDEFINED, DECORATED LIP	10X10 CU
MDB	A-24 -55 -05 83. 306.	45	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	46	RIM SHERD, RIGGS PUNCTATE	MN53
MDB	A-24 -55 -05 83. 306.	47	RIM SHERD, RIGGS PUNCTATE	MN94
MDB	A-24 -55 -05 83. 306.	48	RIM SHERD, RIGGS PINCHED RIM	MN76
MDB	A-24 -55 -05 83. 306.	49	RIM SHERD, RIGGS PINCHED RIM	MN10
MDB	A-24 -55 -05 83. 306.	50	RIM SHERD, RIGGS PLAIN	MN65
MDB	A-24 -55 -05 83. 306.	51	RIM SHERD, RIGGS PLAIN	10X10 CU
MDB	A-24 -55 -05 83. 306.	52	RIM SHERD, RIGGS PLAIN	10X10 CU
MDB	A-24 -55 -05 83. 306.	53	RIM SHERD, UNIDENTIFIED, MAY BE STANLEY WARE	MN98
MDB	A-24 -55 -05 83. 306.	54	RIM SHERD, UNIDENTIFIED, PLAIN RIM, VERY THICK	MN110
MDB	A-24 -55 -05 83. 306.	55	RIM SHERD, UNIDENTIFIED	MN56
MDB	A-24 -55 -05 83. 306.	56	RIM SHERD, UNIDENTIFIED	10X10 CU
MDB	A-24 -55 -05 83. 306.	57	RIM SHERD, UNIDENTIFIED WARE, VERY THICK W/ LUG	MN37
MDB	A-24 -55 -05 83. 306.	58	LUG ONLY, VERY SIMILAR TO ONE ON RIM OF # 57	10X10 CU
MDB	A-24 -55 -05 83. 306.	59	RIM SHERD, RIGGS DECORATED LIP	MN108
MDB	A-24 -55 -05 83. 306.	60	RIM SHERD, RIGGS PUNCTATE	MN16
MDB	A-24 -55 -05 83. 306.	61	RIM SHERD, FORT YATES PINCHED RIM	MN116
MDB	A-24 -55 -05 83. 306.	62	RIM SHERDS (3), UNID, 1 VESSEL, BRACED, PUNCTATE	MN60
MDB	A-24 -55 -05 83. 306.	63	RIM SHERD, UNIDENTIFIED, THICK WITH DEEP TOOL IMPRESS.	MN112
MDB	A-24 -55 -05 83. 306.	64	RIM SHERD, RIGGS DECORATED LIP (?)	MN22
MDB	A-24 -55 -05 83. 306.	65	RIM SHERD, RIGGS PUNCTATE	10X10 CU
MDB	A-24 -55 -05 83. 306.	66	RIM SHERD, RIGGS PUNCTATE	MN120
MDB	A-24 -55 -05 83. 306.	67	RIM SHERD, RIGGS PUNCTATE	MN6
MDB	A-24 -55 -05 83. 306.	68	RIM SHERD, RIGGS PUNCTATE	MN117

Table A2 (cont.)

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
MOB	A-24	-55	-05	83. 306.	69	RIM SHERD, RIGGS PUNCTATE	MN137
MOB	A-24	-55	-05	83. 306.	70	RIM SHERD, UNIDENTIFIED, CONSTRICTING RIM, TOOL IMPRESS	MN94
MOB	A-24	-55	-05	83. 306.	71	RIM SHERD, UNIDENTIFIED, TOOL IMPRESSED,LARGE DIAMETER	10X10 CU
MOB	A-24	-55	-05	83. 306.	72	RIM SHERD, UNIDENTIFIED, TOOL IMPRESSED AND BRUSHED (?)	MN21
MOB	A-24	-55	-05	83. 306.	73	RIM SHERD, RIGGS PUNCTATE, VERY FRAGMENTED	MN66
MOB	A-24	-55	-05	83. 306.	74	RIM SHERD, UNIDENTIFIED WARE	10X10 CU
MOB	A-24	-55	-05	83. 306.	75	RIM SHERD, UNIDENTIFIED WARE	10X10 CU
MOB	A-24	-55	-05	83. 306.	76	RIM SHERD, UNIDENTIFIED WARE	10X10 CU
MOB	A-24	-55	-05	83. 306.	77	RIM SHERD, UNIDENTIFIED WARE	10X10 CU
MOB	A-30	0	0	83. 307.	1	OBLONG, ROUNDED PIECE OF PETRIFIED WOOD, POLISHED ENDS	MN128
MOB	A-30	0	0	83. 307.	2	LARGE CORE TOOL, TONGUE RIVER SILICIFIED SEDIMENT	MN26
MOB	A-30	-15	0	83. 308.	1	GRAVER/DRILL, BLADE ONLY, PLATE CHALCEDONY	MN55
MOB	A-30	-21	0	83. 309.	1	DEBITAGE SAMPLE FROM 10X10 COLLECTION UNIT	10X10 CU
MOB	A-30	-21	0	83.	1.1	9 TERTIARY KNIFE RIVER FLINT, 1 TERTIARY AGATE, 13	
MOB	A-30	-21	0	83.	1.2	TERTIARY TONGUE RIVER SILICIFIED SEDIMENT	
MOB	A-30	-21	0	83.	1.3	2 SECONDARY KNIFE RIVER FLINT, 5 SECONDARY TONGUE RIVER	
MOB	A-30	-21	0	83.	1.4	SILICIFIED SEDIMENT, 4 TONGUE R. SHATTER, 1 KRF SHATTER	
MOB	A-30	-21	0	83. 309.	2	SECONDARY KNIFE RIVER FLINT FLAKE	MN9
MOB	A-30	-21	0	83. 309.	3	TERTIARY KNIFE RIVER FLINT FLAKE	MN64
MOB	A-30	-21	0	83. 309.	4	UTILIZED FLAKE, KNIFE RIVER FLINT	MN142
MOB	A-30	-21	0	83. 309.	5	UTILIZED FLAKE, KNIFE RIVER FLINT	MN26
MOB	A-30	-21	0	83. 309.	6	UTILIZED FLAKE, KNIFE RIVER FLINT	MN97
MOB	A-30	-21	0	83. 309.	7	UTILIZED FLAKE, KNIFE RIVER FLINT	MN14
MOB	A-30	-21	0	83. 309.	8	UTILIZED FLAKE, KNIFE RIVER FLINT	MN33
MOB	A-30	-21	0	83. 309.	9	UTILIZED FLAKE, TONGUE RIVER SILICIFIED SEDIMENT	MN35
MOB	A-30	-21	0	83. 309.	10	UTILIZED FLAKE, TONGUE RIVER SILICIFIED SEDIMENT	MN63
MOB	A-30	-21	0	83. 309.	11	UTILIZED FLAKE, BASALT	MN75
MOB	A-30	-27	0	83. 310.	1	BASALT W/ ONE SIDE POLISHED AND STRIATED,GRINDING/CUT ?	MN114
MOB	A-30	-30	0	83. 311.	1	SMALL HAMMERSTONE	MN27
MOB	A-30	-30	0	83. 311.	2	SMALL HAMMERSTONE	MN19
MOB	A-30	-36	0	83. 312.	1	BIFACE BASE, COARSE WHITE QUARTZITE	MN24
MOB	A-30	-36	0	83. 312.	2	BIFACE TIP, KNIFE RIVER FLINT	MN43
MOB	A-30	-36	0	83. 312.	3	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN79
MOB	A-30	-36	0	83. 312.	4	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN50
MOB	A-30	-36	0	83. 312.	5	BIFACE FRAGMNET, KNIFE RIVER FLINT	MN40
MOB	A-30	-36	0	83. 312.	6	BIFACE FRAGMENT, COARSE WHITE QUARTZITE	MN31
MOB	A-30	-36	0	83. 312.	7	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	10X10 CU
MOB	A-30	-36	0	83. 312.	8	BIFACE FRAGMENT, GRANITIC (?)	MN84
MOB	A-30	-63	0	83. 313.	1	PROJ POINT, LATE PERIOD SIDE NOTCHED, TONGUE RIVER SS	MN107
MOB	A-30	-63	0	83. 313.	2	PROJ POINT, LATE PERIOD SIDE NOTCHED, KR FLINT	MN21
MOB	A-30	-63	0	83. 313.	3	PROJ PT, LATE PLAINS ARCHAIC CORNER NOTCHED, KR FLINT	MN88
MOB	A-30	-63	0	83. 313.	4	PROJ PT, LATE PLAINS ARCHAIC CORNER NOTCHED, KR FLINT	MN51
MOB	A-30	-66	0	83. 314.	1	END SCRAPER, KNIFE RIVER FLINT	MN59
MOB	A-30	-66	0	83. 314.	2	END SCRAPER, KNIFE RIVER FLINT	MN87
MOB	A-30	-66	0	83. 314.	3	END SCRAPER, KNIFE RIVER FLINT	MN34
MOB	A-30	-66	0	83. 314.	4	END SCRAPER, KNIFE RIVER FLINT	MN89
MOB	A-30	-66	0	83. 314.	5	END SCRAPER, KNIFE RIVER FLINT	MN82
MOB	A-30	-66	0	83. 314.	6	END SCRAPER, KNIFE RIVER FLINT	MN102
MOB	A-30	-66	0	83. 314.	7	END SCRAPER, FRAGMENT, KNIFE RIVER FLINT	MN23
MOB	A-30	-66	0	83. 314.	8	END SCRAPER/GUN FLINT (?), KNIFE RIVER FLINT	MN13
MOB	A-30	-66	0	83. 314.	9	END SCRAPER, TONGUE RIVER SILICIFIED SEDIMENT	MN52
MOB	A-30	-66	0	83. 314.	10	END SCRAPER, TONGUE SILICIFIED SEDIMENT	10X10 CU
MOB	A-30	-66	0	83. 314.	11	END SCRAPER, DULL LIGHT BROWN CHERT	MN96

Table A2 (cont.)

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
MD98	A-30	-66	0	83. 314.	12	SIDE SCRAPER/BACKED BLADE CUTTING TOOL,TONGUE RIVER SS	MN115
MD98	A-24	-55	0	83. 315.	1	CORD-ROUGHENED BODY SHERD	MN61 (B)
MD98	A-24	-55	0	83. 315.	2	CORD-ROUGHENED BODY SHERD	MN46 (B)
MD98	A-24	-55	0	83. 315.	3	CORD-ROUGHENED BODY SHERD	MN39 (B)
MD98	A-24	-55	0	83. 315.	3	CORD-ROUGHENED BODY SHERD	MN6 (B)
MD98	A-24	-55	0	83. 315.	5	CORD-ROUGHENED BODY SHERD	MN58 (B)
MD98	A-24	-55	0	83. 315.	6	CORD-ROUGHENED BODY SHERD	MN6 (B)
MD98	A-24	-55	0	83. 315.	7	CORD-ROUGHENED BODY SHERD	MN44 (B)
MD98	A-24	-55	0	83. 315.	8	CORD-ROUGHENED BODY SHERD	MN40 (B)
MD98	A-24	-55	0	83. 315.	9	CORD-ROUGHENED BODY SHERD	MN44 (B)
MD98	A-24	-55	0	83. 315.	10	CORD-ROUGHENED BODY SHERD	MN53 (B)
MD98	A-24	-55	0	83. 315.	11	CORD-ROUGHENED BODY SHERD	MN48 (B)
MD98	A-24	-55	0	83. 315.	12	CORD-ROUGHENED BODY SHERD	MN14 (B)
MD98	A-24	-55	0	83. 315.	13	CORD-ROUGHENED BODY SHERD	MN4 (B)
MD98	A-24	-55	0	83. 315.	14	CORD-ROUGHENED BODY SHERD	MN3 (B)
MD98	A-24	-55	0	83. 315.	15	CORD-ROUGHENED BODY SHERD	MN24 (B)
MD98	A-24	-55	0	83. 315.	16	CORD-ROUGHENED BODY SHERD	MN25 (B)
MD98	A-24	-55	0	83. 315.	17	CORD-ROUGHENED BODY SHERD	MN7 (B)
MD98	A-24	-55	0	83. 315.	18	CORD-ROUGHENED BODY SHERD	MN41 (B)
MD98	A-24	-55	0	83. 315.	19	CORD-ROUGHENED BODY SHERD	CU (B)
MD98	A-24	-55	0	83. 315.	20	CORD-ROUGHENED BODY SHERD	MN32 (B)
MD98	A-24	-55	0	83. 315.	21	CORD-ROUGHENED BODY SHERD	MN5 (B)
MD98	A-24	-55	0	83. 315.	22	3 CORD-ROUGHENED BODY SHERDS FROM SAME VESSEL	MN20 (B)
MD98	A-24	-55	0	83. 315.	23	CORD-ROUGHENED BODY SHERD	MN9 (B)
MD98	A-24	-55	0	83. 315.	24	CORD-ROUGHENED BODY SHERD	MN50 (B)
MD98	A-24	-55	0	83. 315.	25	CORD-ROUGHENED BODY SHERD	MN56 (B)
MD98	A-24	-55	0	83. 315.	26	CORD-ROUGHENED BODY SHERD	MN42 (B)
MD98	A-24	-55	0	83. 315.	27	CORD-ROUGHENED BODY SHERD	MN65 (B)
MD98	A-24	-55	0	83. 315.	28	CORD-ROUGHENED BODY SHERD	MN59 (B)
MD98	A-24	-55	0	83. 315.	29	CORD-ROUGHENED BODY SHERD	MN25 (B)
MD98	A-24	-55	0	83. 315.	30	PLAIN BODY SHERD	MN62 (B)
MD98	A-24	-55	0	83. 315.	31	SIMPLE-STAMPED BODY SHERD	MN35 (B)
MD98	A-24	-55	0	83. 315.	32	PLAIN BODY SHERD	MN36 (B)
MD98	A-24	-55	0	83. 315.	33	PLAIN BODY SHERD	MN35 (B)
MD98	A-24	-55	0	83. 315.	34	PLAIN BODY SHERD	MN32 (B)
MD98	A-24	-55	0	83. 315.	35	PLAIN BODY SHERD	CU (B)
MD98	A-24	-55	0	83. 315.	36	PLAIN BODY SHERD	MN5 (B)
MD98	A-24	-55	0	83. 315.	36	SIMPLE-STAMPED BODY SHERD	MN34 (B)
MD98	A-24	-55	0	83. 315.	37	SIMPLE-STAMPED BODY SHERD, POSSIBLE SHOULDER	MN30 (B)
MD98	A-24	-55	0	83. 315.	39	CORD-ROUGHENED BODY SHERD	MN5 (B)
MD98	A-24	-55	0	83. 315.	40	CORD-ROUGHENED BODY SHERD	MN55 (B)
MD98	A-24	-55	0	83. 315.	41	CORD WRAPPED ROD/FABRIC IMPRESSED SHERD, POSSIBLE NECK	MN47 (B)
MD98	A-24	-55	0	83. 315.	42	CORD WRAPPED ROD/FABRIC IMPRESSED SHERD, POSSIBLE NECK	MN24 (B)
MD98	A-24	-55	0	83. 315.	43	CORD-ROUGHENED BODY SHERD	MN102(A)
MD98	A-24	-55	-05	83. 316.	1	RIM SHERD, CORD-ROUGHENED, CORD WRAPPED ROD IMPRESSED	CU (B)
MD98	A-24	-55	-05	83. 316.	2	RIM SHERD, CORD-ROUGHENED, CORD WRAPPED ROD IMPRESSED	MN104(A)
MD98	A-30	0	0	83. 317.	1	FRAGMENT OF LARGE CORE TOOL, TONGUE RIVER SIL. SED.	MN21 (B)
MD98	A-30	0	0	83. 317.	2	ROUND CORE TOOL, EDGE USE, GREY QUARTZITE	MN22 (B)
MD98	A-30	-21	0	83. 318.	1	UTILIZED FLAKE, KNIVE RIVER FLINT	MN39 (B)
MD98	A-30	-21	0	83. 318.	2	UTILIZED FLAKE, KNIVE RIVER FLINT	MN57 (B)
MD98	A-30	-21	0	83. 318.	3	UTILIZED FLAKE, KNIVE RIVER FLINT	MN23 (B)
MD98	A-30	-21	0	83. 318.	4	UTILIZED FLAKE, KNIFE RIVER FLINT	MN66 (B)
MD98	A-30	-21	0	83. 318.	5	UTILIZED FLAKE, KNIFE RIVER FLINT	MN2 (B)

Table A2 (cont.)

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
MD98	A-30	-21	0	83. 318.	7	UTILIZED FLAKE, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-21	0	83. 318.	8	UTILIZED FLAKE, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-21	0	83. 318.	9	UTILIZED FLAKE FRAGMENT, TONGUE RIVER SILICIFIED SED.	CU (B)
MD98	A-30	-21	0	83. 318.	10	UTILIZED FLAKE, KNIFE RIVER FLINT	MN70 (A)
MD98	A-30	-21	0	83. 318.	11	DEBITAGE SAMPLE, 26 TERT KRF,36 TERT TRSS,5 SEC KRF,	CU (B)
MD98	A-30	-21	0	83. 318.	11.1	11 SEC TRSS, 1 SEC CHALCEDONY	
MD98	A-30	-21	0	83. 318.	12	COLLECTED FLAKE, TERTIARY TONGUE RIVER SILICIFIED SED.	MN51 (A)
MD98	A-30	-21	0	83. 318.	13	UTILIZED FLAKE, KNIFE RIVER FLINT	MN49 (B)
MD98	A-30	-36	0	83. 319.	1	LARGE OVOID BIFACE, COMPLETE, RED-BROWN QUARTZITE	CU (B)
MD98	A-30	-36	0	83. 319.	2	BIFACE FRAGMENT, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-36	0	83. 319.	3	BIFACE FRAGMENT, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-36	0	83. 319.	4	SMALL HAFTED BIFACE, KNIFE RIVER FLINT	MN18 (B)
MD98	A-30	-36	0	83. 319.	5	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN64 (B)
MD98	A-30	-36	0	83. 319.	6	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN54 (B)
MD98	A-30	-36	0	83. 319.	7	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN1 (B)
MD98	A-30	-36	0	83. 319.	8	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN1 (B)
MD98	A-30	-36	0	83. 319.	9	BIFACE/PREFORM, TONGUE RIVER SILICIFIED SEDIMENT	MN67 (A)
MD98	A-30	-36	0	83. 319.	10	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN57 (A)
MD98	A-30	-36	0	83. 319.	11	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN54 (A)
MD98	A-30	-36	0	83. 319.	12	SMALL HAFTED BIFACE, KNIFE RIVER FLINT	MN68 (A)
MD98	A-30	-36	0	83. 319.	13	BIFACE FRAGMENT, TONGUE RIVER SILICIFIED SEDIMENT	MN51 (A)
MD98	A-30	-36	0	83. 319.	14	BIFACE FRAGMENT, KNIFE RIVER FLINT	MN87 (A)
MD98	A-30	-63	0	83. 320.	1	PROJECTILE POINT, LATE PERIOD SIDE NOTCHED, K.R. FLINT	CU (B)
MD98	A-30	-63	0	83. 320.	2	PROJ. PT. BASE, LATE PERIOD SIDE NOTCHED, TRSS	MN2 (B)
MD98	A-30	-63	0	83. 320.	3	PROJ PT.,BROKEN BASE,LATE PERIOD SIDE NOT.,RED CHERT	MN17 (B)
MD98	A-30	-63	0	83. 320.	4	PROJ. PT.,LATE PERIOD TRIANGULAR, BASE, KNIFE RIVER F.	MN43 (B)
MD98	A-30	-63	0	83. 320.	5	PROJ. PT.,LATE PERIOD TRIANGULAR, BASE, KNIFE RIVER F.	MN12 (B)
MD98	A-30	-63	0	83. 320.	6	PROJ. PT.,LATE PERIOD TRIANGULAR, BASE, KNIFE RIVER F.	CU (B)
MD98	A-30	-63	0	83. 320.	7	PROJ. PT., LATE PERIOD SIDE NOTCHED, KNIFE RIVER FLINT	MN97 (A)
MD98	A-30	-63	0	83. 320.	8	PROJ. PT., BESANT, RED TONGUE RIVER SS	MN72 (A)
MD98	A-30	-63	0	83. 320.	9	PROJ. PT., BESANT(?), WHITE CHERT	MN31 (A)
MD98	A-30	-66	0	83. 321.	1	END SCRAPER, KNIFE RIVER FLINT	MN63 (B)
MD98	A-30	-66	0	83. 321.	2	END SCRAPER, KNIFE RIVER FLINT	MN38 (B)
MD98	A-30	-66	0	83. 321.	3	END SCRAPER, KNIFE RIVER FLINT	MN10 (B)
MD98	A-30	-66	0	83. 321.	4	END SCRAPER, KNIFE RIVER FLINT	MN11 (B)
MD98	A-30	-66	0	83. 321.	5	END SCRAPER, KNIFE RIVER FLINT	MN6 (B)
MD98	A-30	-66	0	83. 321.	6	END SCRAPER, KNIFE RIVER FLINT	MN31 (B)
MD98	A-30	-66	0	83. 321.	7	END SCRAPER, KNIFE RIVER FLINT	MN51 (B)
MD98	A-30	-66	0	83. 321.	8	END SCRAPER, KNIFE RIVER FLINT	MN43 (B)
MD98	A-30	-66	0	83. 321.	9	END SCRAPER, KNIFE RIVER FLINT	MN8 (B)
MD98	A-30	-66	0	83. 321.	10	END SCRAPER, KNIFE RIVER FLINT	MN52 (B)
MD98	A-30	-66	0	83. 321.	11	END SCRAPER, KNIFE RIVER FLINT	MN29 (B)
MD98	A-30	-66	0	83. 321.	12	END SCRAPER, KNIFE RIVER FLINT	MN60 (B)
MD98	A-30	-66	0	83. 321.	13	END SCRAPER, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-66	0	83. 321.	14	END SCRAPER, KNIFE RIVER FLINT	MN65 (B)
MD98	A-30	-66	0	83. 321.	15	END SCRAPER, KNIFE RIVER FLINT	MN65 (B)
MD98	A-30	-66	0	83. 321.	16	END SCRAPER, KNIFE RIVER FLINT	CU (B)
MD98	A-30	-66	0	83. 321.	17	END SCRAPER, KNIFE RIVER FLINT	MN5 (B)
MD98	A-30	-66	0	83. 321.	18	END SCRAPER, KNIFE RIVER FLINT	MN51 (B)
MD98	A-30	-66	0	83. 321.	19	END SCRAPER, KNIFE RIVER FLINT	MN48 (A)
MD98	A-30	-66	0	83. 321.	20	END SCRAPER, KNIFE RIVER FLINT	MN38 (A)
MD98	A-30	-66	0	83. 321.	21	END SCRAPER, KNIFE RIVER FLINT	MN22 (A)
MD98	A-30	-66	0	83. 321.	22	END SCRAPER, KNIFE RIVER FLINT	MN13 (A)

Table A2 (cont.)

SITE #	CTG	SUB	SSB	ACC .# /	CAT.#	DESCRIPTION	LOCATION
MD98	A-30	-66	0	83. 321.	23	END SCRAPER, KNIFE RIVER FLINT	MN85 (A)
SI17	A-30	-27	0	83. 322.	1	METATE/GRINDING PLATFORM, SANDSTONE	MN3

Ceramics

Plains Village:

Plains Village ceramics were collected from a number of sites in the study area (see Table A2). With one exception all identified wares are consistent with those known to exist on Middle Missouri tradition sites of the Extended and Terminal Middle Missouri variants.

Site 32MO8 was the only Plains Village site to contain a large enough sample for comparing ware frequencies. A total of 18.2 percent of the rim sherds collected have been identified as Fort Yates ware while 59.7 are believed to be Riggs ware. The categories used here are those described by Lehmer (1966), Thiessen (1976) and Ahler (1977).

An unfortunately high percentage (20.8) of the assemblage could not be identified to ware. While some of these may eventually be classified, many are simply too small and fragmentary to be categorized. In all cases individual rim sherds rather than number of vessels was used as the basic unit of analysis. This is believed to be the best, if not the only, means of comparison when dealing with a surface sample.

The number of unidentified rim sherds, and perhaps the sample size, makes the results of the ceramic ware analysis quite ambiguous. It has long been believed that the varying proportions of Riggs and Fort Yates wares in an assemblage is a key indicator of whether a site in the Cannonball region belongs to the Extended or the Terminal Middle Missouri variants (Lehmer 1966, 1971; Wood 1967; see also, Chapter Three of this report) with sites of the Extended Middle Missouri variant containing well over 60 percent Riggs ware (Sperry 1982:154).

If the percentages of ware types are an accurate reflection of the total site assemblage, 32MO8 appears to be more similar to Terminal Middle Missouri sites than is does to Extended Middle Missouri sites. If this is

the case, it would alter the original classifications of the site (Will and Hecker 1944:94; Lehmer 1971:67).

Jensen in discussing a previous ceramic sample from the site also noted the same problem:

> Will and Hecker....ascribe this site to Archaic Mandan but this seems peculiar in view of the wide range of rim forms, the high proportion of incised rims and the lack of smooth body sherds (Jensen 1965:26).

It should be noted that Jensen's method of rim classification is somewhat different than normally used for the region (e.g. Lehmer 1966; Wood 1967) and it is difficult to directly ascribe rims from that sample to either Fort Yates or Riggs ware.

Fort Yates ware at 32MO8 is represented by nine Fort Yates Cord Impressed (Figure A1a-b), four Fort Yates Incised (Figure A1c) and one Fort Yates Plain rim.

The Riggs ware sample is composed of an unusually large number (31 of 46) of Riggs Punctate (Figure A1d-h). There are also ten Riggs Plain rims (Figure A2a), three Decorated Lip (Figure A2b-c) and two Pinched Rim sherds.

Of the rim sherds unidentified as to ware, four have distinctive characteristics. These included two lug handled rims (Figure A2d) similar to a specimen noted by Sperry (1982:72, Plate 7a) at the Havens site, a very thin incised and punctated rim (Figure A2e) and a very thick rim with deep tool impressions below the lip (Figure A2f).

A simple rim sherd from 32MO8 resembles Stanley ware (Figure A2g). This sherd is very fragmented however and only the exterior portion of the rim remains.

Only eleven shoulder sherds were found at 32MO8. All were undecorated and showed no indications of surface treatment.

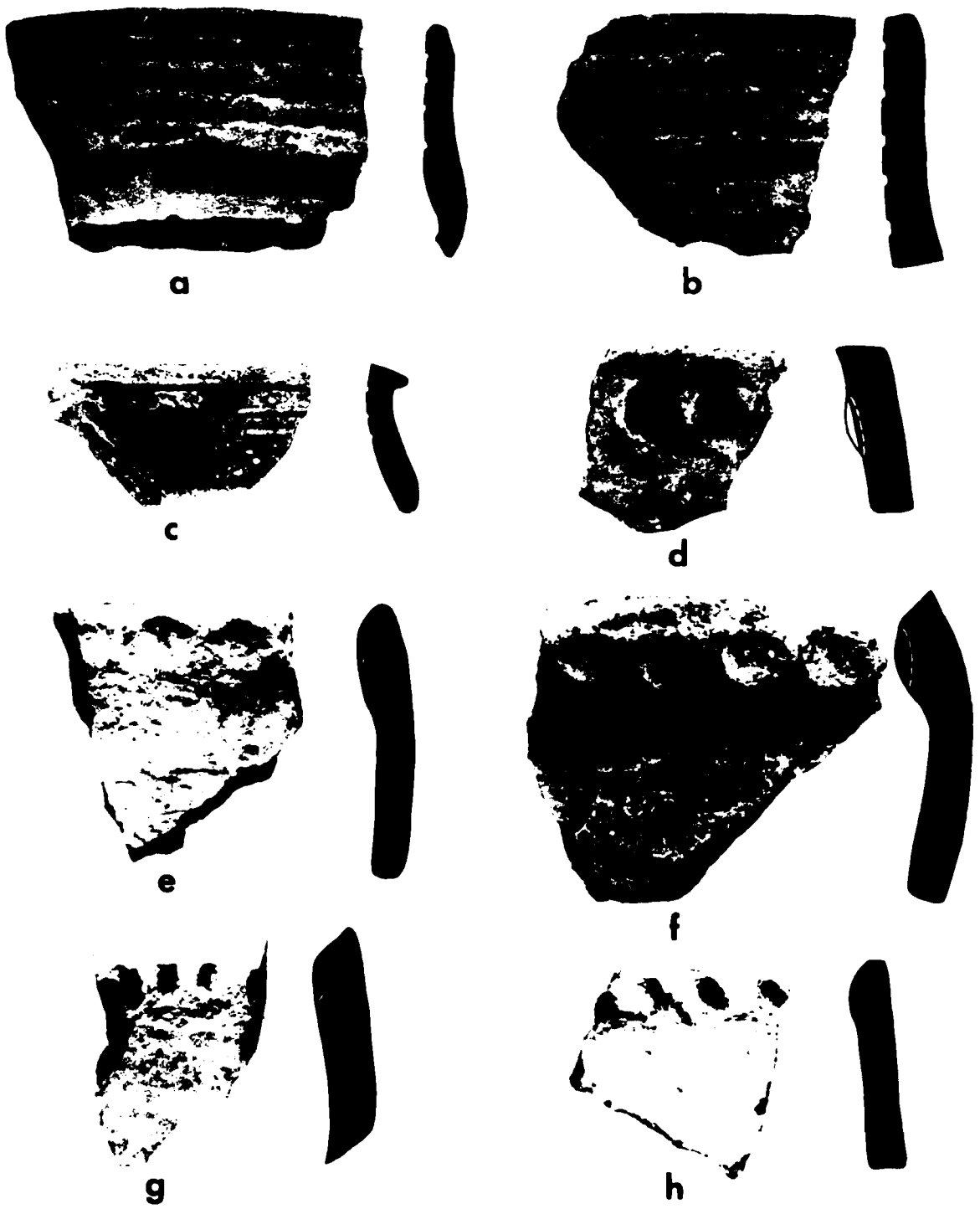
a
b
c
d
e
f
g
h

Figure A2. Rim sherds. a: Riggs Plain (83.[illegible]), b-c: Riggs Decorated lip (83.306.64, 83.306.23), d: unidentified [illegible] rim (83.306.57), e: unidentified [illegible] rim (83.306.72), f: unidentified tool impressed rim (83.30[illegible]), g: possible Stanley ware rim (83.30[illegible]), h: [illegible] rim sherd from 32MO98 (83.316.1), i: Body sherd from 32MO[illegible] (83.315.41).

A sample of 98 body sherds was collected in a 10 by 10 meter collection unit at 32M08. Surface treatment on this sample consists of 76 smoothed (77.6 percent) and 22 simple-stamped (22.4 percent). Five of the smoothed body sherds are red in color on one surface and another has a cord-wrapped rod decoration on its exterior surface.

A single check-stamped body sherd was recovered at the site. This sherd was found outside of the collection unit and is therefore not included in the above tally.

Small samples of rim sherds were collected at other village sites and are listed in Table A2. While no other sites provided samples large enough to yield usable statistics, the over-all characteristics seem very similar to those represented at 32M08.

The single vessel recovered from 32M0106 does not appear to be a Middle Missouri tradition ware (Figure A3). The characteristics of this vessel are described as follows:

Paste: Lump molded vessel with irregular breakage pattern. Finished with paddle and anvil. Temper is decomposed pieces of granite between 0.5 and 1.5 millimeters in diameter. These are distributed evenly throughout the paste. Color is light grey to black.

Surface finish: Simple-stamped finish with stamping crossing the body of the vessel at 35 to 180 degree angles.

Decoration: Absent.

Form:
- Lip: Rounded wavy lip formed by pinching.
- Rim/neck: Outcurving with slight interior bracing.
- Orifice: Wide and circular.
- Shoulder: Gently rounded, appears to be the widest portion of the vessel.
- Body: Globular.
- Size: Orifice diameter = 225 millimeters
  Diameter at neck = 200 millimeters
  Approximate diameter at shoulder = 235 millimeters
  Estimated height = 300-350 millimeters
- Thickness: Rim = 7-8.5 millimeters
  Body = 3.5-5.5 millimeters

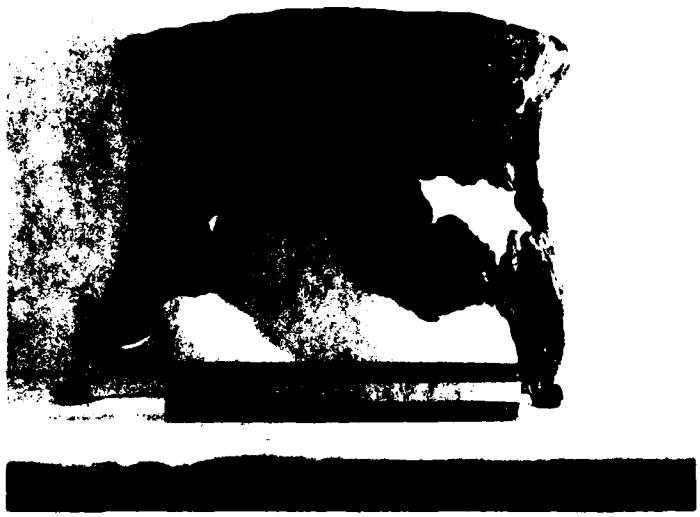

Figure A3. Partially reconstructed pottery vessel from 32MO106 (83.279.1).

In general appearances, this vessel resembles the Talking Crow Straight rim vessels described by Woolworth and Wood (1964:92-96, Plate 9k) from the Demery site (39C01), but seems to be both thinner and larger with a higher neck area and different lip form. Ann Johnson and J. J. Hoffman with the National Park Service, Denver, both viewed the vessel and expressed the opinion that it is very late in age, probably protohistoric or historic.

Plains Woodland:

The only site which can conclusively be said to contain Plains Woodland ceramics is 32M098. Of the 40 body sherds recovered from Area B at this site, 29 (72.5%) are cord-roughened. Six of the body sherds are smoothed and three appear to be simple-stamped. The two final body sherds are believed to be rather unique for the Cannonball region. Both have what appears to be parallel cord-wrapped rod impressions which have been overlain with a loose fabric impression (Figure A2i).

Two rim sherds were found at 32M098. Both have flattened lips with cord-wrapped rod impressions inlaid diagonally across the flat surface (Figure A2h). Other than these impressions, this rim form appears to resemble those from other Woodland sites in the region (e.g. Neuman 1975; Wood 1960).

Chipped Stone Tools

Projectile Points:

The term projectile point as it is used here is intended to imply more about the form of the item rather than the function of it. Detailed ware and breakage pattern analyses have not been performed on these specimens. Items included in this category are essentially small hafted bifaces which would traditionally be interpreted as dart or arrow points and are believed to be potentially temporally diagnostic.

A total of 23 projectile points were recovered from eight sites during the study. The majority (15) of these are believed to date from the Late Prehistoric period. These include nine small side-notched projectile points (Figure A4a-c) and six triangular unnotched points (Figure A4d). It is interesting to note that the projectile points occurring with Woodland ceramics at Area B of 32M098 are all of either small side-notched or triangular in form (Figures A4c, d). It is for this reason that Area B is believed to be a Late Woodland manifestation.

Three projectile points, two from 32M098 and one from 32EM204 are classifiable as Besant (Figure A4e, f; e.g. Frison 1978:213-223). As with the case of other investigations in the Middle Missouri subarea (e.g. Neuman 1975; Johnson 1977), all Besant points were found at sites believed to be Northern Plains Woodland in origin.

Three projectile points were found which are believed to date from the Plains Archaic. Two of these are burned and fragmented specimens from 32M08 and one is a fragmented specimen from 32EM98 (Figure A4g). While large corner-notched projectile points generally date from the Late Plains Archaic, it should be noted that specimens similar to the one illustrated in Figure A4g are also known to occur in Early Plains Archaic components (e.g. Benedict 1981:103, 104, 113-114).

The remaining two projectile points found are undiagnostic midsections. One from 32EM68 is a surface find and of unknown age or origin. The second undiagnostic midsection was found in a cultural stratum at 32EM204 which is below a component dated at 1180$\pm$270 years B.P.

Bifaces:

Twenty-eight items were recovered from four sites which are classified as bifaces. In 26 of these cases the specimens a very fragmented edges, midsections or tips. One biface (Figure A4h) from 32M098 is a small

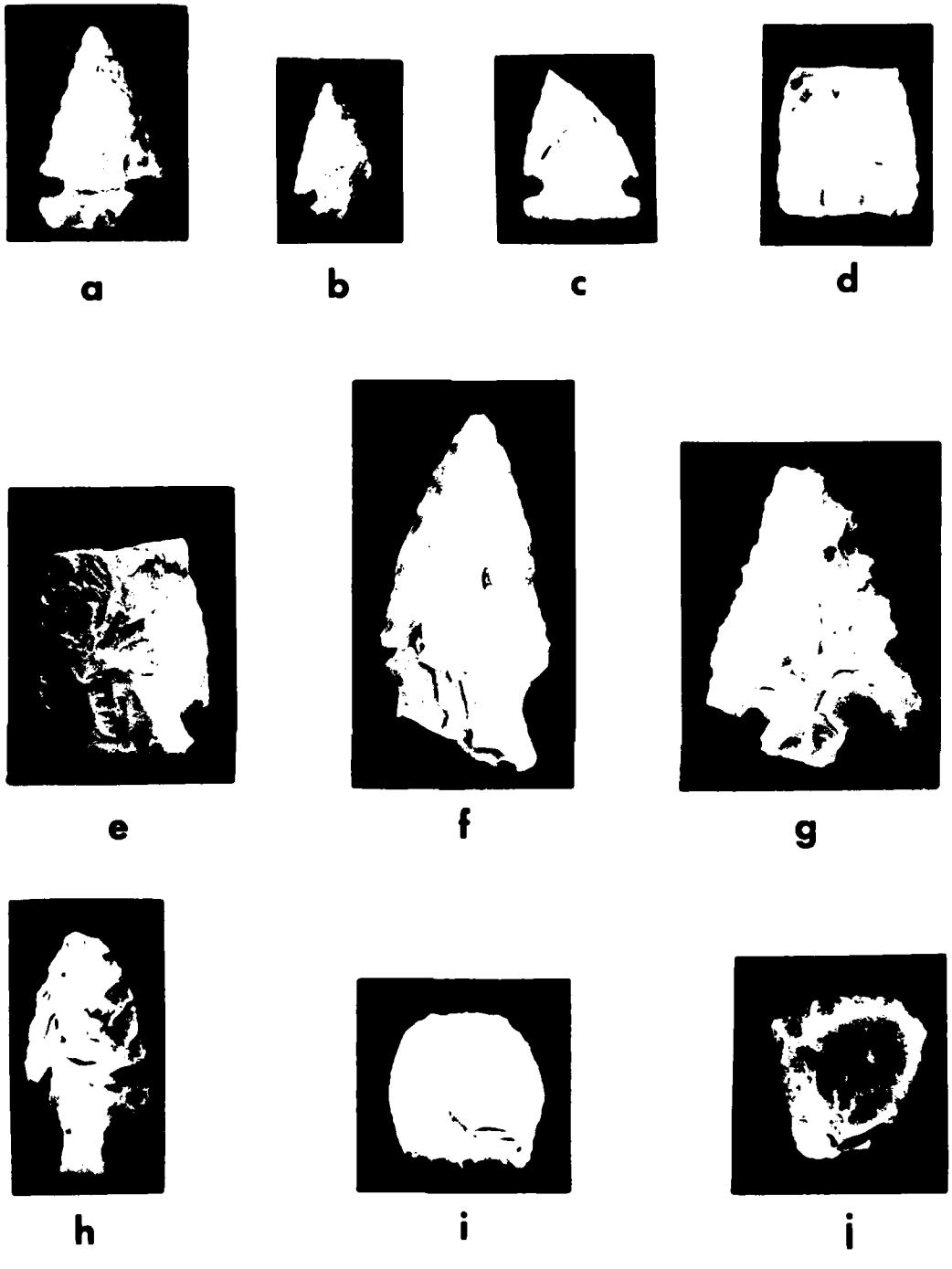

Figure A4. Projectile points. a-b: [illegible], c-e: 32MO98 (83.32[illegible], 83.[illegible]), f: [illegible] (83.273.1), g: 32EM08 (83.[illegible].1). [illegible] (83.319.4). End scraper/gun [illegible]: [illegible].13.9). End scraper j: 32MO98 (83.321.[illegible]).

shouldered specimen of Knife River Flint. It is very similar in appearance to an artifact recovered from Mound 3 at the Boundary Mound site (32SI1; Neuman 1975: Plate 32a). A second specimen found at the same site is a large ovoid biface of coarse quartzite (Figure A5).

Scrapers:

Forty-two items collected were classified as end or side scrapers. Thirty-five of these specimens were recovered from either 32M08 (n=12) or 32M098 (n=23) and are discussed in detail in another manuscript (Larson n.d.). Therefore only two factors relating to this artifact class will be mentioned here. One of the artifacts from 32M098 grouped with end scrapers during analysis actually appears to be a gun flint (Figure A4i). If this is the case, there is the likelihood of a later protohistoric or historic component at 32M08. At site 32M098, nearly fifty percent of the artifacts classified as end scrapers exhibited noticeable spurs or protrusions on one or both sides of the scraping edge (Figure A4j). These appear to be intentional graver tips and may be associated with bone or wood working activities at the site.

Utilized Flakes:

Twenty-two artifacts classified as utilized flakes were recovered from three sites during the study. A great deal more of these artifacts were noted and mapped but not collected. Of both the collected and noncollected utilized flakes, 81 percent were manufactured from Knife River Flint. Except for end scrapers, this is the highest proportional use of Knife River Flint in any artifact category.

Ground and Polished Stone

Celt:

A fragment of a diorite celt was collected at 32M04. The fragment

Figure A5. Biface from site 32MO98 (83.319.1).

appears to have been broken in use but has received more damage due to plowing activity.

Ground Stone Fragment:

A small portion of an apparent mano or hand stone was found in the plowed field at 32M0100. Only a small portion of the working surface is present on the fragment recovered. It is composed of granite and appears to have been burned.

Metate:

A complete sandstone metate, or grinding platform, was found at 32SI17 (Figure A6). The artifact has a central basin-shaped working surface. It has been shaped into ovoid form by the removal of large flakes around its exterior similar to those removed in a core reduction process. The metate was probably used to grind wild and domesticated plant foods. Although artifacts of this type are fairly common in the High Plains and Great Basin, they are seldom found in the Middle Missouri subarea.

Miscellaneous Stone Artifact:

A fragment of basalt which has apparently been ground and polished on one surface was recovered at 32M08. The polished surface is covered with a number of light striations, possibly from cutting activities.

Bone Tools

Bone tools were found only in a few instances during the 1982 survey. Single scapula hoe fragments were found at 32M07 and 32M08. The tip of a bone awl was also found at 32M08 and a fragment of a bone spatulate was collected at 32M04.

Figure A6. Metate from site 32SI17 (83.322.1).

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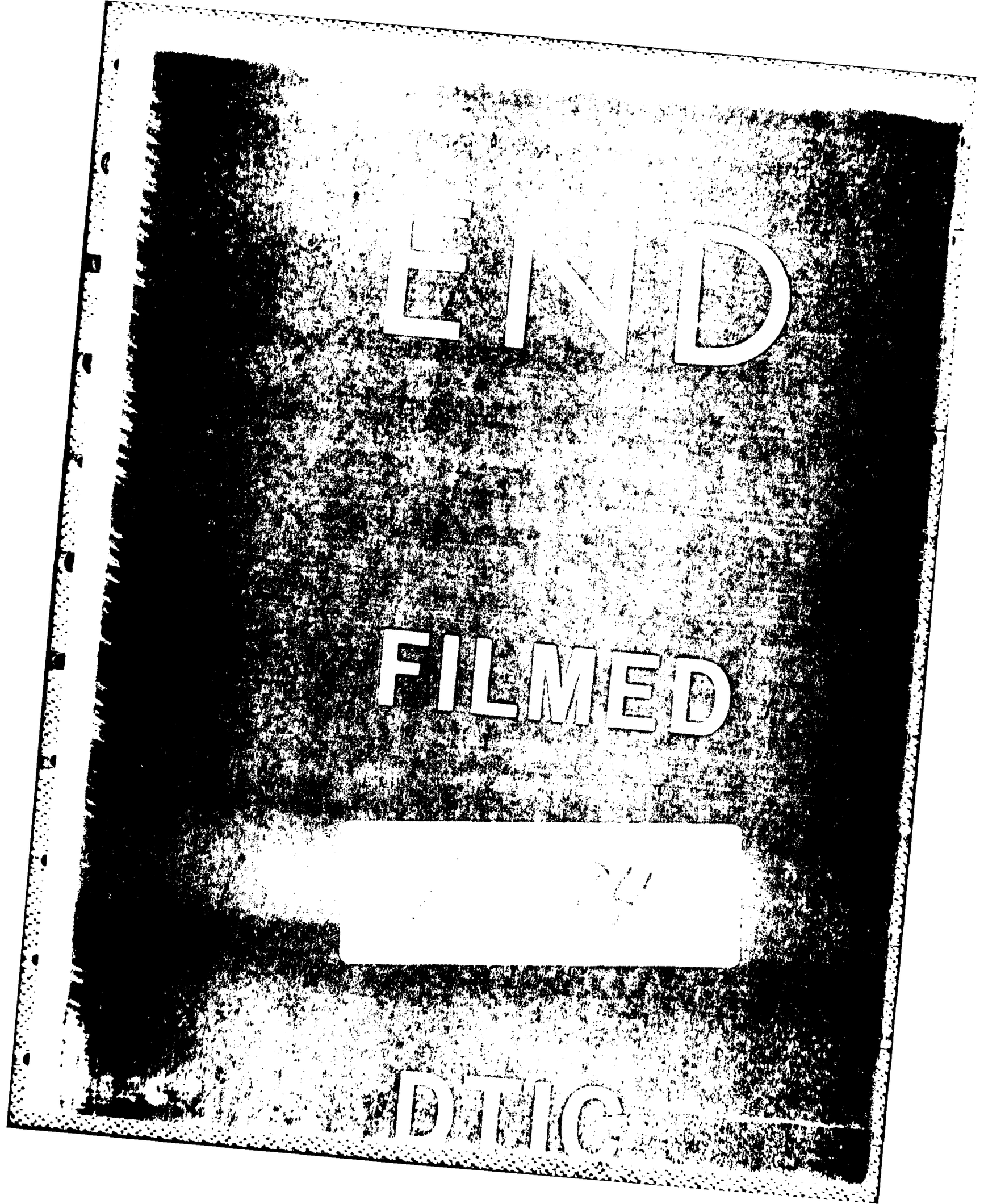
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