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NEBRASKA STATE HISTORICAL SOCIETY

A CULTURAL RESOURCES STUDY OF THE CROW BUTTE URANIUM PROSPECT DAWES COUNTY, NEBRASKA



By
John R. Bozell
Robert E. Pepperl

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ABSTRACT

This report covers cultural resource management investigations within the Crow Butte Uranium Prospect completed by the University of Nebraska - Lincoln (1982) and the Nebraska State Historical Society (1987). These efforts included background study and archival research as well as intensive field surveys required to assist Ferret Exploration in preparation of a commercial scale Nuclear Regulatory Commission application. The field study included an intensive (100% coverage) pedestrian survey of the Research and Development Pilot Plant study area (1982) and all remaining Commercial Size Area tracts (1987). The combined study unit encompasses approximately 1350 acres. Twenty-one newly recorded cultural resources were identified during the surveys including eight Native American sites, twelve Euroamerican locations and a buried bone deposit of uncertain cultural association. Six of these resources are considered potentially eligible for inclusion in the National Register of Historic Places due to archeological data recovery potential (25DW114, 25DW192, 25DW194 and 25DW198) and possible architectural interest (25DW112 and 25DW00-25). No further investigations are needed at this point, however, project planning should allow for professional evaluation if intact subsurface deposits are encountered anywhere in the project area. Furthermore, avoidance, monitoring or in field assessment will be required during future phases of the Crow Butte Project.

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INTRODUCTION

Identification and assessment of cultural resources within the Crow Butte In Situ Uranium Mining project have involved two separate field investigations. The initial Research and Development (R&D) scale study for the project was carried out by the University of Nebraska (UNL) during March and April 1982 under the direction of Robert E. Pepperl. A review of pertinent literature and records and an intensive (100% coverage) pedestrian survey of select project lands (Section 19, T31N, T51W) were completed to identify resources which may be affected by development of the R&D scale mining operation (Bozell and Pepperl 1982). An equally comprehensive background study and field reconnaissance of the remainder of the Commercial Size Area (CSA) was completed by the Nebraska State Historical Society during the period April-June, 1987, under the direction of John R. Bozell. A summary of the results and recommendations of both studies are presented here. All correspondence and field records are organized in a separate volume (Appendices A and B), which is available for professional review at the Nebraska State Historical Society.

PROJECT DESCRIPTION

The Crow Butte project involves in situ solution mining activities within a limited portion of the proposed uranium prospect permit area. Pilot plant mining operations are currently in progress. Immediate project planning concerns application for permits to initiate commercial scale production.

The Crow Butte CSA encompasses approximately 1350 acres located within a 4.5 mile long strip of land varying in width between 500 ft and .75 mile. The center of the project is located 2.5 miles east and 3.0 miles south of Crawford in extreme northwestern Nebraska (see Figure 1).

The White River flows 2 mi north of the area. Three southern tributaries of this river, including Squaw Creek, English Creek, and White Clay Creek, extend through the project area. The slopes of Crow Butte, a prominent local landmark visible throughout the project area, are situated 1.5 mi east of the project area. This feature and the Pine Ridge Escarpment are the dominant topographic elements of this area but are, for the most part, situated outside the permit boundary.

STUDY DEFINITION

This study will assist Resource Technologies Group and Ferret Exploration in complying with applicable Federal antiquities legislation and regulations requiring consideration of cultural resources during the planning process, particularly as relevant to permitting and licensing of the proposed mining operations by the U.S. Nuclear Regulatory Commission (NRC). Pertinent authorities include the National Historic Preservation Act of 1966 (P.L. 89-655), the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order 11593 dated May 1971.

The purpose of this work is to recover data necessary to determine the potential effects of the proposed undertaking on resources currently listed or potentially eligible for listing in the National Register of Historic Places. The study will provide recommendations concerning the scope of further study area investigations or site specific evaluations that may be required to facilitate this determination and, where possible, will suggest stipulations for avoidance of potentially qualified resources pending full assessment and determination of eligibility.

Pursuant to procedures defined for implementation of the above cited authorities (e.g. 36CFR Part 800, as amended October 1, 1986, and 36CFR Part 60), review of the study program and coordination with pertinent Federal agencies will be accomplished through consultation with the State Historic Preservation Officer (SHPO).

STUDY METHODS

Methods utilized in this study were developed in accordance with Federal standards (36CFR1210) for data recovery and reporting requirements published as proposed guidelines (36CFR Part 66) in the Federal Register (42,19,15374-5383), January 1977). Tasks completed in the work program are identified below.

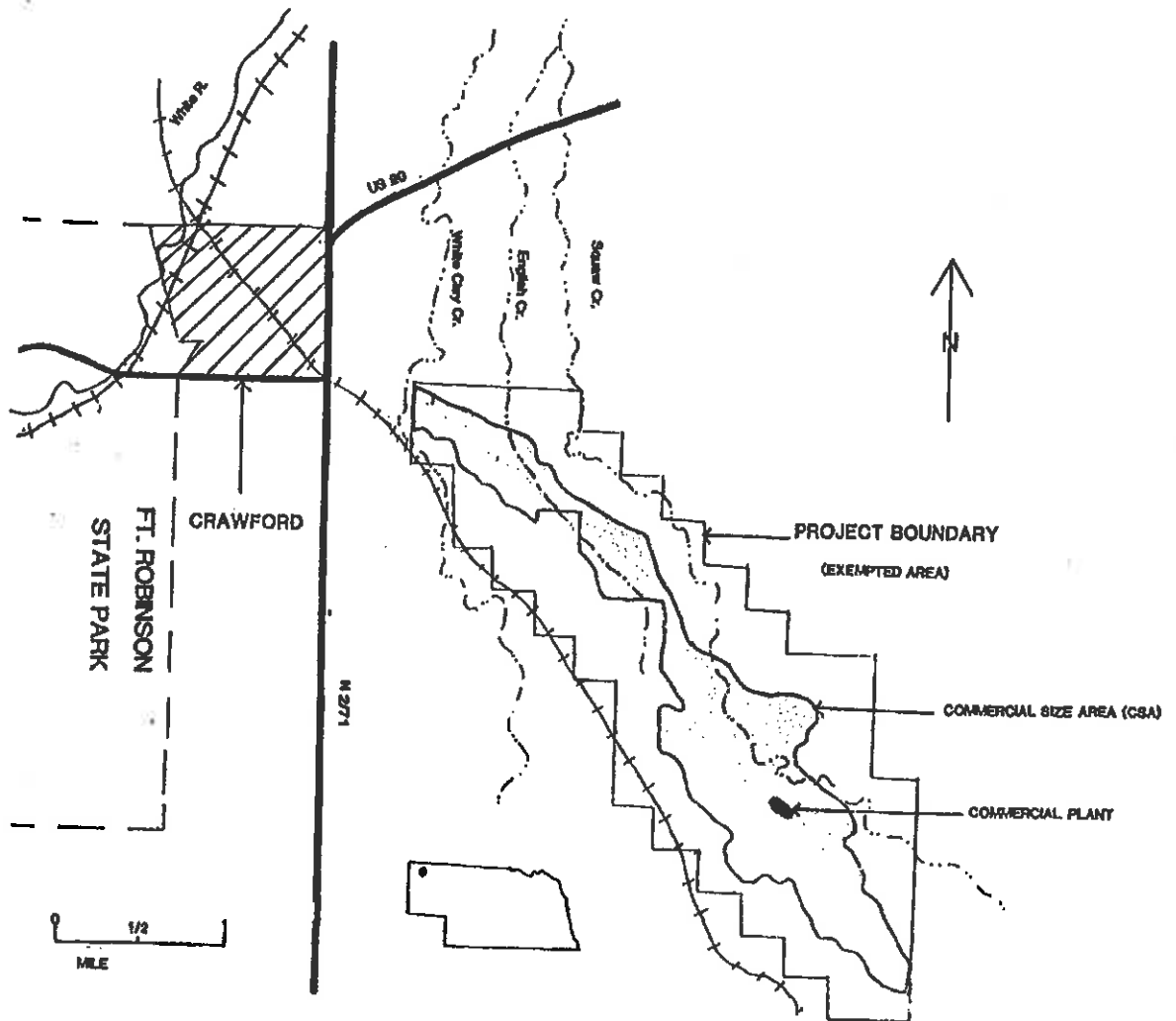


Figure 1. General project location; Crow Butte permit area, Dawes County, Nebraska

Literature Review. A thorough review of previous archeological, paleontological and historical studies relevant to the study area was conducted to identify known resources, particularly those within an 8km (5 mile) adjacent area boundary as defined in the 1983 Wyoming Fuel Company R&D application, and to assess the general cultural and scientific significance of the study region. The status of known resources with respect to National Register eligibilities was determined through consultation of listings published in the Federal Register.

This effort involved examination of select published references as well as other site records and materials on file at the Division of Archeological Research, the University of Nebraska libraries, the Midwest Archeological Center (National Park Service) and the Nebraska State Historical Society.

Archival Research. The reference resources noted above as well as records filed at the National Archives, Washington, and the Dawes County Courthouse, Chadron, were inspected for historic documentation of persons and events associated with project area locations. In addition to published histories and biographies, pertinent records include various land entry files such as the U.S. General Land Office Tract Book, homestead claimant and witness proof documents, and the county Numerical Index, as well as other county records and available historic map sources. This effort involved gathering of general and site specific information concerning the CSA. Beyond interpretive considerations this work provides a basis for assessing the importance of area resources to local, regional or national history.

Field Investigation. On-site efforts consisted of an intensive (100% coverage) pedestrian survey of the R&D study area in 1982 (640 acres) and other CSA lands in 1987 (ca. 700 acres). Limited subsurface testing and other documentation measures were implemented in order to facilitate preliminary resource assessment.

Resource Evaluation and Reporting. Analytic and reporting efforts necessary to the resource management objectives of this study included: 1) processing and descriptive analysis of recorded materials; 2) compilation of site specific descriptive data and field records; 3) preliminary assessment of identified resources with respect to site integrity and National Register criteria regarding cultural and scientific values; and 4) preparation of a report providing suggested stipulations for clearance of the entire CSA (including the R&D plant unit) for project development. Evaluative considerations and recommendations were accomplished through consultation with appropriate State (SHPD) and Federal (NRC) agencies.

BACKGROUND

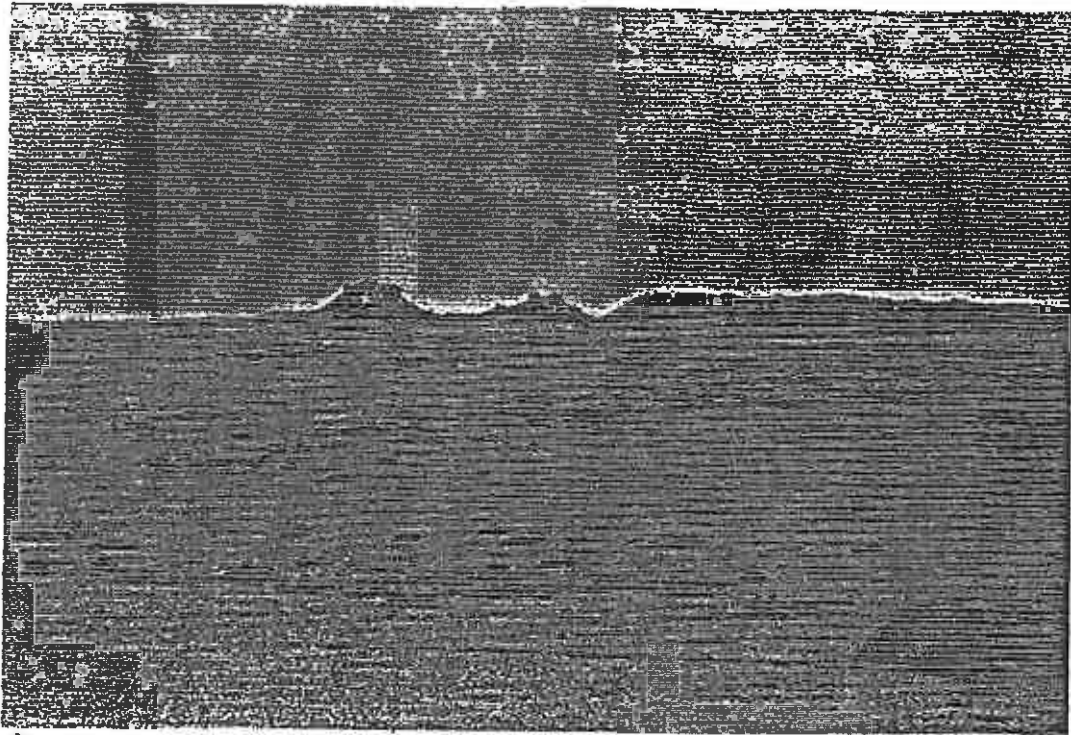
ENVIRONMENTAL SETTING

The general project area is located near the northern limits of the High Plains physiographic province and is situated in a region characterized by diverse topography. The climate is semiarid and vegetation is dominated by western yellow pine and a variety of short grass species.

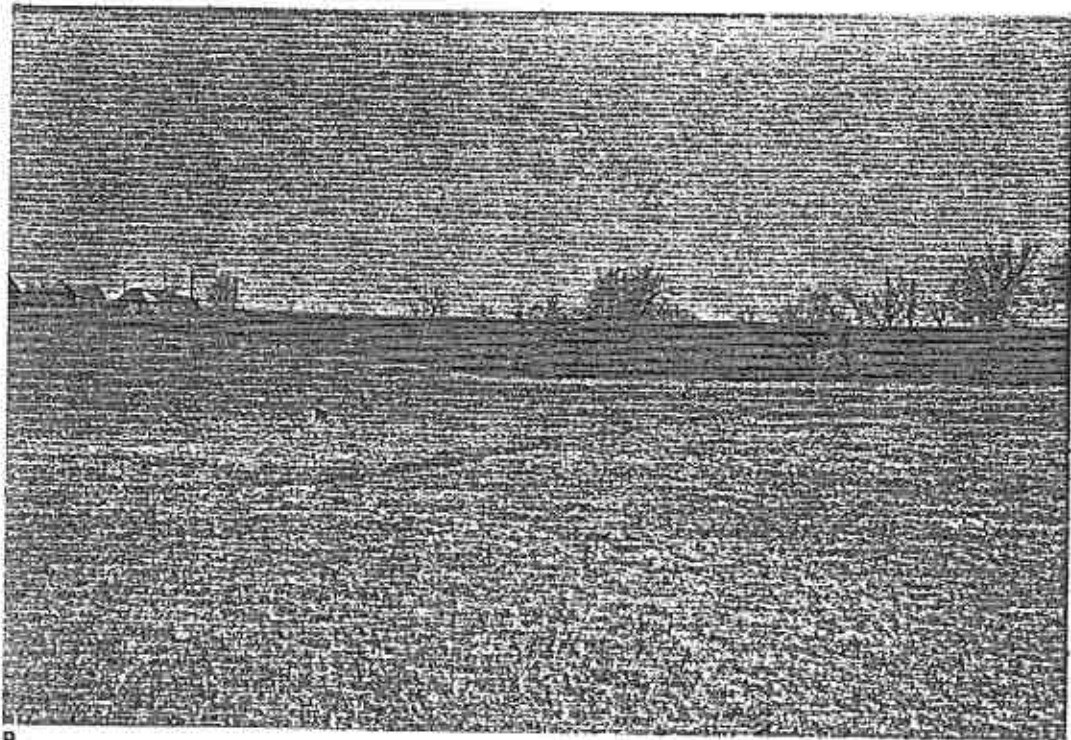
Physiography and Climate. The most prominent physiographic feature in the general project area is the Pine Ridge Escarpment, which Fenneman (1931:4,18) considers a distinct physiographic subunit marking the northern limits of the High Plains section of the Great Plains province. This heavily dissected escarpment occupies the northern half of Sioux and Dawes Counties and rises 300 to 900 ft above a broad area of low relief extending into South Dakota.

A six to eight mile wide band of sloping colluvial lands border the escarpment in most areas. The Crow Butte project area is generally comprised of these gentle slopes with elevations ranging from 3600 to 4400 ft amsl. The topography is generally represented by rolling hills and broad ridges interrupted by a series of permanent and intermittent stream valleys (see Figure 2).

Soils in the area are formed by several kinds of parent material including alluvium, colluvium, loess, and weathered siltstone and sandstone (Ragon et al. 1977). The study area is covered predominantly by loamy sandy soils formed in colluvium and in material weathered from sandstone. Bedrock directly underlying the study area includes the White River and Hemingford-Arikaree formations, both Tertiary in origin. The climate of the region is semiarid marked by rather low average annual precipitation (18.2 in) (Ragon et al. 1977:1). The growing season lasts approximately 130 days from



A



B

Figure 2. Photographs of general pilot plant survey area. A) general area looking toward east, Crow Butte (left) and Pine Ridge escarpment in background; B) general area looking north toward Squaw Creek, site [REDACTED] (flag) in foreground, site [REDACTED] in left background, site [REDACTED] in center background.

mid May to late September. Weather Bureau records from Fort Robinson for the period 1883-1960 indicate mean daily temperatures range from 23.7 degrees in January to 71 degrees in July and August; the wind is generally from the southwest during most of the year and changes to a northwesterly direction during the winter (Meston 1976:9).

Flora and Fauna. Native vegetation of the project area is dominated by a number of short grass species and a variety of sedges (Shelford 1963:344-347; Weaver 1965:155-161). Yucca and cactus are also common. Deciduous timber species characteristic of stream valleys include green ash, American elm, boxelder and hackberry. Western yellow pine is the dominant coniferous species present in the Pine Ridge Escarpment.

Dominant fauna of the northern temperate grasslands prior to the Historic period include bison, antelope, mule deer and a variety of lesser mammalian influents. Common avifauna include western meadowlark, longspur and sparrow. The lesser prairie chicken may have been locally dominant at one time (Shelford 1963:344-345).

Scenic and Natural Landmarks. The Pine Ridge region contains a variety of scenic and natural landmarks, several of which are visible or within close proximity to the proposed CSA. The most prominent are the extensive butte and ridge systems surrounding the general vicinity, particularly Crow Butte and Little Crow Butte directly to the east of the project boundary and Red Cloud Buttes ca. 5km to the northwest. Crow Butte, the site of a notorious conflict between the Crow and Brule Sioux Indians in 1848 (Hanson 1969; Hanson and Walters 1976:14-15), also served as a prominent landmark for early explorers, fur traders and settlers. Additional scenic features characterizing this area include the White River valley along the northern edge of the CSA, and the Pine Ridge Division of the Nebraska National Forest near the southern and eastern margins of the project.

CULTURAL SETTING

The general project area is situated in an archeologically intriguing vicinity that has been inhabited intermittently for the past 10,000 years by a variety of Native American populations and more recently by Euroamerican traders, settlers and rural food production communities.

Prehistoric Periods. The project area is situated near the edge of both the Central Plains and Northwestern Plains archeological subareas as defined by Wedel (1961, 1978), Frison (1978) and others.

Recognized cultural units in the general vicinity are: Paleo-Indian (10,000-5,000 B.C.), Archaic (5,000 B.C.-A.D. 1), Plains Woodland (250 B.C.-A.D. 950), and several Plains Village (A.D. 900-1850) taxa including Dismal River, Central Plains and Coalescent prehistoric cultural traditions and variants.

Paleo-Indian remains (projectiles) are commonly reported for this area, but only one site has been systematically investigated. The Hudson-Meng site, located approximately 40km (25 miles) northwest of the project along a tributary of the Cheyenne River in Sioux County, was subjected to testing and excavation by Chadron State College during the late 1960s through the late 1970s (Agenbroad 1978a; 1978b). These investigations have verified the presence of a Paleo-Indian bison kill and adjacent butchering floor, associated with over three hundred bison, and an abundance of artifactual material. The majority of diagnostic projectile points are assigned to the Alberta culture (Agenbroad 1978a:131). Radiocarbon assays place the occupation between 8900-9400 B.P.

Archaic sites in the region have not been intensively studied but surveys near the project area indicate the period is represented by small temporary camps (Meston 1976:43). It is noteworthy that much of the Archaic materials recorded by Meston and others (site files, NSHS) appear to be associated with the latter portion of the period. Early and Middle Archaic sites are rare in the immediate project vicinity, however notable McKean Complex (Middle Archaic) type sites are located in the Black Hills of northeastern Wyoming and the Scottsbluff area (Forbis et al. n.d., Mulley 1954, Greiser 1985, and Kornfield and Todd 1985). Plains Woodland (2,000-1,000 B.P.) manifestations are equally rare in the Pine Ridge area and are probably a reflection of limited use of the area for hunting or possibly frontier expansion by Central Plains Woodland peoples (Gill and Lewis 1977; Bozell n.d.).

Ceramic and chipped stone diagnostic artifacts indicate several Plains Village Tradition cultural taxa are represented including Dismal River Phase (Gunnerson 1960:226), Central Plains Tradition (Meston 1976:43-44) and Extended Coalescent Variant components (Ludwickson 1982; Ludwickson and Bozell n.d.). A variety of generalized nonceramic, late prehistoric sites are also recorded in the area (Bozell 1984; Carlson n.d.).

Historic Exploration and Settlement Periods. Historic accounts of Native American presence within the study area, including oral traditions and notes of explorers and military personnel, indicate that during recent times (ca. 1800-1877) this region was contained within various tribal hunting territories as well as territorial boundaries and reservations defined by Federal treaties. However, Native American occupation of relatively permanent or long-term settlements in the immediate area are not evident. Various nomadic groups such as the Sioux, Cheyenne, Arapahoe and Crow located largely in the Black Hills area to the north utilized the White River region and other areas extending south to the Platte River (see Hartley 1981 and Hanson 1983).

The principal Native American group occupying or utilizing the study area throughout at least much of the nineteenth century was the Teton Sioux tribe (or Lakota). The Teton represent the western division of the Dakota-speaking subgroup (Sioux) of the Siouan linguistic family and include the Brule and Oglala bands (see e.g., Voeglin 1941). The Teton gradually moved westward from their homelands in Minnesota during the eighteenth century (Hyde 1937) and various sources indicate their territory extended to the headwaters of the White River by the early nineteenth century (see e.g., Lewis and Clark 1814:1,714; Thwaites 1905:VI,98-99).

Beginning in 1851, Federal treaties with the various Plains tribes significantly reduced the "Indian Territory" west of the Missouri River but the Sioux retained control of the White River region (Royce 1899:786-787). By 1868 further land cessions confined the Sioux to a permanent Dakota reservation extending along the southern edge of present South Dakota between the Missouri River and the Black Hills with rights only to hunt within their former territories to the south (Royce 1899:848-849). The Oglala and Brule, along with other groups were issued supplies at the Red Cloud Agency (1873-1877) and Spotted Tail (Whetstone Agency (1872-1877) located respectively west and east of the present project area but outside the reservation proper. The locations of camps or other occupancy of these groups within the immediate project vicinity are unclear.

Removal of the Indian populations to reservation lands to the north in 1877 opened the area to Euroamerican settlement and large cattle raising operations entered the vicinity as early as 1878 (Grange 1978:225).

The influx of Euroamerican influence within the project area discussed here concerns various episodes of fur trade, military installations and frontier settlement largely involving an 80 year period between the mid nineteenth and early twentieth centuries. Earlier entries into the Central and Northern Plains by French, English and American explorers were essentially restricted to the Missouri and Platte River drainages. As part of the Missouri Company's efforts to open the upper Missouri River to commerce, James MacKay traveled up the Niobrara River in 1796 but turned south near present Valentine without reaching the general project vicinity (see Nasaatir 1952:93-108; Diller 1955).

The fur trade extended into Dawes County during the 1830s and two trading posts were established south of Chadron in the 1840s (Hanson and Walters 1976:6). These include Chartran's Post (1841-1845) and Bordeaux's Post (1841-1876). The fur trade in western Nebraska ceased following the termination of the Bordeaux Post.

In 1855, a military exploration under the leadership of General W.S. Harney entered the project vicinity by traveling down the White River through South Dakota and into the Nebraska panhandle (Warren 1856). The first permanent military installation in the area was Camp Robinson, established in 1874 near the Red Cloud Agency to control Indian opposition. The installation was renamed Fort Robinson in 1878 and remained an important post for the monitoring of Indians and frontier settlement. The fort was utilized for various military purposes through 1948 (Grange 1978).

Settlement of Dawes County began in 1885 under the provision of the Preemption Act of 1841 and the Homestead Act of 1861 and was intensified with arrival of the railroad in 1886. Most of the land was settled during the 1880s, but adverse environmental and economic conditions, such as the drought of the

1890s, forced three out of five people to leave their claim after several years (Ragon et al. 1977:1). The town of Chadron was formed in 1885 and Dawes County and Crawford were established the following year (Anonymous 1961; Pinny 1985).

SUMMARY AND ASSESSMENT OF PREVIOUS INVESTIGATIONS

The Pine Ridge region including the White River drainage of northwest Nebraska has been the subject of occasional small scale archeological, paleontological and historical studies for a number of years. Interest in the paleontological remains of the area extends to the late nineteenth century. Archeological sites are known but for the most part intensive survey and excavation efforts have not been initiated within the general area until recently in conjunction with the present project and highway archeology efforts (Ludwickson and Bozell n.d.). Attention to historic resources has been directed largely toward the late nineteenth century military and reservation activities associated with sites at the west edge of the study area. In each case, previous work provides a general view of the potential productivity of this region for study but only a limited range of resource types and contexts have been considered. Systematic investigations with the present project unit have not been previously initiated.

Paleontological Studies. Surficial geology and paleontology of northwest Nebraska has been studied by numerous workers beginning with O.C. Marsh in the 1870s (see Schuchert and Levene 1940) and continuing to the present (Schultz and Stout 1955; Martin 1973). Most of these efforts have concentrated on select localities, primarily within the "Little Badlands" area approximately 24km (15 mi) northwest of the Crow Butte project (see Darton 1903; Schultz and Stout 1955; Wood 1969; Singlar and Picard 1980). Limited stratigraphic work and fossil collecting have been carried out in the Pine Ridge Escarpment (see Wellman 1964; Martin 1973) but have not included systematic inspection of exposures located within the Crow Butte project along the eastern and southern margins of the permit area.

Bedrock exposures in the immediate Crawford vicinity are limited to the late Oligocene - early Miocene Arikaree group (Gering, Monroe Creek and Harrison Formations of Lugin, 1939) which have produced important vertebrate fossils in western Nebraska and South Dakota (Macdonald 1970; Martin 1973). This general region is the single source of early Miocene exposures accessible to study east of the Rocky Mountain range.

The uppermost unit of the Arikaree group, the Harrison Formation, is exposed at the top of the buttes within the Pine Ridge Escarpment. The medial unit, the Monroe Creek Formation, comprises the majority of the bluff exposures and is clearly represented within the project. The Gering Formation (known as the Sharps Formation in South Dakota), and possibly a portion of the upper Oligocene Brule Formation, may be accessible at the base of higher sections.

Type sections of these formation in Nebraska are from near Harrison located west of the study area. Exposures of these strata are known to occur in the Crawford area, but with the exception of work in the Fort Robinson vicinity, published stratigraphic sections are not available for the present survey unit.

Fossil taxa expected within strata exposed in the project area include 131 faunas known from rocks of the same age at localities in the surrounding area (see e.g., MacDonald 1970). Fish bearing strata are rare but occasional thin shale lenses representing lake bed deposits can be expected. Few birds are known but numerous lizards and a broad range of mammals are recorded. The only North American early Miocene primate (*Ekgmowechashala philotau*) is contained within the Gering Formation. Other mammalian faunas of the Arikaree group include marsupials (mini possums); small insectivores and rodents; various carnivores including the last occurrence of archaic canine as well as ancestral dogs and also sabre cats; and finally a variety of ungulates, principally oreodonts but including tapirs, horses, rhinos, a giant hog (*Entelodontidae*, indet.), camels, and small "deer".

University of Nebraska State Museum (UNSM) collecting localities near the Crow Butte project include four Arikaree sites located largely within escarpment areas beyond the permit boundary.

UNSM DW-108 (Chadron Roadside Locality) is located approximately 27 km (17 mi) northeast of the project and contains fossils of the Gering Formation. This

site was discovered by Larry D. Martin and Hal McGrew in 1970 (see Martin 1973).

UNSM SX-22 (unnamed) is situated directly northwest of the project, approximately 20 km (12 miles) beyond the permit boundary, and is also a Gering Formation locality but includes Oligocene units (see Martin 1973).

Cochran Wayside Area Locality is located just southwest of the proposed permit area within the escarpment. Three significant collections have been made from which 10 species of fossil vertebrates have been identified.

Coffin Butte Locality is situated in the Fort Robinson area west of the Crow Butte project. More than 20 scattered fossil finds representing early Miocene mammals have been recorded.

Cultural Resource Investigations. Early archeological reconnaissance in the region was largely an unprogrammed effort associated with paleontological research carried out by the University of Nebraska State Museum. Barbour identified weathered features (hearths) as early as 1891 in the general vicinity (Barbour and Schultz 1936:444). Various Paleo-Indian projectiles, particularly Yuma and Folsom types, were collected during preliminary paleontological and geological reconnaissance of the area (Barbour and Schultz, 1936:432, 444). The Nebraska State Historical Society also conducted limited pre-World War II reconnaissance of the area including excavation of a Plains Village Pattern earthlodge south of Chadron.

More recent reconnaissance of the region has been conducted by the Nebraska State Historical Society from the late 1950's through the present. The bulk of this work has been limited to site inspections and testing largely associated with highway salvage efforts, but resulting in identification of numerous archeological localities in both Sioux and Dawes Counties (see Grange 1964, 1978; Bozell 1984; Carlson n.d.). In 1984, one Coalescent hunting camp was excavated and several other prehistoric components tested in response to reconstruction of U.S. Highway 20 between Ft. Robinson and Crawford (Ludwickson and Bozell n.d.).

Portions of the White River and Hat Creek drainage systems within the Oglala National Grassland Preserve north of the Crow Butte project were systematically surveyed in 1972 by the University of Nebraska, Department of Anthropology. Intensive surface inspection along segments of the creek terraces was limited to the upper reaches of Whitehead Creek and entire lengths of Big Cottonwood and Sand Creeks, all in northern Sioux and Dawes counties (Meston 1976). These survey units extended to within 8-16km (5-15mi) north of the Crow Butte project permit boundary. More than 30 Native American sites were identified (Meston 1977:62). Diagnostic cultural materials indicate occupation of the region during the Paleo-Indian, Archaic, Woodland, Plains Village and Historic periods (Meston 1976:42).

Additional surveys were initiated in the Hat Creek and Whitehead Creek drainage during the early 1970's by Chadron State College under contract to the U.S. Forest Service. These surveys encompassed lands within the Oglala National Grasslands 20-30 miles northwest of the CSA and resulted in identification of well over 100 sites ranging in age from Paleo-Indian to Historic Sioux (Agenbroad 1979; Cassells and Agenbroad 1981). Chadron State College excavated a major portion of the Hudson-Meng site, a Paleo-Indian bison kill in the Hat Creek drainage (Agenbroad 1978).

In sum, reconnaissance survey and limited testing have been conducted in the immediate vicinity for over 50 years. These efforts were largely oriented toward documentation of select cultural manifestations. The manner in which these recorded resources are representative of the range of cultural variability within the region cannot presently be defined. Sustained, systematic investigations necessary to this evaluation have not been initiated. However, through previous efforts, it is evident that the northwestern Nebraska region has supported human occupation throughout the range of recognized prehistoric and historic periods.

Prior to 1987, 65 archeological sites and seven architectural sites had been recorded within the 8km (5mi) radius of the Crow Butte project. Seven were discovered as a result of the 1982 Crow Butte Project. All are summarized in Table 1 and indicated in relationship to the Pilot Plant (Section 19, T31N, R51W).

National Register Properties. A consultation of the most recent full listing of properties on the National Register of Historic Places (Federal Register 44<26>, Part II, 1979) and all subsequent annual updates indicate seven sites in Dawes and Sioux Counties are on the Register, but none are located within proposed project boundaries. Three registered sites are within the adjacent area, including Fort Robinson and the Red Cloud Agency which have been designated as National Historic Landmarks and the Cooperative Block Building in Crawford (see Table 1).

The final listing of the National Registry of Natural Landmarks was also consulted (Federal Register 1977, 37<20>:1496-1499). A single Nebraska resource, Fontanelle Forest in Sarpy County at the eastern margin of Nebraska, is listed.

REGIONAL NATURAL AND HISTORICAL SIGNIFICANCE

Extant information, as discussed above, offers ample evidence that the Nebraska panhandle segment of the High Plains physiographic unit contains a variety of natural and historical resources characteristically limited to this region that could potentially provide unique research opportunities from several perspectives. The Pine Ridge region and the adjacent White River drainage system include a number of widely recognized paleontological localities as well as prominent natural landmarks. In addition, the region contains key historic resources associated with military and Native American reservation periods (i.e., Fort Robinson and the Red Cloud and Spotted Tail Agencies). Recent archeological investigations in the High Plains suggest the prehistory of the region is characterized by a high degree of cultural homogeneity within a broad temporal sequence (Frison 1978:2-3). This portion of the High Plains also provides a number of lithic source localities including the Chadron formation outcroppings, Little Badlands and the Spanish Diggings quarries (Wyoming) that could influence the range of Native American site types present within the study area. Although general categories of potentially significant natural and scientific values have been identified, a systematic record of the full range of resource variability has not been compiled. This situation is particularly true of paleontological and prehistoric cultural resources. Implementation of a regional scale systematic sampling program would be required to fully address issues relevant to prehistoric, historic and natural significance and to develop an appropriate regional preservation plan.

ARCHIVAL RESEARCH

A preliminary search of historical documents was completed prior to initiation of the 1982 and 1987 field investigations to generate expectations concerning the potential presence of historic sites within the study area and to develop a basis for evaluating identified resources. Work involving local sources was carried out during the field visits. Following the on-site inspection, additional records were researched for particular locations within the study unit to obtain data concerning individuals, construction dates, periods of occupation and other information relevant to identification of recorded resources (see Bozell and Pepperl 1982:20).

RURAL DOMESTIC SETTLEMENT

The survey unit encompasses 16 full or partial one-quarter sections. Encouraged by construction of the Chicago, Burlington and Quincy Railroad through the area in 1886, most of these were initially settled as entire 160 acre tracts, although four were segmented into smaller units (Table 2). The majority of individuals claimed under the Homestead (1862) or Preemption (1841) Acts. Two Timber Culture Act (1873) claims and one railroad claim are also recorded.

The earliest homestead in the area appears to be settled by James English, a native of Ireland who moved to the area in 1879 from a freighting career in the Rocky Mountains. English purchased a "squatters claim" for \$100.00 in portions of the SE 1/4 of Section 13 (T31N R52W) and the SW 1/4 of Section 18 (T31N R51W) in 1880 (Anonymous 1961:120; Pinny 1984: 120). This claim is depicted as triangular shaped and includes a residence, outside the CSA, in Section 13 on the 1881 General Land Office plat map. English formally filed a Preemption claim for only the Section 13 tract in 1886. Remaining initial claims were filed between 1885 and 1893, but the majority were maintained by original settlers for less than ten years. Within 20 years all of Section 18 and a major portion of Section 19 were owned by two individuals, Eugene Stetson and Henry Daniels. Other long-term holdings in the study area involve

Table 1. Summary of previously recorded cultural resources within an 8km (5mi) radius of the R&D plant location; Crow Butte Project, Dawes County, Nebraska.

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References	Distance from Pilot Plant
ARCHEOLOGICAL			
25DW17 (Slaughter- house Creek)	lithic, ceramic, bone, features; Native American: Coalescent	1982 survey (NSHS); 1984 excavation (NSHS): Ludwickson and Bozell (n.d.)	4.5 mi NW
25DW18	lithic; Native American: unassigned	1982 survey (NSHS)	4.5 mi NW
25DW19	lithic and bone; Native American: unassigned	1982 survey and surface collection (NSHS); 1984 testing (NSHS): Ludwickson and Bozell (n.d.)	4.5 mi NW
25DW20	lithic and bone; Native American: unassigned	1982 and 1984 survey and surface collection (NSHS): Ludwickson and Bozell (n.d.)	5.5 mi NW
25DW21	lithic and bone; Native American: Late Archaic or Woodland	1982 survey (NSHS); 1984 testing (NSHS): Ludwickson and Bozell (n.d.)	6.0 mi NW
25DW51/55 (Ft. Robinson)	US military post guardhouse, ca. 1874	1966 excavation (NSHS): Grange (1978)	6.5 mi W
25DW54 (Red Cloud Agency)	Oglala Sioux reservation agency post, ca 1873-1878	1958 survey, excavation (NSHS)	6.5 mi NW
25DW59	lithic; Native American: Archaic or Woodland	1956, 1982 survey (NSHS); 1984 testing: Ludwickson and Bozell (n.d.)	5.5 mi NW
25DW60	lithic and ceramic; Native American: Plains Village and possible Historic Nomad	1956, 1982 survey (NSHS); 1985 testing: Ludwickson and Bozell (n.d.)	4.5 mi NW
25DW73	bone; Native American: unassigned	1959 survey and testing (NSHS)	4.0 mi N
25DW74 (Franev)	lithic debris, tools (end scrapers), hearth; Native American: pre-ceramic	1956 survey and surface collection (NSHS): Grange (1964)	5.0 mi NW

1 NSHS = Nebraska State Historical Society; CSC = Chadron State College; UNL = University of Nebraska-Lincoln

Table 1. (continued)

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References	Distance from Pilot Plant
25DW77	lithic; Native American: unassigned	1961 survey (NSHS)	9.0 mi N
25DW78	lithic; Native American: unassigned	1961 survey (NSHS)	9.0 mi N
25DW80	lithic; Native American: unassigned	1961 survey (NSHS)	8.0 mi N
25DW81	lithic, bone, glass, burned earth; Native American: unassigned	1961 survey (NSHS)	8.5 mi N
25DW84	lithic; Native American: unassigned	1962 survey (NSHS)	10.0 mi N
25DW87	lithic and bone; Native American: unassigned	1964 survey (NSHS)	8.5 mi N
25DW88	Historic Dakota burial	1969 survey (NSHS)	4.5 mi N
25DW89	Euroamerican homestead(?)	1972 recorded (NSHS)	1.5 mi NW
25DW90 (Mayfield)	Euroamerican homestead(?)	1972 recorded (NSHS)	6.0 mi N
25DW105 (OK Ranch)	lithic, ceramic, bone; Native American: Upper Republican/ Dismal River (Agenbroad 1976); Extended Coalescent (Ludwickson 1982)	1976 survey (CSC); 1982 survey (NSHS)	6.5 mi N
25DW111 (Harvey Homestead ?)	glass, ceramic, metal, bone debris; Euroamerican; late 19th century (?)	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW112/00-17 (Wulf/Daniels Place)	abandoned farmstead (house, depression, 11 outbuildings); Euro- american: late 19th century(?)	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW113 (Flandt Homestead)	glass, ceramic, metal, wood, leather, debris; 4 depressions; Euroamerican; late 19th century	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area

1 NSHS = Nebraska State Historical Society; CSC = Chadron State College; UNL = University of Nebraska-Lincoln

Table 1. (continued)

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References ¹	Distance from Pilot Plant.
25DW114	lithic, bone; Native American: Middle and Late Archaic and possible other pre-Plains Village period components	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW115 (School No. 25)	glass, brick debris; former location of First Presbyterian Church and public school; Euro- american: late 19th century	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW116	lithic; Native American: unassigned	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW117 (Fleming Homestead ?)	windmill, cistern, stock tank complex; Euroamerican (possible association with Fleming Homestead): late 19th century	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW128	historic trash dump (Ft. Robinson period)	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW129	historic trash dump (Ft. Robinson period)	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW130	historic trash dump (Ft. Robinson period)	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW131	historic trash dump (Ft. Robinson period)	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW132	lithic, ceramic, bone, glass, metal; Native American: prehistoric (Coalescent?) and early historic	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW133	lithic, bone, glass bead; Native American: unknown prehistoric and/or early historic	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW134	lithic, bone, metal; Native American: unknown prehistoric	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW

¹ NSHS = Nebraska State Historical Society; CSC = Chadron State College; UNL = University of Nebraska-Lincoln

Table 1. (continued)

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References ¹	Distance from Pilot Plant
25DW135	lithic, bone, metal; Native American: historic (possibly one of Red Cloud's camps) and possible unknown prehistoric	1982 survey (NSHS); Carlson (n.d.)	4.5 mi NW
25DW136	lithic, bone, glass; Native American Plains Archaic and possible early historic	1982 survey (NSHS); Carlson (n.d.)	4.5 mi NW
25DW137	lithic, bone, metal; Native American: unknown prehistoric and/or early historic	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW140	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	6.0 mi W
25DW141	lithic, ceramic: Native American: late prehistoric	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW142	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	10.0 mi N
25DW143	Sidney-Blackhills stage station (Little Cottonwood) and Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	6.0 mi SE
25DW144	lithic; Native American: Paleo-Indian(?) and/or unknown prehistoric	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW145	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	3.0 mi SW
25DW146/00-18	ceramics, glass, metal, bone, stone Euroamerican: possible station associated with Red Cloud Agency (1873-1877), and unknown prehistoric	1982 survey (NSHS); Carlson (n.d.)	
25DW147	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW148	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW

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Table 1. (continued)

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References ¹	Distance from Pilot Plant
25DW149	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW150	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW151	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25DW152	Sidney-Black Hills stage station (White Clay Creek)	1982 survey (NSHS); Carlson (n.d.)	4.0 mi S
25DW153	lithic, bone; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	6.5 mi W
25DW154	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	2.5 mi W
25DW501	flour mill; Euroamerican: 19th century	1982 survey (NSHS); Carlson (n.d.)	5.0 mi NW
25SX126 (Rau)	lithic, ceramic, refuse deposit and possible house depression; Native American: late prehistoric	1982 survey (NSHS); Carlson (n.d.)	10.0 mi NW
25SX164	historic trash dump; Euroamerican: Ft. Robinson period	1982 survey (NSHS); Carlson (n.d.)	7.0 mi W
25SX165	lithic, bone; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	7.0 mi W
25SX168	lithic, bone; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	8.5 mi W
25SX173	metal, glass, lithic; Euro- american small military outpost related to Ft. Robinson	1982 survey (NSHS); Carlson (n.d.)	8.5 mi NW
25SX174	lithic, ceramic, metal; Native American: early historic and possible unknown prehistoric	1982 survey (NSHS); Carlson (n.d.)	8.5 mi NW
25SX178	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	7.0 mi NW

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Table 1. (continued)

Site Number (Name)	Site Description and Cultural Affiliation	Extent of Investigations and Published References ¹	Distance from Pilot Plant
25SX179	lithic; Native American: unassigned	1982 survey (NSHS); Carlson (n.d.)	7.0 mi NW
25SX451	lithic, bone; Native American: unassigned	1984 survey (NSHS); Bozell (1984)	8.0 mi NW
25SX452	lithic, ceramic; Native American: probable Plains Village	1984 survey (NSHS); Bozell (1984)	8.5 mi NW
25SX457	windmill, stock tank; Euroamerican: 20th century	1984 survey (NSHS); Bozell (1984).	9.0 mi NW
ARCHITECTURAL			
25DW004(1-43)	Crawford, Nebraska; Euroamerican: 1886 to present	? survey (NSHS)	5.0 mi NW
25DW00-5	Belmont RR tunnel; Euroamerican: 19??	? survey (NSHS)	6.5 mi S
25DW00-17 (25DW112)	farmstead; Euroamerican: 19th - 20th century	1982 survey (UNL); Bozell and Pepperl (1982)	within pilot plant study area
25DW00-18 (25DW146)	log building; Euroamerican: probable association with Red Cloud Agency	1982 survey (NSHS)	3.0 mi SW
25DW00-19	log house; Euroamerican: late 19th century	? survey (NSHS)	10.0 mi NW
25DW00-20	covered log house; Euroamerican: late 19th century	? survey (NSHS)	9.0 mi NW
25SX00-27	1 1/2 story log house; Euroamerican: late 19th century	? survey (NSHS)	10.0 mi NW

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Table 2. Summary of initial Euroamerican settlement within the CSA; Crow Butte Project, Dawes County, Nebraska

Claimant	Claim Year	Patent Year	Legal Description	Claim Type	Acres	Euroamerican Sites within Tract
Luther Keenan	1887	1888	SE 1/4 S11 T31N R52W	homestead	160	25DW199
Malinda A. Cooper	1889	1891	NE 1/4 S11 T31N R52W	homestead	160	
Charles L. Cutler	1885	1889	SW 1/4 S12 T31N R52W	timber	160	
Daniel Clark	1887	--	S 1/2 SE 1/4 S12 T31N R52W	preemption	80	
Josephine Bohers	1887	1894	NE 1/4 SE 1/4 S12 T31N R52W	homestead	40	
David Clark	1887	--	N 1/2 NE 1/4 S 13 T31N R52W	preemption	80	
James English	1886	1890	S 1/2 NE 1/4 + N 1/2 SE 1/4 S13 T31N R52W	preemption	160	
Sanford West	1891	1892	W 1/2 NW 1/4 + W 1/2 SW 1/4 S13 T31N R52W	homestead	160	
Preston C. Woods	1885	1894	E 1/2 NW 1/4 + E 1/2 SW 1/4 S13 T31N R52W	timber	160	
William Hamlin	1888	1891 ?	NW 1/4 + SW 1/4 + SE 1/4 of SW 1/4 S20 T31N R51W	homestead	120	25DW00-26
Eugene Stetson	1887	1890 ?	SW 1/4 S18 T31N R51W	preemption	160	25DW00-25, 25DW193
Winfield A. Campbell	1887	--	NW 1/4 S18 T31N R51W	preemption	160	
Frank Fleming	1886	1890	NW 1/4 S19 T31N R51W	preemption	160	25DW117 (?)
Hans Wulf	1889	1891	NE 1/4 S19 T31N R51W	preemption	160	25DW112/00-17
Cyrenius Fiandt	1886	1891	SE 1/4 S19 T31N R51W	preemption	160	25DW113
J.J. Harvey	1888	1891	SW 1/4 S19 T31N R51W	preemption	160	25DW111
John Dougherty	1893	1899	W 1/2 NW 1/4 S29 T31N R51W	homestead ?	80	25DW191
William Hamlin (?)	1886	1886	SW 1/4 S29 T31N R51W	homestead	160	
Elisha Stetson	1893	1896	NE 1/4 S30 T31N R51W	homestead ?	160	25DW192
Bennet B. Warford	1888	--	NW 1/4 S 30 T31N R51W	railroad	160	

the English, Gibbons and McDowell families. Much of the remainder of the CSA tracts were the subject of numerous short-term transactions, often involving nonresidential interests.

The field investigation resulted in identification of eight sites potentially associated with early settlement episodes of the project area. Further details concerning initial claimants and select subsequent landowners as well as possible buildings constructed on the claims are provided in the "Site Descriptions" section of this report (see also Bozell and Pepperl 1982:21-23). Relevant site locations are: 25DW111, 25DW112, 25DW113, 25DW117, 25DW191, 25DW192, 25DW00-25 and 25DW00-26.

There existed an overall discrepancy between historic map data and archival or field study data. Many of the archivally predicted or identified homestead sites do not appear on historic map sources, suggesting many claims were abandoned and structures removed prior to 1913 when the first reliable map depicting residence locations was issued. A series of dry years beginning in 1887 forced many people to leave large areas of the county abandoned. This trend continued up to the turn of the century. By 1910 the county population had decreased from its mid-1880s position (Burn et al. 1917:11). Previous rural settlement on project lands was likely of greater density than indicated by historic map information. During the 1982 field investigation, 34 historic resource locations were noted within the CSA and adjoining lands. Only 24 of these are represented on available maps.

RURAL INSTITUTIONS AND COMMERCIAL CONCERNS

Evidence of rural community facilities previously located within the study area consists of two public schools, an icehouse, a cemetery, a possible sawmill and a blacksmith shop.

Superintendent of Schools records on file at the county courthouse in Chadron indicate that Section 19 was once within former School District No. 25 and lands directly north (Section 18) were at one time within District No. 9.

District No. 25 was formed 15 February 1886 and a schoolhouse was apparently established in the extreme northeast corner of Section 19 (see 25DW115). District No. 9 was formed 3 October 1885. A former schoolhouse location is in the extreme southwest corner of Section 18, 1 mi due west of School No. 25 (25DW193). The two districts were consolidated in 1903 and dissolved in 1976. The consolidated district occupied the Section 18 tract.

The presumed original site (25DW115) of the District No. 25 schoolhouse was also the location of the First Presbyterian Church of Crow Butte which was constructed ca. 1896 on an acre of land purchased for \$25.00 from A.E. Hobson (Numerical Index). According to Mr. Harold Gibbons, who presently farms this tract, the church building was later moved several times eventually arriving at its present location at the Wulf/Daniels farmstead (see 25DW112).

The relationships between the school and church usage of this site, or the date when the building ceased functioning for either purpose is unclear. The Standard Atlas of Dawes County (1913), the earliest map source for this area showing structural locations, labels both of the two sites in Section 18 (25DW193) and Section 19 (25DW115) as schools. These two structure locations are also plotted on the U.S.D.A. 1917 series soil survey map (Burn et al. 1917), and both appear to be represented by church symbols. However, only the site in Section 18 is shown on the 1939 Department of Roads highway map suggesting that the church (or former school building) located in Section 19 (25DW115) was moved sometime between 1915 and 1937.

The Statson family apparently managed commercial sawmill and threshing operations in the vicinity (Anonymous 1961:71). Precise locations for these activities were not identified. A current landowner in the area, Frank Ehlers, believes Eugene Statson had a blacksmith shop at site 25DW191, although this could not be verified. Frank Fleming also notes operating a blacksmith shop on his claim (see site 25DW117). Finally a commercial icehouse was established in the early 20th century (25DW199) which serviced both Crawford and the local rural community (Mrs. Lorentz Raben:personal communication).

In summary, the study area apparently contained a sufficient population to sustain a church and school during the late nineteenth century and maintained a school until 1976. An icehouse and possible other commercial operations

were established in the area during the late 19th - early 20th century. Archival records concerning the Crow Butte Cemetery (1888-1971) located at the western edge of the survey unit were not investigated. The cemetery contains at least 16 tombstones which date from 1888-1971.

FIELD INVESTIGATIONS

An in-field inspection of the R&D study area (Section 19, T31N, R51W) was conducted during the period 29 March - 2 April 1982, by an experienced four-member UNL field crew. Additional procedures carried out during this effort included verification of architectural structures visible from roadways throughout the CSA, coordination with Wyoming Fuel Company (WFC) field personnel and landowners, and historic archival research for Section 19 conducted at the Dawes County Courthouse.

The remaining CSA land in portions of Sections 18, 20, 29 and 30 (T31N R51W) and Sections 11, 12 and 13 (T31N R52W) was surveyed by a 3 member NSHS crew during the period 27-30 April 1987. Additional archival research was completed at this time.

SURVEY PROCEDURES

All lands within the project area were subjected to intensive (100%) pedestrian surface survey. The investigation procedure consisted of walking in a zigzag reconnaissance pattern at closely spaced intervals, normally 20-30m. Intervals were modified as necessary to meet varying terrain and vegetational conditions. Inspection of all exposed areas, such as animal burrows, exploratory drill pads and eroded surfaces was completed. An intensive effort was made to examine all cutbanks exposed along creeks and adjacent intermittent tributaries for buried cultural deposits.

All cultural sites identified during the surveys were plotted on U.S.G.S. 7.5 minute topographic maps (Crow Butte and Crawford quadrangles). A detailed examination of the immediate area of each located cultural resource was performed to identify horizontal limits and composition of surface materials. A preliminary field inventory of observed materials and sketch map of the immediate site vicinity were also made at this time. In addition, photographic documentation of all site locations was completed. More extensive field documentation, such as: instrument mapping (transit), test unit excavation, collection of select surface specimens, and cutbank profiling, was carried out during further investigations of potentially significant sites.

Surface visibility varied within the study area. Much of the tract surface was covered with short bunch grass offering fair visibility. Roughly 300 acres was cultivated (winter wheat) providing good to excellent visibility. About 100 acres in the extreme southeastern corner of the survey area are sparsely covered with evergreen forest where visibility was fair. The surface of the wooded creek bottomland was generally obscured, however creek bank exposures facilitated subsurface observations throughout this area (see Figure 3).

SURVEY RESULTS

Approximately 1350 acres including segments of the Squaw, English and White Clay Creek channels and associated terraces were inspected resulting in identification of 21 previously unrecorded cultural resources. Eighteen of these are assigned systematic site numbers while the remaining three locations are designated only by their field numbers for reasons discussed below. Descriptive characteristics are summarized in Table 3. A map of recorded resource locations is provided in Figure 4.

Native American Resources. Two Native American sites, an isolated fragment of chipped stone flaking debris (FN-1) and a subsurface deposit of bone (cf. bison) and charcoal (FN-2) exposed along the Squaw Creek cutbank were identified within the pilot plant unit. Origin of the bone deposit is unclear. Site 25DW114 consists of an extensive scatter of chipped stone tools, flaking debris, bone and trade goods. Remains at site 25DW116 are limited to three specimens of chipped stone flaking debris. All of these sites are located within 100 meters of Squaw Creek in the northeastern portion of the section.

Five additional Native American lithic or lithic and bone scatters were identified during survey of the remainder of the CSA (25DW194-25DW198). All

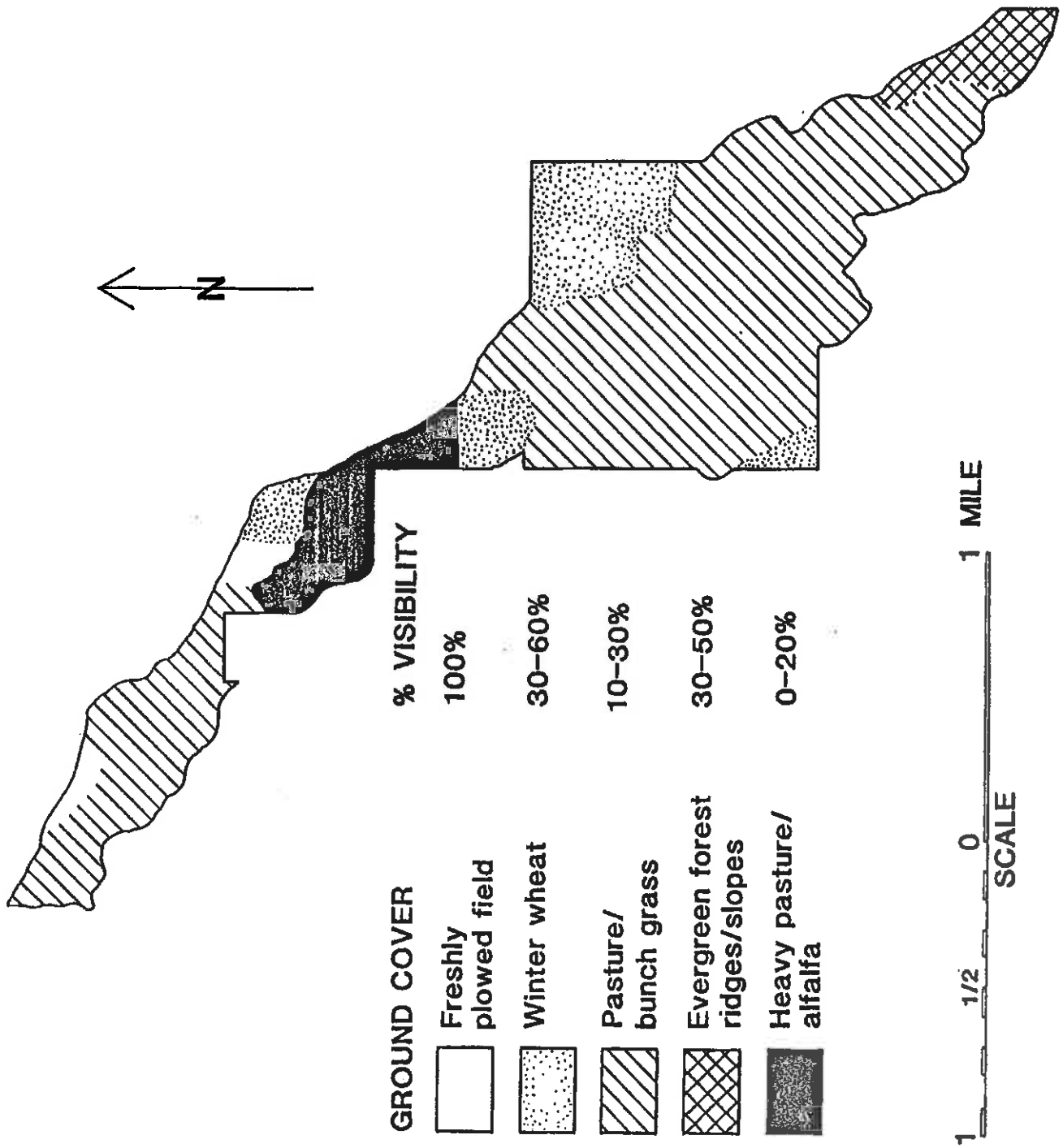


Figure 3. Ground cover and surface visibility at the time of the 1982 and 1987 surveys; Crow Butte Project, Dawes County, Nebraska.

Table 3. Summary of cultural resources identified during the 1982 and 1987 investigations; Crow Butte Project, Dawes County, Nebraska.

Site Number	Description and Temporal Assignment	Topographical Location	Area (m2)	Field Investigation
1982				
25DW111 (Harvey Homestead ?)	surface; glass, ceramic, metal; bone debris; Euroamerican; late 19th century (?)	top and slope of small knoll	1,000	survey, sketch map, photographs
25DW112/00-17 (Wulff/Daniels Place)	surface/buried; abandoned farmstead (house, depression 11 outbuildings); Euroamerican; late 19th/early 20th century	broad terrace; Squaw Creek	6,000	survey, sketch plan, photographs
25DW113 (Fiandt Homestead ?)	surface/buried; glass, ceramic; metal, wood, leather debris (25-40cm S.D.); 4 depressions; Euroamerican; late 19th century (?)	broad terrace; Squaw Creek	9,000	survey, transit map, soil probe/shovel test, photographs
25DW114	surface; chipped stone tools, flaking debris, trade goods, bone, primary component is Middle Archaic, although Paleo-Indian, Late Archaic, Late Prehistoric and Historic components are also present	broad terrace; Squaw Creek	150,000	survey, transit map, controlled surface collection, photographs
25DW115 (School Dist. 25)	surface; glass, brick debris; former location of First Presbyterian Church and public school; Euroamerican; late 19th century	small rise on upper slope	900	survey, sketch map
25DW116	surface; chipped stone flaking debris; unassigned Native American	terrace slope; Squaw Creek	2	survey, sketch map, photographs
25DW117 (Fleming Homestead ?)	surface; windmill, cistern, stock tank complex; Euroamerican (possibly associated with Fleming Homestead); late 19th century (?)	terrace slope; Squaw Creek	250	survey, sketch plan, photographs
FN-1	surface; 1 chipped stone flake; unassigned Native American	terrace slope; Squaw Creek	1	survey
FN-2	buried; bone, charcoal; unknown cultural association	eroding cutbank; Squaw Creek	50 (length)	survey, controlled bank profile/collection, sketch

Table 3. (continued)

Site Number	Description and Temporal Assignment	Topographical Location	Area (m ²)	Field Investigation
FN-3	Crow Butte Cemetery; Euroamerican; 1880-1971	level ridge top	2,700	map survey, sketch plan, photographs
<u>1987</u>				
25DW191 (Dougherty/ Smith)	surface/buried; outbuilding; 2 depressions; farm machinery; Euroamerican; late 19th century	foot of Pine Ridge. colluvial slope	50,000	survey, sketch map, photographs
25DW192 (Stetson/ Roby)	surface/buried; glass and metal debris; 2 depressions; 2 foundations; Euroamerican; late 19th century	top and slope of small knoll overlooking Squaw Creek tributary	1,000	survey, sketch map, uncontrolled surface collection, photographs
25DW193 (School Dist. 9/25)	surface/buried; ceramic, glass; 2 foundations, extant outhouse; Euroamerican (1904-1976)	upland valley	2,500	survey, sketch map, uncontrolled surface collection, photographs
25DW194	surface/buried; chipped stone flaking debris, bone; unassigned and possible historic Native American components.	saddle in ridge above Squaw Creek	1,600	survey, transit map, uncontrolled surface collection, controlled tests (2), photographs
25DW195	surface; chipped stone tool, flaking debris, bone; unassigned Native American	broad terrace; English Creek	1,000	survey, uncontrolled surface collection, sketch map, photographs
25DW196	surface; chipped stone tool, flaking debris, bone; unassigned Native American	upland ridge divide between Squaw and English Creeks	80,000	survey, transit map, uncontrolled surface collection, controlled tests (4), photographs
25DW197	surface; chipped stone tools, flaking debris, bone; unassigned Native American	upland ridge divide between Squaw and English Creeks	150,000	survey, sketch map, uncontrolled surface collection, photographs
25DW198	surface/buried; chipped stone tools and flaking debris; unassigned Native American	saddle and adjacent knolls on divide between English and White Clay Creeks	30,000	survey, transit map, uncontrolled surface collection, controlled tests (3), photographs
25DW199 (Crawford Ice House)	surface/buried; foundation, pond; Euroamerican; early to mid 20th century	narrow terrace, White Clay Creek	2,000	survey, sketch map, photographs

Table 3. (continued)

Site Number	Description and Temporal Assignment	Topographical Location	Area (m2)	Field Investigation
25DW00-25 (Stetson Place)	surface/buried; occupied farmstead (house, 8 out-buildings, corral); Euro-american, late 19th century to present	broad terrace, Squaw Creek	18,000	survey, sketch plan, photographs
25DW00-26 (Gibbons/Ehlers Place)	surface/buried; occupied farmstead (house, 11 out-buildings, corral); Euro-american; early 20th century to present	broad terrace, Squaw Creek	25,000	survey, sketch plan, photographs

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 4. Location of cultural resources identified during 1982 and 1987 investigations within the
Crow Band Project, Dawes County, Nebraska.

of these resources are located northwest of the R&D unit on either upland divides or level terraces of English or Squaw Creeks.

Euroamerican Resources. Five Euroamerican sites and the Crow Butte Cemetery (FN-3) were recorded during the 1982 R&D survey. These resources include an abandoned farmstead (25DW112), three historic debris scatters marking the former locations of two possible homestead sites (25DW111 and 25DW113) and a removed church (25DW115), as well as an isolated windmill complex (25DW117).

Six Euroamerican sites were discovered during the 1987 CSA study. Two are occupied farmsteads (25DW00-25, 25DW00-26), one is a series of outbuildings and two depressions (25DW191) and three are represented by foundation remains. One of these is a school (25DW193), one is an icehouse (25DW199) and the final resource appears to be a pre-1900 homestead site.

SITE DESCRIPTIONS

Brief narrative descriptions summarizing locational information and the results of site-specific investigations are presented in sequence by site number. Detailed field records for each of the the resource locations are contained in Appendix B.

Field observations lacking spatial integrity (e.g., isolated specimen locations) or identifiable cultural association, as well as sites (e.g., cemeteries) not eligible for National Register consideration are designated by field numbers (FN-1 through FN-3).

25DW111 (HARVEY HOMESTEAD?)

This site consists of historic debris thinly scattered on the top and slopes of a small knoll at 3885 ft. elevation. Approximately 25-30 specimens including window glass, milk glass, china, white (thin) ironstone, metal, and bone were observed within an area of ca. 32 x 32 m, and left in place. A sketch map of the site was prepared (see site form in Appendix B) and standardized archival research was initiated.

The site is situated on a land tract for which the initial claim (preemption) was filed by Jefferson J. Harvey in 1888, and finalized in 1891 (U.S. General Land Office tract book). The land was purchased by Eugene Statson in 1907, and remains in the family. Federal census records for 1900 (Crawford Precinct) indicate Harvey was born in Missouri in 1852, married Lillie Phelps in 1876, and together they had six children. Harvey and his family moved to Dawes County in April of 1886 and filed a preemption claim for the southwest quarter of Section 19. Harvey initially constructed a dugout on the land, where he and his family lived for several years while Harvey farmed and worked for the Chicago and Northwestern Railway. The family eventually moved to Crawford where Harvey was appointed City Marshall from 1901-1908 (Anonymous 1909:315).

Claimant's testimony filed by Harvey (17 October 1888) summarizes improvements he made on the claim (National Archives, Washington). The house (16 x 32 ft) was a two-story frame structure with shingle roof, board floors, three doors, and six windows. Additional structures included: a log stable (14 x 16 ft), cellar (10 x 12 ft), hen house/cow shed, and a well (53 ft deep). Harvey's cost estimate for these improvements was \$598.00. At the time of his testimony, Harvey had 30 acres of tilled land on which he raised corn, oats, millet and vegetables.

Although this site may represent the former location of the farmstead constructed by the Harvey family in homesteading this land tract, no definite evidence of this possibility was obtained. However, other potential homestead remains were not identified within Harvey's initial claim (southwest quarter).

25DW112 (WULF/DANIELS PLACE)

This site is an abandoned farmstead consisting of an intact house and twelve outbuildings as well as various structural remains and debris situated at 3880 ft elevation on a broad south and west facing terrace directly above the east bank of Squaw Creek. An access drive connects the farm to a county road approximately 0.3 km (0.2 miles) to the east.

Field procedures included production of photographs and a detailed sketch plan of the site including exterior measurement of all architectural features. Standardized archival research and local resident interviews were carried out.

The site consists of 18 features encompassing an area of 6000 square meters. Each are identified in Table 4. The present condition of each of the nine intact buildings ranges from poor to good, but in general all appear to remain structurally sound. See Figures 5, 6 and 7 for a map of the site and photographs of various structures.

Feature 1, the dwelling, is comprised of four major structural components which may represent as many construction episodes. A veranda or open porch extends along the eastern facade, or formal front, of the house and connects the gabled upright at the southeastern corner, the central wing, and a smaller gabled unit at the northern end of the building. In addition to the present door in the wing extension, a former doorway, later converted to a window, is located in the east facade or gable end of the upright unit.

On the basis of Wulf's proof testimony (see below) the gabled upright at the southeastern corner of the building likely represents the core component or initial dwelling unit. The exterior of this structure is sheathed with vertical planking (1 x 12 in) over which horizontal clapboard (1/4 x 4 in) has been added suggesting the possible use of timber frame construction.

The site is situated on the land tract initially claimed (preemption) in 1889 and patented in 1891 by Hans Wulf who held the property for four years until 1893. Wulf's homestead testimony (8 April 1889) summarizes improvements he made on the claim. The house (14x16 ft) is a frame structure with a single roof, board floor, one door, and two windows. Additional structures include a frame barn (16 x 24 ft), cave (8 x 12 ft), corral and fence (40 acres). Wulf's cost estimate for these improvements was \$310.00. At the time of his testimony, Wulf was farming 10 acres (corn and vegetables).

The dimensions (4.4 x 5.0 m or 14.4 x 16.4 ft) of the gabled upright at the southeastern corner of the present dwelling are consistent with the house dimensions (14 x 16 ft) recorded by Wulf. The barn dimensions provided by Wulf (16 x 24 ft) are similar to those recorded for Feature 9 (16.4 x 24.6 ft). The vertical siding of this feature could indicate a relationship to construction utilized in Wulf's house and that a later nineteenth century episode is reasonable. Similar construction was recorded for Features 10 and 11, possibly indicating that these buildings were part of the original Wulf farmstead constructed prior to 1893 and suggesting that the original farmyard likely occupied the southeastern third of the site. The location of the cave or cellar constructed by Wulf is presently unclear.

The site appears to have been occupied since 1888, however particular details concerning occupational history remain unclear; these can likely be established through interviews with local residents. The house at the site is of potential architectural interest.

25DW113 (FIANDT HOMESTEAD?)

This site consists of one large and three small depressions (see Table 5) located on a broad terrace surface. A sparse scatter of historic debris (10-15 specimens) is situated on the eroded terrace slope adjacent to the depressions. The site is located at 3890-3900 ft elevation approximately 60-100 meters south of the west bank of Squaw Creek.

The surface contains bottle and window glass fragments, thick brown ironstone, and metal. Subsurface materials identified in probe tests of one depression (Feature 3) include burned wood, glass, metal, and leather. A contour map of the site is presented in Figure 8.

The site is situated on a land tract for which the initial claim was filed by Cyrenius Fiandt in 1888 and finalized in 1891 (U.S. General Land Office tract book). Claimant's proof testimony filed by Fiandt (10 December 1888) summarizes the improvements he made on the claim (National Archives, Washington). The house (12 x 15 ft) was a frame structure with board and tar paper roof, board floor, three doors and five windows. An 8 x 12 ft addition was also added. Additional structures include a frame barn (12 x 28 ft), board barn (12 x 16 ft), cave (8 x 12 ft), log chicken coop (8 x 12 ft), fence (105 x 36 ft), hog yard, and a well (41 ft deep). Fiandt's cost estimate for the improvements was \$400.00. At the time of his testimony, Fiandt was farming 10 acres planted in corn, wheat, potatoes and millet.

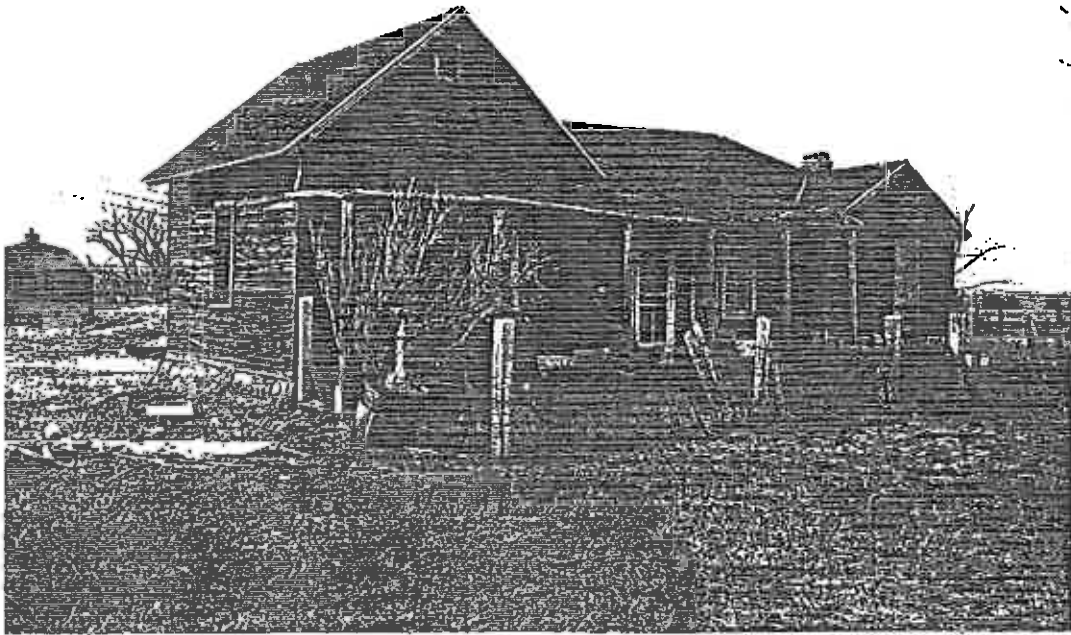
Table 4. Summary of structures and surface features recorded at the Wulf/Daniels Place (25DW112) during the 1982 investigation; Crow Butte Project, Dawes County, Nebraska.

Feature Number	Description and Structural Details	Exterior Dimensions(m)
1	house; single story balloon (?) frame; hipped and gable roofs, stone and concrete foundation; wire and cut nails (see Figure 6)	13.8 x 13.0
2	chicken coop; balloon frame, gable roof, concrete foundation; wire nails	2.5 x 3.75
3	chicken coop; balloon frame, hipped roof, concrete foundation; eight sided; wire nails (see Figure 7A)	5.0 x 10.9
4	shed; log, stone foundation; wire nails	3.3 x 3.0
5	depression; large, rectilinear; possibly barn location	13.0 x 19.5
6	latrine; frame, gable roof; wire nails	1.4 x 1.4
7	shed (poultry ?); balloon frame, shed roof, stone and concrete foundation; wire nails	3.7 x 2.6
8	former church; balloon frame, gable roof, stone and concrete foundation; wire nails (see Figure 7B)	11.2 x 7.4
9	storage shed; balloon frame, gable roof, stone foundation; wire and cut nails	7.5 x 5.0
10	grain storage/barn; balloon frame, gable roof, stone and concrete foundation; wire nails	9.5 x 6.2
11	garage/work shop; balloon frame, gable roof, concrete foundation; wire nails	8.8 x 6.1
12	windmill/stock tank; metal, concrete block foundation	-
13	stone foundation	3.6 x 1.8
14	stone foundation	-
15	lumber debris (structure location ?)	-
16	cistern; metal cover	2.0 x 1.3
17	propane tank	-
18	lumber debris (structure location ?)	-

NOTE: The location of each feature is shown on the site map (see Figure 5).

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 5. Sketch plan of site 25DM12 (Wulf/Daniels Place); Crow Butte
Project, Dawes County, Nebraska.



A



B

Figure 6. Photographs of site 25DW112 (Wulf/Daniels Place). A) farmhouse (Feature 1) east elevation; B) farmhouse (Feature 1) south elevation.



A



B

Figure 7. Photographs of site 25DW112 (Wulf/Daniels Place). A) chicken coop (Feature 4) south elevation; B) church/schoolhouse (Feature 8) northeast elevation.

Table 5. Summary of surface features identified at site 25DN113 during the 1982 field investigation; Crow Butte Project, Dawes County, Nebraska

Feature Number	Description	Dimensions(m) Length x Width	Depth (m)	Comments
1	depression with remains of stone foundation (7 rocks) at perimeter	7.5 x 7.0	ca. 0.85	probe test; sterile
2	depression	7.2 x 6.2	ca. 0.35	shovel test (0-40cm S.D.): burned wood, glass, metal, leather noted at 25-40cm S.D.
3	depression with remains of stone foundation (ca. 25 rocks) on east edge	9.4 x 7.5	ca. 0.50	shovel test (0-25cm S.D.): rocks noted at 10-15cm S.D.
4	depression	27.0 x 23.0	ca. 1.00	shovel test (0-25cm S.D.): sterile

NOTE: The location of each feature is shown on the site map (see Figure 8).

**This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).**

Figure 8. Contour map of archeological site 25DW113; Crow Butte Project,
Dawes County, Nebraska.

Fiandt moved to the claim in 1886 (National Archives, Washington) from Merrick County, Nebraska, although he did not file until two years later. In addition to farming, Fiandt provided carpentry services to his neighbors and the military at Ft. Robinson. He moved to Crawford prior to 1900 and operated a blacksmith shop and livery stable (LaVerne Stetson, personal communication).

Site 25DW113 is likely the former location of the Fiandt homestead. No alternative locations were identified within Fiandt's initial claim. LaVerne Stetson recalls abandoned standing structures on the site. Additional interviews with local residents could serve to clarify the chronology and use of this site.

25DW114

This site consists of an extensive scatter (150,000 square m) of chipped stone tools, flaking debris, bone fragments and trade goods exposed on the surface of a cultivated field (winter wheat). The site is situated at 3880 ft elevation on the broad south facing terrace above the east bank of Squaw Creek and extends across the entire cultivated area limited by a drive on the north, by the terrace edge on the south, and by an abandoned farmstead on the west.

During the 1982 survey specimens were recorded at 28 surface locations; all on the west side of a county road dividing Sections 19 and 20. Included are chipped stone tools (n=10), flaking debris (n=18), and unmodified bone (n=9) as described in Table 6. A contour map showing the distribution of these materials is presented in Figure 9. Only eight stone tools and a single identifiable bone fragment were collected. These specimens are discussed in Bozell and Pepperl (1983: 43-47) and illustrated in Figure 10.

The site was not revisited during the 1987 survey, however, Mrs. Frank Ehlers temporarily loaned to project staff a large collection of artifacts recovered from the site including bifaces, scrapers, flakes, bone fragments, glass trade beads and over fifty projectile points (see Figure 11).

The presence of an Archaic period component on the western edge of the site is indicated by a nearly complete projectile (Figure 10-C) recovered during 1982. The specimen compares with a Duncan type specimen originally illustrated by Wheeler (1954: Figure 1-a, c). This point type has been recovered from sites in Montana, Wyoming and central South Dakota, as well as western Nebraska and is affiliated with prehistoric occupations during a time span ranging from 2550-850 B.C. In general, the type is attributed to mid-to-late (ca. 1500 B.C.) Archaic period origins (see e.g., Wedel 1961:250-251; Frison 1978:40-56).

The eastern two thirds of the site (Section 20) appears to possess a higher density of cultural material based on comments made by Mrs. Ehlers who has surface collected the site for over twenty years. Projectiles in the Ehlers collection represent the late Paleo-Indian, Early Archaic, Middle Archaic, Late Archaic/Woodland, Late Prehistoric and Historic periods. Nearly one half of the projectiles are affiliated with the Middle Archaic period.

25DW115 (SCHOOL NO. 25)

This site is the former location of a rural schoolhouse and the First Presbyterian Church of Crow Butte, which has been moved to another location (see site 25DW112, Feature 8). The site presently consists of a limited scatter of brick fragments and window glass located on a small rise in the extreme northeastern corner of Section 19 at 3900 ft elevation. The surface of the area is currently under cultivation (winter wheat).

The initial claim for this land tract (NE 1/4, Section 19) was filed by Hans Wulf in 1889 and finalized in 1891 (U.S. General Land Office tract book). A.E. Hobson acquired the property in 1893. The First Presbyterian Church of Crow Butte purchased one acre of land from Hobson in the northeast corner of the quarter section for \$25.00 in 1896 (Dawes County Numerical Index). Construction of the church began in the same year. It is unclear when the structure was moved to the Daniels farmstead, however, the Standard Atlas of Dawes County (1913) and the 1918 soil survey map show the structure (as a school) at its original location. The 1937 Department of Roads map and current topographic map (1980 Crow Butte Quadrangle) have no structures plotted for this location, indicating the building was probably moved sometime between 1917 and 1937. Harold Gibbons, who currently farms this tract, indicated that the structure had been used as both a church and school at its

Table 6. Inventory of cultural material recovered at site 25DW114 during the 1982 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Specimen Category and (Frequency)	Description
1	lithic tool (1)	triangular biface (?), edge fragment; quartz
2	lithic tool (1)	endscraper, distal fragment; quartz
3	lithic tool (1)	straight/ovate biface, solid quartzite
4	lithic tool (1)	triangular biface, proximal fragment; chert
5	lithic tool (1)	endscraper, distal fragment; chert
6	lithic tool (1)	double-notched biface; chert
7	lithic tool (1)	double-notched biface; chert
8	lithic tool (1)	retouched flake; solid quartzite
9	unmodified bone (1)	Bovidae; right proximal radius
10	lithic tool (1)	retouched flake; solid quartzite
11	unmodified bone (1)	unidentifiable fragment
12	unmodified bone (1)	unidentifiable fragment
13	lithic debris (1)	chipped stone flake; quartzite
14	lithic debris (1)	chipped stone flake; chert
15	lithic debris (1)	chipped stone flake; chert
16	lithic debris (1)	chipped stone flake; quartzite
17	lithic debris (1)	chipped stone flake; clear chalcedony
18	unmodified bone (1)	unidentifiable fragment
19	unmodified bone (1)	unidentifiable fragment
20	lithic debris (2)	chipped stone flake; chert
21	unmodified bone (1)	chipped stone flake; solid quartzite
22	unmodified bone (1)	unidentifiable fragment
23	lithic debris (1)	unidentifiable fragment
24	lithic debris (1)	chipped stone flake; chert
25	unmodified bone (1)	chipped stone flake; solid quartzite
26	unmodified bone (1)	unidentifiable fragment
27	lithic tool (1)	unidentifiable fragment
	lithic debris (1)	retouched flake; chert
28	lithic debris (6)	chipped stone flake; chert
	lithic debris (1)	chipped stone flake; chert
	lithic debris (1)	chipped stone flake; solid quartzite
	lithic debris (2)	chipped stone flake; chalcedony

NOTE: The provenience of all specimens is indicated per catalog number on site map (see Figure 9). Catalog numbers 1-9 were collected; all other materials were left in place.

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
 the National Historic Preservation Act, Section 304
 (16 U.S.C. § 470w-3(a), and Nebraska Revised
 Statutes § 84-712.05(13).

CONTAINS UNCLASSIFIED MATERIAL

Figure 9. Contour map of archeological site 25DW114; Crow Butte Project, Dawes County, Nebraska.

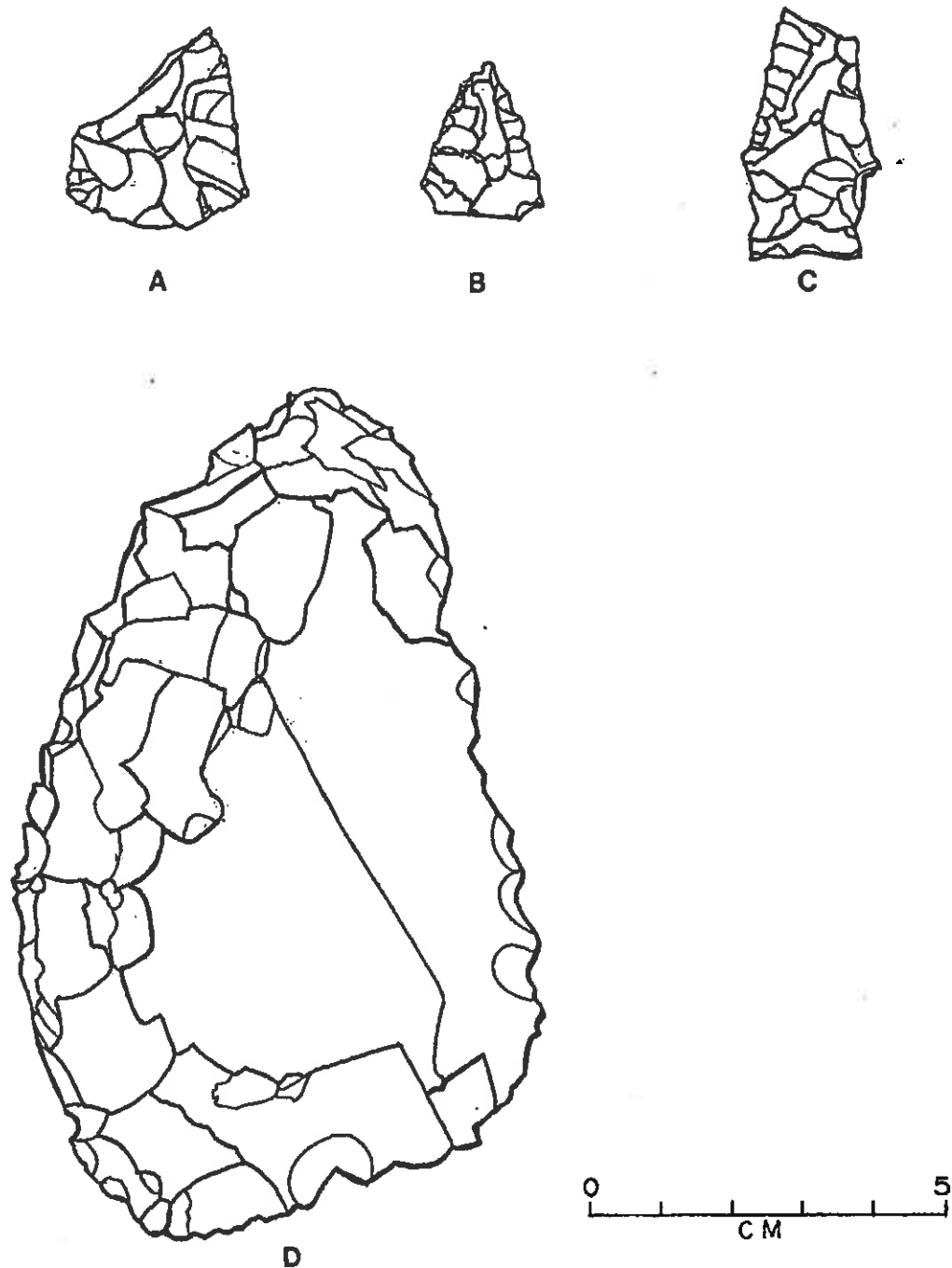


Figure 10. Illustration of select chipped stone tools recovered from site 25DW114; A) cat. no. 4, B) cat. no. 6, C) cat. no. 7, D) cat. no. 3.

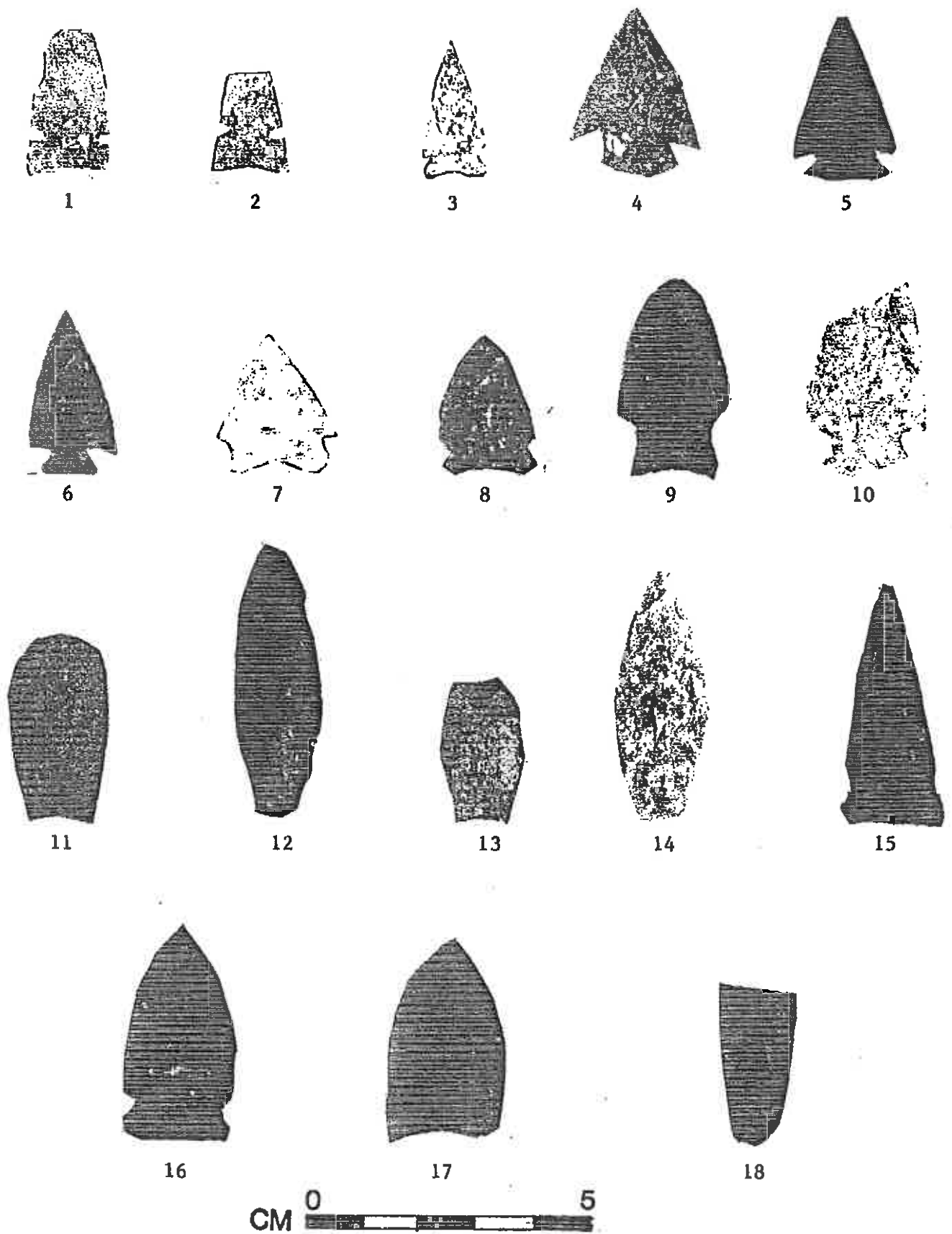


Figure 11. Select projectiles in the Ehlers' collection, 25DW114. Temporal periods represented include: Late Prehistoric (1-3), Late Archaic or Woodland (4-6), Middle Archaic (7-14), Early Archaic (15-16), and Paleo Indian (17-18).

original location, and for hay storage at the present location at site 25DW112.

The site appears to have been originally developed as a school (ca. 1886) and later as a church (ca. 1896; see ARCHIVAL RESEARCH). The building was moved several times prior to arriving at its present location. The precise date of the original movement is uncertain but probably occurred between 1915 and 1937. Interviews with local residents could clarify the function and use periods of this site.

25DW116

A single chipped stone tool and flaking debris (n=2) were observed along the west facing terrace slope above and ca. 30 meters east of Squaw Creek. The site is situated at 3850 ft elevation. A retouched flake (silicified wood) and two specimens of chipped stone flaking debris (chert and red/white chalcedony) were recorded within a 1 x 2 meter surface area. These specimens were left in place and a sketch map of the general area was prepared.

The observed lithic specimens are not temporally diagnostic and the site has not been assigned to a particular cultural period. Verification of subsurface deposits and possible relationship to an isolated find (FN-1) located approximately 200 meters northwest would require limited subsurface testing of the west facing Squaw Creek terrace slope within and between these two locations.

25DW117 (FLEMING HOMESTEAD?)

The site consists of a wooden framed windmill, concrete cistern and metal stock tank situated within a barbed wire fence near the edge of the southwest facing terrace approximately 40 meters northeast of Squaw Creek at 3840 ft elevation. The windmill, manufactured by the Aeromotor Company, is in good and operable condition, but presently is not utilized.

The site is located in the northwest quarter of Section 19. The initial claim for this land was filed by Frank Fleming in 1886 and finalized in 1890 (U.S. General Land Office tract book). The 1900 series Federal census records for Dawes County indicate Frank Fleming was born in Ohio in December of 1852 and homesteaded in Dawes County during the 1880s. By 1900, Fleming was a blacksmith residing in Crawford. Fleming's homestead proof testimony (26 October 1886) summarizes improvements he made on the claim (National Archives, Washington). The house (18 x 24 ft) was a log structure with three doors and five windows. Outbuildings included a frame blacksmith shop (14 x 22 ft), frame stable (12 x 14 ft), corn crib/wagon shed (16 x 16 ft), and a well. Fleming's cost estimate for these improvements was \$525.00. At the time of his testimony, Fleming was farming 12 acres as well as operating the blacksmith shop.

This site may be the former location of the Fleming homestead but positive evidence for this possibility was not obtained. No other potential location for this farmstead was identified within Fleming's initial claim

25DW191 (DOUGHERTY/SMITH HOMESTEAD?)

This site is comprised of two small depressions, nonresidential buildings and scattered farm machinery situated near the base of a broad Pine Ridge colluvial slope. The site is located at 3940-3980 ft elevation about one-half mile southwest of Squaw Creek.

Following an intensive survey of the site area, a sketch map was prepared and general view photographs taken from a north facing slope above the site. Standardized archival research was initiated for this location and an interview conducted with the present landowners.

The scattered farm machinery and thirteen outbuildings (including shops, shed, chicken coops, a windmill and stables) occupy the southern two thirds of the site. Immediately northwest of the building cluster are two depressions and an east-west vehicle trail. One depression is circular and about 3 m in diameter. The other is oval or rectangular and measures 5 x 3 m. The entire site occupies approximately 50,000 square meters.

The site is situated on an 80 acre land tract (W 1/2, NW 1/4) originally claimed by John Dougherty in 1893. The transaction was finalized in 1899 (U.S. General Land Office Tract Book). Dougherty sold the land to W.P. Smith

in 1910. A number of short-term transactions occurred until 1960 when the tract was purchased by Frank Ehlers and his wife, the current owners (Dawes County Numerical Index). All of the buildings on the site have been constructed or moved in by the Ehlers since 1960. Frank Ehlers stated in an interview that he believed the site was never used as a residence and the depressions mark the location of Eugene Stetson's blacksmith shop. The Dawes County Numerical Index does not, however, record Stetson as an owner of this tract. A structure is plotted at the site location on the 1917 County Atlas, and LaVerne Stetson recalls extant abandoned buildings on the site prior to the Ehlers' ownership (L. Stetson:personal communication).

Dougherty's homestead testimony (August 28, 1899) summarizes improvements he made on his claim (National Archives, Washington). At the time Dougherty was 48 years old and residing with his wife and eleven children. The home was a frame structure measuring 20 x 30 ft, probably constructed in 1893 or before. Other structures include a frame barn (12 x 30 ft), a frame granary (10 x 12 ft), a well and a windmill. Dougherty's cost estimate for these improvements was \$500.00. Twenty-five acres were under cultivation on the claim at the time of testimony.

The site is likely the location of a blacksmith shop or early homestead associated with John Dougherty or W.P. Smith.

25DW192 (STETSON/ROBY HOMESTEAD?)

Site 25DW192 consists of a small cluster of foundation remains and depressions situated on the top and slope of a small knoll overlooking a Squaw Creek tributary at 3960-3970 ft elevation. The site was covered with short bunch grass at the time of survey.

The site was discovered during the initial survey of the area. A return investigation consisted of making measured drawings of all surface features, taking photographs of features and the general site area and collecting select surface artifacts. Standardized archival research was initiated for this tract and interviews conducted with local residents.

The site is comprised of five features (Table 7), encompassing an area of over 3000 square meters (see Figure 12). Feature 1 is an oval mound surrounded by an intermittent rectangular stone foundation measuring 8.7 m x 6.2 m. Foundation remains consist of well-sodded-in natural cobbles (see Figure 13). Feature 2 is a deep circular depression, 9 m in diameter. A raised ring of earth surrounds this depression. Feature 3 is an oval to rectangular depression measuring 10 x 6 m. A natural stone foundation corner is present at the northeast edge of the depression. Feature 4 is a circular concentration of coal and stone approximately 1 m in diameter. Feature 5 is a 4.5 m north-south running stone line with corner remnants evident.

Three artifacts were collected from the surface of the site, including a chain link or large post staple, a fragment of pink bottle glass and a portion of a bottle base. The last specimen was recovered from Feature 4 and displays raised letters typical of a bitters or compound bottle (Table 8).

The site is situated on a 160 acre tract of land originally claimed by Elisha Stetson in 1893. The transaction was finalized in 1896 (U.S. General Land Office Tract Book). In 1901 Stetson deeded the land to Godfrey Roby. The tract remained largely in Roby family ownership until the 1950s, although several short-term transactions took place during this period (Dawes County Numerical Index). In 1898 Stetson sold 1 acre of the tract, at an unknown location, to Public School District 25. The school sold the acre back to Roby in 1906. No structures are plotted in this quarter section on any historic map sources consulted. Interviews were conducted with members of the Ehlers and Stetson families. No one recalls standing structures at the site. The late Orville Stetson's wife Anna believes her husband's Uncle Elisha moved back to Wisconsin shortly after 1900. The 1900 Dawes County census lists Elisha as a civilian carpenter working for the U.S. Army and residing at Ft. Robinson. Elisha Stetson's homestead testimony (June 16, 1896) lists improvements made on his claim (National Archives, Washington). Stetson was 27 years old and single at the time of his testimony. Stetson constructed a house on the claim in 1890 (no dimensions given) but built a second structure in 1892. The second structure included a frame main component (14 x 20 ft) with a 10 x 12 ft frame addition. Other structures include a stable (10 x 14 ft), a shed (14 x 14 ft) a hen house (6 x 12 ft), a cave or cellar (10 x 12 ft) and a well 100 ft deep. Stetson's cost estimate for the improvements was \$600.00. Forty acres were under cultivation at the time of the testimony.

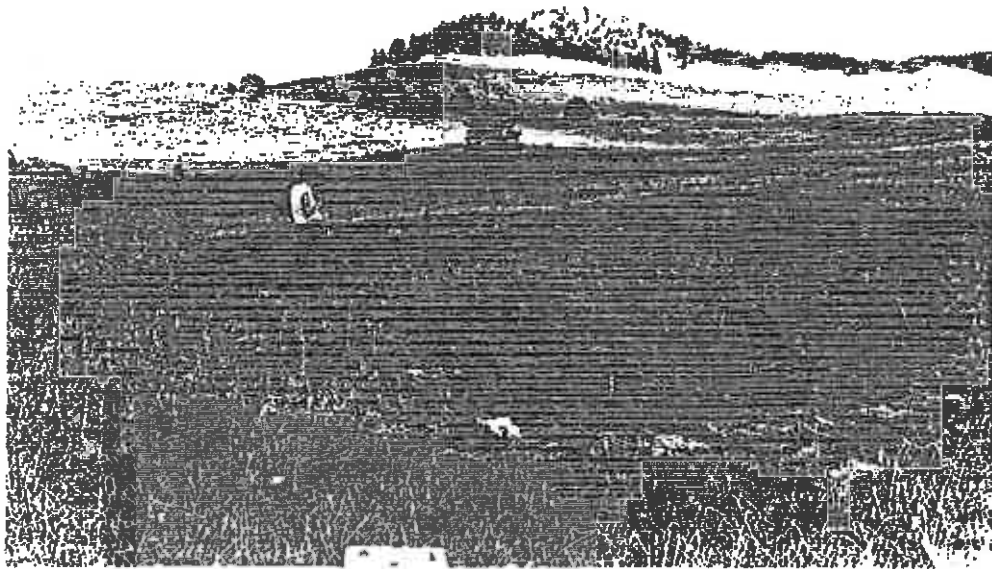
Table 7. Summary of features recorded at site 25DW192 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Feature Number	Description and Structural Features	Exterior Dimensions (m)
1	stone building foundation surrounding oval mound	8.7 x 6.2
2	circular depression	9.0 x 9.0
3	rectangular depression with stone foundation	10.0 x 7(?)
4	coal and stone concentration	1.0 x 1.0
5	west edge of stone building foundation	4.5 x ?

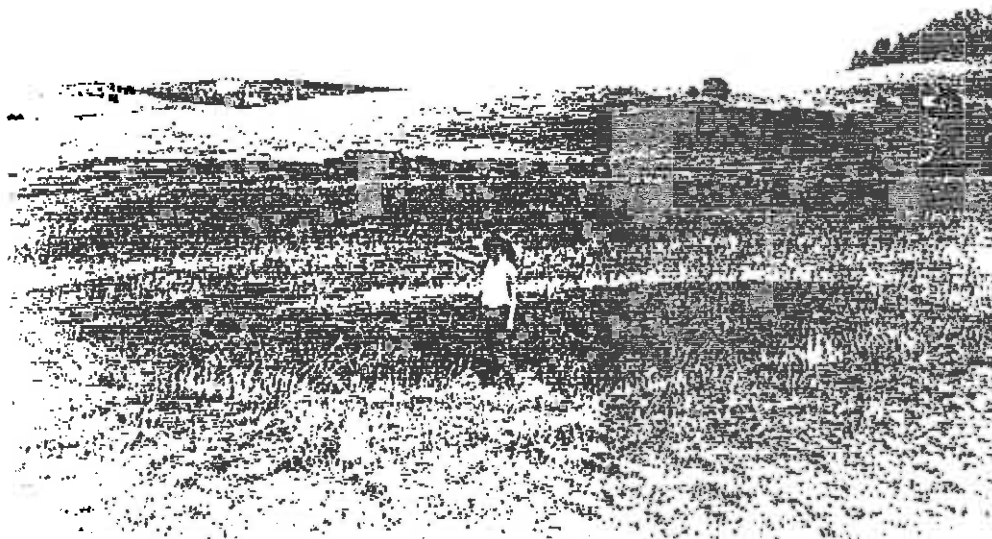
NOTE: The location of each feature is shown on the site map (see Figure 12).

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a)), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 12. Map of archaeological site 23DW192 (Stinson/Hobby); Crow Butte Project, Dawes
County, Nebraska.



A



B

Figure 13. Photographs of site 25DW192 (Stetson/Roby). A) Feature 1; B) Feature 2.

Table 8. Inventory of material recovered at site 25DW192 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	chain link or heavy fence post staple; 55.8mm long, 30.3mm wide, 8.5mm thick
2	general surface	pink bottle glass; 4.5mm thick
3	surface; Feature 4	green bottle glass base; 7.0mm thick; with raised letters: -LMER'S - MP -

The dimensions of either Feature 1 (6.2 x 8.7 m or 20.3 x 28.5 ft) or possibly Feature 3 (7 x 10 m or 22.9 x 32.8 ft) are generally consistent with the house (and addition) dimensions (20 x 26 ft) given by Stetson. Feature 5 (4.5 x ? m or 14.76 x ? ft) may also represent a building similar in size to Stetson's shed (14 x 14 ft).

It is likely this site is the location of Elisha Stetson's homestead (1890-1901). The site may have also been occupied by Godfrey Roby after 1900, however at some point prior to 1913 the site was abandoned and all structures removed.

25DW193 (SCHOOL NO. 9/25)

This site is the location of a rural schoolhouse and presently consists of foundation remains, one extant outhouse and scattered historic artifacts. The site is located in a nearly level upland valley about one-half mile west of Squaw Creek at 3810 ft elevation.

The field effort consisted of preparing measured drawings of foundation features and an uncontrolled surface collection. Photographs of individual features and the general site area were taken. Standardized archival research was initiated for the location and interviews conducted with local residents.

The site includes four features (Table 9) within an area of 2500 square meters (see Figure 14). Feature 1 is the schoolhouse foundation which is constructed of concrete and measures 11.1 m (N/S) by 6.6 m (E/W). The average thickness of the foundation is 20 cm. The entrance to the school is on the south and features a small porch 2.45 x 1.0 m. Near the back of the east wall a 1 x 1 m extension was observed, which includes a light scatter of burned material and brick suggesting a stove or fireplace location. According to LaVerne Stetson, the school was heavy timber frame construction with horizontal wood siding. Features 2 and 3 are outhouses. Feature 2 is extant with concrete block construction and a gable roof. Feature 3 is represented only by foundation remains. Feature 4 is a small oval cement slab with a square metal cap. This appears to be the location of either a well, electric lamp post or flag pole.

A small collection of artifacts was recovered from within the schoolhouse foundation, including window glass (n=1), bottle glass (n=2) and a white ware sherd (n=1). See Table 10 for a description of the collection.

The initial claim for this land (SW 1/4, Section 18) was filed by Eugene Stetson in 1887 and finalized in 1890 (U.S. General Land Office Tract Book). In March of 1904 Stetson granted a warranty deed for 1 acre to Public School District No. 25.

Two School Districts, 9 and 25, are relevant to site 25DW193 (see Archival Research Section and Bozell and Pepperl 1982:23-25). District 25 was formed in 1886 in Section 19 and District 9 in 1885 in Section 18. The districts were consolidated in 1903, one year before Eugene Stetson sold 1 acre in the extreme SW 1/4 of Section 18 for use as a school. Anna Stetson recalls her late husband Orville, who was born in 1898 (1900 Federal Census, Dawes County), began his schooling at the location of 25DW193, suggesting the consolidated district was in fact established in Section 18 by 1903 or 1904. Evidently the school remained in place at the site until dissolution of the district in 1976. Shortly thereafter the building was moved to Crawford. A school is plotted on the 1913 County Atlas, 1917 Soil Survey and 1939 Department of Roads map.

Site 25DW193 represents the location of consolidated Public School District No. 9/25, which operated a school on the site from 1903 or 1904 until 1976. It is likely the present foundation remains represent the original 1903-04 construction (L. Stetson:personal communication).

Table 9. Summary of features recorded at School No. 9/25 (25DW193) during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Feature Number	Description and Structural Features	Exterior Dimensions (m)
1	schoolhouse foundation; rectangular cement foundation with porch at front center and fireplace on side near rear of building; foundation thickness is about 20cm	11.1 x 6.6
2	extant outhouse; concrete block with gable roof	1.6 x 1.6
3	outhouse foundation; concrete block	2.0 x 1.6
4	small circular cement slab with metal cap, probably well or electric lamp post base	0.6 x 0.6

NOTE: The location of each feature is shown on the site map (see Figure 14)

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 14. Sketch plan of site 25DW193 (School 9/25); Crow Butte Project,
Dawes County, Nebraska.

Table 10. Inventory of material recovered at School No. 9/25 (25DW193) during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	burned bottle glass 8.5mm thick
2	general surface	window glass; 2.1mm thick
3	general surface	undecorated whiteware; plate or saucer edge; 4.3mm thick
4	general surface	clear curved bottle glass; 3.2mm thick

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 15. Contour map of site 25DW194; Crow Butte Project, Dawas County,
Nebraska.

25DW194

Site 25DW194 consists of a very sparse scatter of chipped stone debris and bone fragments exposed on the surface of a cultivated field (winter wheat). The site is at 3820-3840 ft elevation on a small knoll within an upland saddle overlooking Squaw Creek, which flows 50-100 m to the east. Surface materials were observed within a 1600 square meter area. (See Figure 15). An historic Native American burial was exposed and removed on a high ridge immediately north of the site in the 1950s during gravelling operations (L. Stetson: personal communication).

A general surface collection was made of all observed surface specimens during the initial survey. A return investigation was carried out consisting of preparation of a measured sketch map of the site area and excavation of two controlled test units. Test 1 measured 1 x .5 m and Test 2 was .7 x .4 m. Both were excavated in three 20 cm levels to 60 cm and all soil was passed through 1/4 in screen.

Test 1 was placed at the wheat field edge on the crest of the knoll at a position that did not appear to have been as severely eroded and deflated as the main portion of the site. A weakly developed artifact producing soil horizon occurs below loose topsoil in the test from approximately 30-40 cm. This unit overlays sterile yellow-brown loamy soil. Test 2 was excavated approximately 50 m south-southeast of Test 1 on the crest of the east facing slope leading to Squaw Creek. The Test 2 soil profile was similar to that observed in Test 1 although no cultural material was recovered.

Material recovered (Table 11) includes three flakes (one retouched), two large mammal leg bone fragments and one large mammal tooth enamel fragment collected from the surface; and three flakes, one burned bone fragment and three sandstone pebbles recovered from Test 1 (20-40 cm). Lithic raw material types include chalcedony cobble (n=1), Hartville Uplift chert (n=4) and purple and white chalcedony (n=1). All three types are available within a 100 mi radius of the project area (Carlson and Peacock 1975).

No temporally diagnostic materials were recovered and the site is not assigned to a particular cultural period. Much of the site has been plowed resulting in cultural materials being restricted to the eroded plow zone. A narrow north-south strip (30-40 m) of the site near the fence line possesses some intact subsurface deposits relating to an undefined and probably limited prehistoric use of the area. Although no evidence of burials was obtained during the current study, the presence of additional historic Native American graves in the site area should remain a consideration.

25DW195

This site consists of a small, thin scatter of aboriginal debris observed near the edge of a terraced wheat field on a broad terrace above English Creek. The site is at 3780 ft elevation and covers an area of 1000 square meters (see sketch map in Appendix B).

A general collection of all observed stone artifacts was made and a sketch map prepared during the survey. No further work was required at the site.

Materials recovered from the surface are inventoried in Table 12. Several small bone fragments and pieces of burned rock were also noted on the surface but not collected. The recovered sample includes one hammerstone, one bifacial tool and three flakes. The hammerstone (Figure 16:1) is an oval quartz cobble weighing 306 gm with a maximum diameter of 73.5 mm. Battering marks are evident intermittently around the widest diameter margin of the specimen. The chipped stone tool is a crude, or unfinished, ovate biface with one U-shaped corner notch (Figure 16:2). The specimen is 46.1 mm long, 27.2 mm wide and 10.7 mm thick, and manufactured from an unidentified white chert or chalk-like rock. No edge damage is evident suggesting the specimen represents an unfinished knife or projectile.

None of the recovered artifacts are temporally diagnostic and the site is not assigned to a particular cultural period. The presence of burned rock fragments may indicate the site possessed a hearth feature although terracing has compromised the resource's subsurface integrity and productive data recovery is not expected.

Table 11. Inventory of cultural material recovered at site 25DW194 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	flake; Hartville Uplift
2	general surface	retouched/utilized flake; Hartville Uplift
3	general surface	shatter; chalcedony cobble
4	general surface	long bone fragment; Bovidae
5	general surface	long bone fragment; Bovidae
6	general surface	tooth enamel; Bovidae
7	Test 1 (20-40cm)	flakes (3); Hartville Uplift (2), purple and white chalcedony (1)
8	Test 1 (20-40cm)	sandstone (3)
9	Test 1 (20-40cm)	burned bone; mammal

Table 12. Inventory of cultural material recovered at site 25DW195 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	biface; unidentified white chert
2	general surface	flake; purple and white chalcedony
3	general surface	flake; unidentified white chert
3	general surface	flake; clear brown chalcedony
4	general surface	hammerstone; quartz

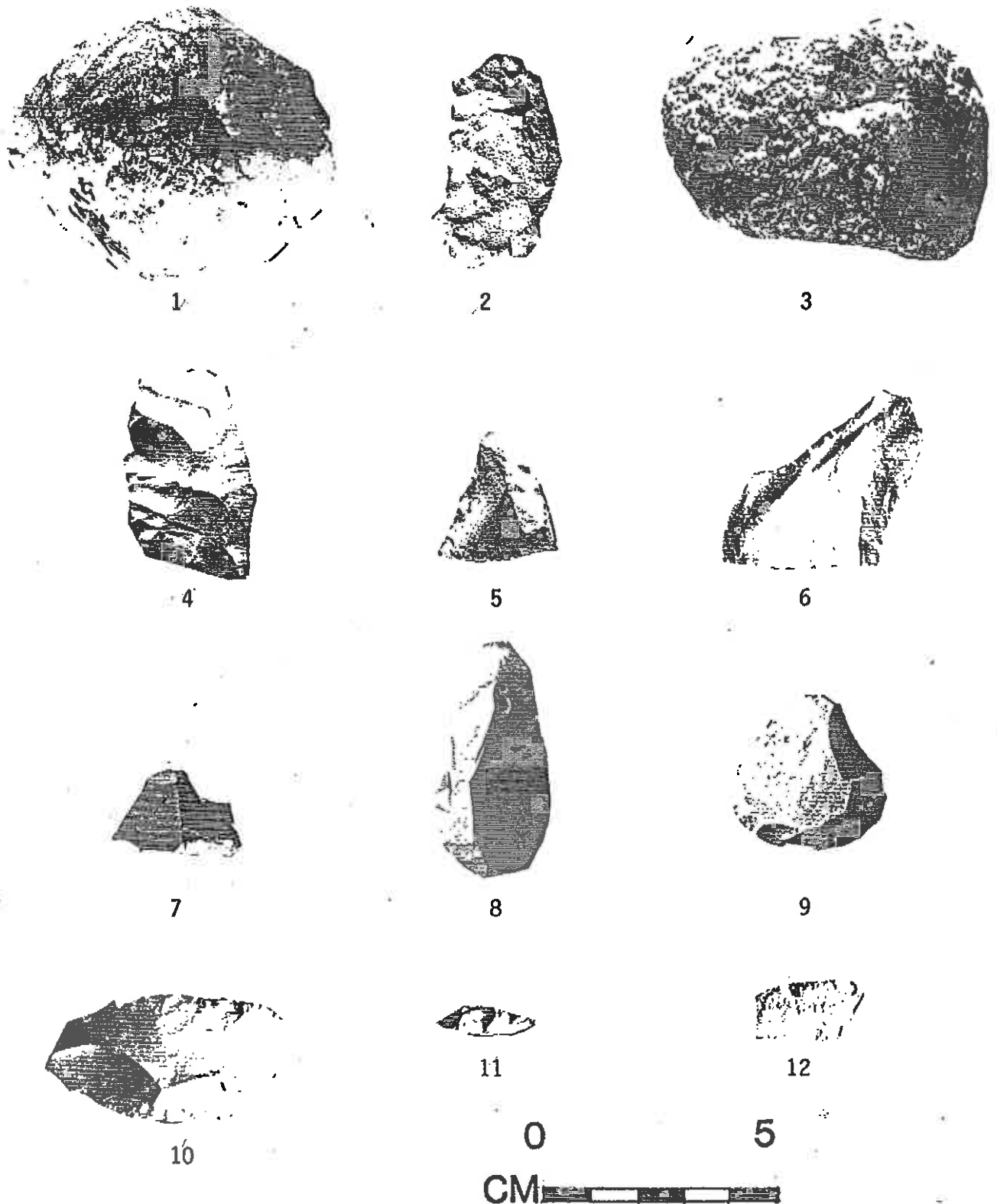


Figure 16. Select stone artifacts recovered during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska. 1-2: 25DW 195; 3-7: 25DW196; 8-10: 25DW197; 11-12: 25DW198.

25DW196

Site 25DW196 consists of an extensive scatter of lithic and bone debris exposed on the crest of a long narrow ridge dividing the English Creek and Squaw Creek drainages. The site is at 3780-3820 ft elevation and covers nearly 80,000 square meters (see Figure 17). Short winter wheat covered the surface at the time of survey.

A general collection of observed surface specimens was made during the initial survey. A return investigation featured a more intensive surface examination with additional collections, excavation of four controlled test units and instrument mapping. Tests 1-3 were .5 x .5 m and Test 4, .3 x .3 m. Tests 1 and 4 were excavated in three 10 cm levels to 30 cm, and Tests 2 and 3 excavated in one 10 cm level and two 20 cm levels to 50 cm. All soil was passed through 1/4 inch mesh. The soil profile was similar in all four units consisting of loose plow zone (0-15 cm); brown silt loam (20-40 cm); and yellow clayey subsoil (40-50cm). Cultural materials were recovered from only one unit and occurred within the plow zone.

The recovered sample was collected primarily from the site surface (n=27) although two flakes were present in Test 3 (Table 13). The collection includes: one biface, one side scraper, four retouched flakes, fourteen pieces of flaking debris; three tooth enamel fragments, three mussel shell fragments; two pieces of coal and a hammerstone. The coal, and probably the mussel shell, are associated with agricultural use of the site area. A variety of lithic raw materials are present in the sample including Hartville Uplift chert (n=6); silicified wood (n=3); plate chalcedony (n=3); purple and white chalcedony (n=2); solid quartzite (n=1); unidentified white chert (n=3) and unidentified beige chert (n=2).

The hammerstone is granite and exhibits battering on one surface (see Figure 16:3). The specimen is 69.1 mm long, 46.3 mm wide and weighs 205 grams. The biface is a distal segment of an ovate form, manufactured from Hartville Uplift chert (Figure 16:4). The specimen is 45.0 mm long, 27.3 mm wide and 7.9 mm thick. Edge damage and resharpening scars are evident around the entire margin of the tool. The side scraper is the proximal end of a pointed specimen made of grey translucent silicified wood (Figure 16:5). Both converging margins display steeply retouched edges (55 and 50 degrees) with use wear. Specimen dimensions are: length 27.0 mm; width 23.3 mm; and thickness 6.6 mm. Three of the retouched flakes have one straight or slightly concave unifacially flaked margin (Figure 16:6). These specimens are made from Hartville Uplift chert, an unidentified white chert and plate chalcedony. The remaining specimen is an angular piece of Hartville Uplift chert shatter with two concave unifacially retouched margins (Figure 16:7).

None of the recovered cultural materials are temporally diagnostic and the site is not assigned to a particular cultural period. As a result of long term cultivation, it is unlikely intact subsurface deposits remain at this location.

25DW197

This site is defined on the basis of four spatially discrete artifact scatters exposed on the surface of a terraced wheat field (see sketch map in Appendix B). Each scatter is referred to by its field number (FN87-10 through FN87-13). The site covers an area of 150,000 square meters and is situated on a wide upland ridge dividing Squaw and English Creeks at 3740-3760 ft elevation.

All observed surface materials exposed in the four areas were collected separately. A sketch map was prepared and photographs of the general site area taken at the time of survey. The site is largely outside of the project area eliminating the need for subsurface testing at the present time. Surface artifacts recovered are summarized below and inventoried in Table 14.

The FN87-10 collection consists of an endscraper, four flakes (1 plate chalcedony, 3 Hartville Uplift) and one proximal ulna fragment of either cow or bison. The endscraper is a complete Hartville Uplift specimen, plano-convex in cross section and measuring 49.9 mm x 21.4 mm (Figure 16:8). This artifact has a maximum thickness of 8.7 mm and the angle of the working margin is 75 to 80 degrees.

One endscraper, a flake (beige chert) and a large mammal tooth enamel fragment make up the FN87-11 sample. The endscraper is made of Hartville Uplift chert,

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 17. Contour map of site 23MR166; Cow Butte Project, Dawes County, Nebraska.

Table 13. Inventory of cultural material recovered at site 25DW196 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	ovate biface; distal fragment; Hartville Uplift
2	general surface	side scraper; proximal fragment; silicified wood
3	general surface	retouched flake; Hartville Uplift
4	general surface	retouched flake; plate chalcedony
5	general surface	retouched flake; unidentified white chert
6	general surface	retouched flake; Hartville Uplift
7	general surface	flake; unidentified white chert
8	general surface	flake; silicified wood
9	general surface	flake; unidentified white chert
10	general surface	flake; purple and white chalcedony
11	general surface	flake; Hartville Uplift
12	general surface	flake; unidentified beige chert
13	general surface	flake; Hartville Uplift
14	general surface	flake; purple and white chalcedony
14	general surface	flake; silicified wood
14	general surface	flake; plate chalcedony
14	general surface	flake; plate chalcedony
14	general surface	flake; unidentified beige chert
15	general surface	hammerstone; granite
16	general surface	tooth enamel fragments (3); Bovidae
17	general surface	shell (3)
18	general surface	coal (2)
19	Test 3 (10-30cm)	flake; solid quartzite
20	Test 3 (10-30cm)	flake; Hartville Uplift

Table 14. Inventory of cultural material recovered at site 25DW197 during the 1987 investigation; Crow Butte Project Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface; FN87-10	endscraper; Hartville Uplift
2	general surface; FN87-10	flake; plate chalcedony
3	general surface; FN87-10	flake; Hartville Uplift
3	general surface; FN87-10	flake; Hartville Uplift
3	general surface; FN87-10	flake; Hartville Uplift
4	general surface; FN87-10	bone; Bovidae - proximal ulna
5	general surface; FN87-11	endscraper; Hartville Uplift
6	general surface; FN87-11	flake; unidentified beige chert
7	general surface; FN87-11	tooth enamel; Bovidae ?
8	general surface; FN87-13	side scraper; Hartville Uplift
9	general surface; FN87-13	bone fragment; large mammal
9	general surface; FN87-13	bone fragment; large mammal
9	general surface; FN87-13	bone fragment; large mammal
10	general surface; FN87-12	flake; solid quartzite
11	general surface; FN87-12	flake; solid quartzite
11	general surface; FN87-12	flake; solid quartzite
11	general surface; FN87-12	flake; solid quartzite
11	general surface; FN87-12	flake; plate chalcedony

is plano-convex in cross section, measures 33.2 mm x 33.0 mm, and is 8.9 mm thick. The working margin is at a 75-90 degree angle (Figure 16:9). Some bifacial retouch is present along the distal lateral margins of the specimen.

The FN87-12 sample consists of five flakes. Four are white or grey solid quartzite and the fifth is probably plate chalcedony.

One sidescraper and three large mammal long bone splinters constitute the FN87-13 collection. The sidescraper is manufactured from a long plano-convex Hartville Uplift flake measuring 53.6 mm x 27.6 mm (Figure 16:10). The specimen is 8.8 mm thick with uniform retouch on both lateral margins.

The present sample from site 25DW197 does not contain temporally diagnostic remains and this location is not assigned to a particular cultural period. Although not tested, locations FN87-10, -11 and -13 have probably been impacted to a large degree by plowing and terracing. FN87-12 and the northern one quarter of the site do not appear to have been farmed and may still possess subsurface integrity.

25DW198

This site consists of a scatter of chipped stone tools and flaking debris exposed along the crest of a prominent linear knoll on a wide upland divide between English and White Clay Creeks. The site is at 3800-3810 ft elevation and encompasses an area of 30,000 square meters (see Figure 18). The initial survey consisted of a general collection of observed surface specimens.

During a return investigation, photographs were taken, three controlled tests excavated and data collected for preparation of a contour map. Test 1 was placed near the center of the scatter. Tests 2 and 3 were excavated on a knoll and a saddle adjacent to the site. All three tests were approximately 0.5 sq m in diameter.

Test 1 was excavated in four 15 cm levels to 60 cm and Tests 2 and 3 excavated in two 15 cm levels to 30 cm. All soil was passed through 1/4 inch mesh. A measured profile of Test 1 was completed, revealing three soil units (see excavation form in Appendix B). From the ground surface to 10 cm lies a dark gray soil zone. Below this a thick horizon of light brown clayey silt loam occurs from 10-40 cm. The basal unit is a very light to almost white bed of sandy silt loam. Artifacts were recovered from the surface to 40 cm.

The recovered artifact sample is inventoried in Table 15, and summarized below. The collection is comprised of one biface edge segment, two retouched flakes and 39 pieces of flaking debris. Lithic raw material is diverse, but dominated by solid quartzite (28.6%) and Hartville Uplift chert (33.3%). The chert and probably the quartzite were obtained at the Spanish Diggings Quarries in eastern Wyoming about 100 mi from the project area. Quartzites are also available in the Blackhills, the Laramie Range and the Bighorn Range (Craig 1982). Other lithic types represented include locally available purple and white chalcedony and silicified wood, as well as a variety of unidentified cherts and chalcedonies (see Table 16).

The biface edge segment was recovered from Test 1, Level 2, and is manufactured from Hartville Uplift chert (Figure 16:11). The specimen is 21.2 mm long and 4.4 mm thick. Both retouched flakes were collected from the surface. One specimen is made of silicified wood, is 23.9 mm long and 2.9 mm thick, and is bifacially retouched along one slightly convex margin (Figure 16:12). The other example is made of Hartville Uplift chert with a convex unifacially retouched margin. This specimen is 15.9 mm long and 2.9 mm thick.

The recovered sample does not contain temporally diagnostic material and the site has not been assigned to a specific cultural period. The site does not appear to be particularly rich although based on the excavation of Test 1, intact subsurface deposits likely remain.

25DW199 (CRAWFORD ICE HOUSE)

Site 25DW199 is represented by a single foundation located near the edge of a narrow White Clay Creek terrace at 3740 ft elevation. The foundation is situated about 50 m from the creek (see sketch map in Appendix B).

During the initial survey an intensive surface inspection of the general area was made, a measured sketch plan of the foundation was completed and photographs taken. The site is outside of the project area and a return

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 18. Contour map of site 25DW198; Crow Butte Project, Dawes County,
Nebraska.

Table 15. Inventory of cultural material recovered at site 25DW198 during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Provenience	Description
1	general surface	retouched flake; silicified wood ?
2	general surface	retouched flake; Hartville Uplift
3	general surface	flake; solid quartzite
4	general surface	flake; unidentified brown chert
5	general surface	flake; purple and white chalcedony
6	general surface	flake; unidentified banded maroon chert
7	general surface	flake; solid quartzite
8	general surface	flake; solid quartzite
9	general surface	flake; solid quartzite
10	general surface	flake; solid quartzite
11	general surface	flake; unidentified brown chalcedony
12	general surface	flakes (16); Hartville Uplift (5), purple and white chalcedony (3), solid quartzite (3); unidentified dark brown-purple chert (3), unidentified brown chalcedony (2)
13	general surface	shatter or cobble; quartz
14	Test 1 (0-15cm)	flake; purple and white chalcedony cortex
15	Test 1 (0-15cm)	flake; banded Hartville Uplift/ solid quartzite
16	Test 1 (0-15cm)	flakes (5); Hartville Uplift
17	Test 1 (15-30cm)	flakes (3); Hartville Uplift (1), solid quartzite (2)
18	Test 1 (15-30cm)	biface edge; Hartville Uplift (?)
19	Test 1 (30-45cm)	flake; Hartville Uplift
19	Test 1 (30-45cm)	flake; unidentified grey speckled chert
20	Test 2 (0-15cm)	flake; solid quartzite

Table 16. Summary of lithic raw material types represented at site 25DW198; Crow Butte project, Dawes County, Nebraska.

Material Type	Frequency	% of Total
Hartville Uplift chert	14	33.3
solid quartzite	12	28.6
purple and white chalcedony	5	11.9
unidentified brown chalcedony	3	7.1
unidentified brown-purple chert	3	7.1
silicified wood	1	2.4
quartz	1	2.4
unidentified brown chert	1	2.4
unidentified brown maroon chert	1	2.4
unidentified grey chert	1	2.4
Total	42	100.0

investigation was not scheduled. The foundation is made of grouted-aggregate concrete containing pebble to cobbler-sized rocks and measuring 24.8 m (E/W) by 12.5 m (N/S). Much of the foundation is at or near ground level, however, segments of the north wall are over 80 cm high. No artifactual material was noted in the general vicinity of the structure although ground cover was quite dense at the time of survey. Approximately 250-300 m north/northwest of the foundation on the edge of White Clay Creek is a circular pond about 10 m in diameter. This feature may be stone or brick lined.

The site is situated on a 160 acre land tract originally claimed by Luther Keenan in 1887. The transaction was finalized in 1911 (U.S. General Land Office Tract Book). A series of short-term transactions took place between 1898 and 1943, at which point the land was purchased by Lorentz Raben, the present owner. No structures are plotted on any historic map sources consulted; however, a lake is depicted near the site on the 1913 County Atlas, 1917 Soil Survey and 1939 Department of Roads map.

A telephone interview was conducted with Mrs. Lorentz Raben following the field investigation. Mrs. Raben indicated the site is the remains of a commercial ice house which serviced the city of Crawford and the local rural community from approximately 1910-1915 through World War II. Apparently the small lake depicted on historic maps and the extant circular pond were contributing properties to the operation. The Dawes County Numerical Index for this tract does not list entries specifying a commercial ice concern; however, possible commercial transactions relevant to this site include Russell Thorp (1891), "Sutter Bros." (1892), "Thorp Co." (1915) and several others. Additional interviews and archival research could help clarify ownership and history of the business.

25DW00-25 (STETSON PLACE)

Site 25DW00-25 is the occupied farmstead of Anna and the late Orville Stetson. The site covers an area of nearly 20,000 square meters and is located on a broad terrace on the east side of Squaw Creek at 3800-3820 ft elevation.

Field investigation of the site consisted of preparing measured exterior drawings of all buildings, drafting interior floor plan sketches of the residence and barn, and photographing select structures and the general area. Standardized archival research was initiated for the tract and interviews conducted with Anna Stetson and her son laVerne.

The Stetson property presently consists of a house, a barn with corral, and seven additional outbuildings (see Table 17 and Figure 19). The architectural elements of the farmyard are organized in a compact, almost formal, pattern, similar to site plans advocated in turn-of-the-century farm publications. The buildings uniformly face south, with the exception of two (Features 7 and 8) which face east and enclose the entry yard at the rear of the house. The farmstead is set back roughly 200 m from the road, with the angled drive providing visual separation between the residence and barn for visitors as they advance toward the house without needing to pass the livestock areas (cf. e.g., Saunders Publishing Co. 1905:12).

All buildings are in good to excellent condition and appear to be structurally sound. More importantly, key structures appear to have been constructed at about the same time and the general plan of the farmstead during that period does not seem to have been subsequently altered. These buildings are characterized by extensive use of masonry and concrete. Most were probably built about the same time as the house which was constructed around 1910 to replace the original homestead dwelling (L. Stetson, personal communication).

The two-story house (Feature 9) is of concrete block construction with stucco surfacing and a gable roof (Figure 20). An enclosed porch covers the front (formal) entry which is centered in the south gable end and faces the road. A small rear-entry porch faces the farmyard and provides access to the kitchen and basement. The nearly square plan of the house is quartered, with the living and dining areas each side of the central, second-floor staircase placed at the front and the kitchen and a bedroom at the rear. A bath was added after 1950 and the kitchen was shortened to provide a hallway to the bath (L. Stetson: personal communication). Although this alteration had little effect on the functional zoning of the original plan, it greatly improved traffic flow by providing access to all ground-floor rooms from the center of the house. Fenestration is symmetrical with the exception of off-set windows in the remodeled northwest corner. Small gable windows light and ventilate the attic at both ends.

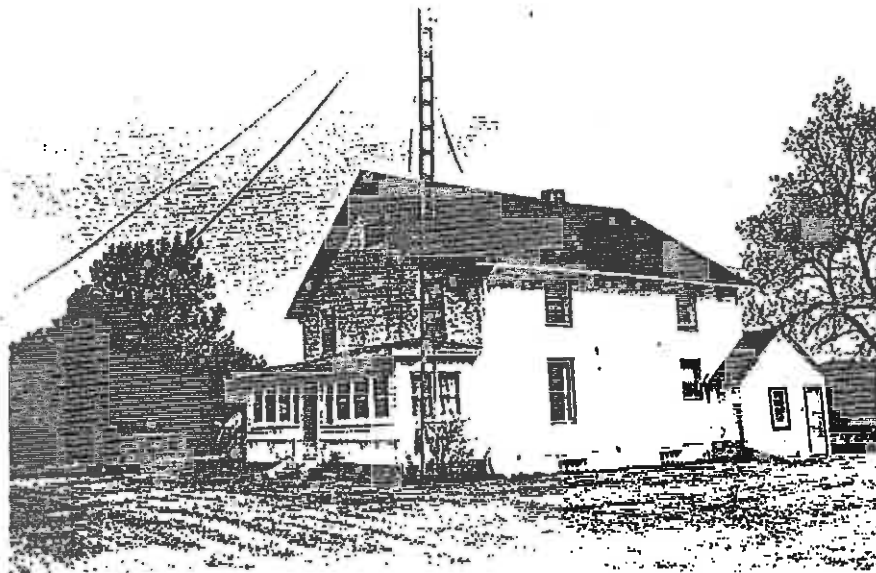
Table 17. Summary of structures recorded at the Stetson Place(25DW00-25) during the 1987 investigation, Crow Butte Project, Dawes County, Nebraska.

Feature Number	Description and Structural Details	Exterior Dimension (m)
1	shed; heavy frame; shed roof; wood foundation; wire nails	8.7 x 4.5
2	chicken coop; hollow clay tile construction; shed roof; concrete foundation	9.3 x 5.7
3	chicken coop; hollow clay tile construction; shed roof; concrete foundation	9.3 x 3.7
4	barn; heavy frame; gable roof; grouted aggregate concrete foundation; wire and cut nails	18.2 x 12.4
5	shed; balloon frame; shed roof; concrete foundation; wire nails	4.4 x 3.8
6	garage; quonset roof; concrete foundation; wire nails	18.4 x 10.0
7	garage; balloon frame; gable roof; brick foundation; wire nails	8.7 x 5.7
8	shed; balloon frame; gable roof; concrete foundation; wire nails	7.3 x 3.7
9	house; two story; concrete block construction; stucco siding; gable roof; concrete and concrete block foundation; wire nails	14.6 x 10.3

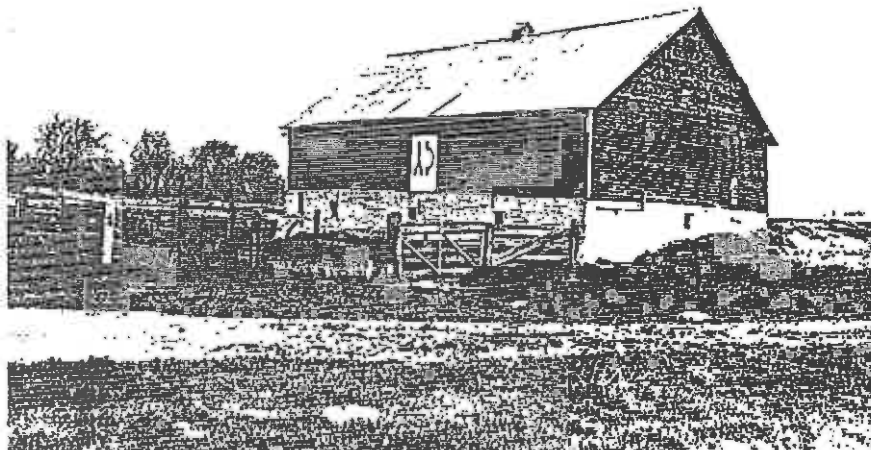
NOTE: The location of each feature is shown on the site map (see Figure 19).

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a)), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 19. Sketch plan of site 25B00-15 (Station Place); Crow Butte Project, Deuel County, Nebraska.



A



B

Figure 20. Photographs of site 25DW00-25 (Stetson Place). A) house (Feature 9) south (front) and east elevations; B) barn (Feature 4) south and east elevations.

The principal livestock area is defined around a single multi-purpose structure. This building (Feature 4) is a two-level, side-entry bank barn of seven bays in length (Figure 20-b). The upper (ground) level is a loft with two bays for hay storage on each side of the central (transverse) drive floor. The lower (basement) level is the livestock area. With the exception of a grain storage at the northeast corner, the basement is subdivided by fencing for feeding, holding and milking activities arranged along three aisles running the length of the building. The central and southern aisles have access to the corral at both their eastern and western ends. The heavy framing of the upper part of the barn is constructed of dimension lumber with solid uprights which are tied and braced at plate level, and again at purlin level but only along the central runway and at the end walls. Collar beams tie the rafters near the peak but a ridge beam is not used. The main tie beam (plate level) is made up of paired segments of lumber which are spliced (nailed) at the posts (a central bent and plans for both levels are sketched in Appendix B). The basement walls are concrete (grouted-aggregate) and, along with a system of two central posts, supports the upper frame component of the barn. The embankment is along the northern (front) wall. Windows are restricted to the south facing basement wall. The only large entry is at the embanked access to the loft. The barn has a small cupola and a painted ranch brand decorates the small (rear) drive-floor door.

Although a portion of the tract had previously been occupied by James English, the land (160 acres) was formally claimed by Eugene Stetson in 1887 and the transaction was finalized in 1890 (U.S. General Land Office Tract Book). By 1913 Stetson had purchased all of Section 18 and 3/4 of Section 19. The holdings are presently owned by Eugene's daughter-in-law, Anna, who resides on the tract. The NE1/4 of Section 19 has been owned by the Daniels family since 1901 (see site 25DW112 - the Wulf-Daniels farmstead in Bozell and Pepperl 1982).

Eugene Stetson's father Isaiah moved to Dawes County in 1886 from Manitowoc County, Wisconsin (Anonymous 1909:888). His eldest son Isaiah followed him in 1887, and his wife, Aurelia, a native of Norway, joined them in Nebraska in 1889. Aurelia was accompanied by her sons Eugene, Elisha and Benjamin (Anonymous 1961:71). Isaiah Sr., and his son, Eugene, operated a steam threshing machine and sawmill as well as being involved in ranching and farming. In 1892, at the age of 25, Eugene married his wife Annie. By 1900 they had three children; Elmer, Orville and Ernest. A farmhand, John Combs, was also residing with the family at this time (1900 Federal Census). The 1910 census lists five children.

Stetson established residence at site 25DW00-25 in the late 1800s and the present farmhouse was constructed about 1910 (L. Stetson:personal communication). Prior to that time Eugene lived in a dugout about one half mile east of the current farmyard. Anna Stetson noted this location is marked by a depression although the site is well outside the survey area and was not formally recorded.

A residence is plotted at the site on all map sources consulted (1913 - present). A structure is also depicted on the 1917 Soil Survey near the point where Anna Stetson believes Eugene's dugout to be.

Homestead testimonies for Section 18 claims were provided by Stetson in 1887 and 1894. Both summarize improvements made on the claim (National Archives, Washington). In 1894 Stetson lists his house as a one-story 12 x 16 ft frame structure with a 10 x 16 ft addition. Other structures include a frame stable (12 x 32 ft), a hen house (12 x 16 ft), a cellar (12 x 16 ft) and a granary (16 x 24 ft). Stetson estimated the cost of his claim improvements at \$600.00. Several 25DW00-25 outbuildings correspond rather closely to some testimony dimensions, however, based on their present dimensions the existing home and barn do not appear to be listed in the testimony inventory. The one-story frame house listed by Stetson was probably situated on the same spot where the extant 1910 stucco structure now exists (L. Stetson:personal communication).

The Stetson Place is situated on land homesteaded and occupied continuously by members of the Stetson family since 1887. Throughout this 100 year period, the family has maintained a prominent position in the community and can be viewed as contributing importantly to local history. The existing farmstead is also notable for lengthy continuity, both in plan-form and buildings (ca. 1910-present), and warrants assessment of potential National Register eligibility (see DISCUSSION section).

25DW00-26 (GIBBONS/EHLERS PLACE)

This site is the occupied farmstead of Mr. and Mrs. Frank Ehlers. The farm covers an area of 25,000 square meters and is located on a broad terrace on the west side of Squaw Creek at 3900 feet elevation. The field effort consisted of preparing measured exterior drawings of all buildings, drafting an interior floor plan sketch of the primary residence, and photographing select structures and the general area. Standardized archival research was initiated for the tract and an interview conducted with the Ehlers.

The Ehlers property is comprised of a frame house, a trailer house, a small livestock barn, a machine shed, ten other scattered outbuildings and several corrals (see Table 18 and Figure 21). This site represents a dispersed type of farmstead which is characterized by a large number of small, special-function structures (cf., e.g., Pepperl et al. 1983:56-58). Some of the buildings were apparently moved intact to the site from other locations and probably had different prior functions. Their former uses and locations could not be established, however. Although building dates are also not available for structures erected on-site, a variety of construction episodes appear to be represented by existing buildings, and perhaps involve the full range of principal occupations at the site (ca. 1913 - present).

The recently vacated one-story, frame house is comprised of two gable roofed buildings butted end-to-side in a T-plan (Figure 22). The smaller, eastern component (possibly the initial part of this structure) has shed additions on each side and a central chimney near the east gable end. This part of the existing house (probably erected on-site) may have been constructed at the same time as the adjacent storm/root cellar, perhaps during the Gibbons' occupation (Hamlin, who homesteaded this tract, does not mention a cellar in his testimony). The larger, western component may have been moved from another location. This two-room part of the composite structure appears to contain the front (formal) entry to the residence which is located in the center of its west side and faces the road. A window is placed on each side of this door. Both components have a single window centered in one gable end.

The land tract (120 acres) including site 25DW00-26 was originally claimed by William A. Hamlin in 1888. Hamlin held the land until 1900, although it is unlikely he ever received a patent for the property (U.S. General Land Office Tract Book). After several short-term transactions, the land was purchased by William H. Gibbons in 1913. The tract remained in Gibbons' family ownership until the late 1950s. Shortly following the Gibbons' sale of the land, the property was purchased by Mr. and Mrs. Frank Ehlers who are the present owners and reside at site 25DW00-26.

No one in the Hamlin or Gibbons families appears in the 1885, 1900 or 1910 Federal Census. An occupied residence is depicted on the 1913 County Atlas and the 1939 Department of Roads map, but not on the 1917 Soil Survey.

William Hamlin's homestead testimony, supplied in June of 1886, inventories improvements made to the claim (National Archives, Washington). These include an 18 x 24 ft log house, with an 8 x 24 ft lean addition; a log stable 12 x 16 ft, a chicken house and a shed. The dimensions of the latter two structures are not provided. Hamlin estimated the cost of his improvements at \$440.00. At the time of his testimony, Hamlin had 30 acres under cultivation.

Although the farmstead may have been established by William Hamlin or another immediate post-19th century owner, it seems more likely initial construction of the house and associated buildings are related to the Gibbons family after 1913. Many of the later structures were either constructed or moved in by Frank Ehlers. Mr. Ehlers may be able to furnish further, more detailed information regarding the origins of various farmstead structures. It would appear, however, that specific periods of development for the general farmstead plan will be difficult to clearly define, and that many of the buildings lack integrity of location required for National Register consideration.

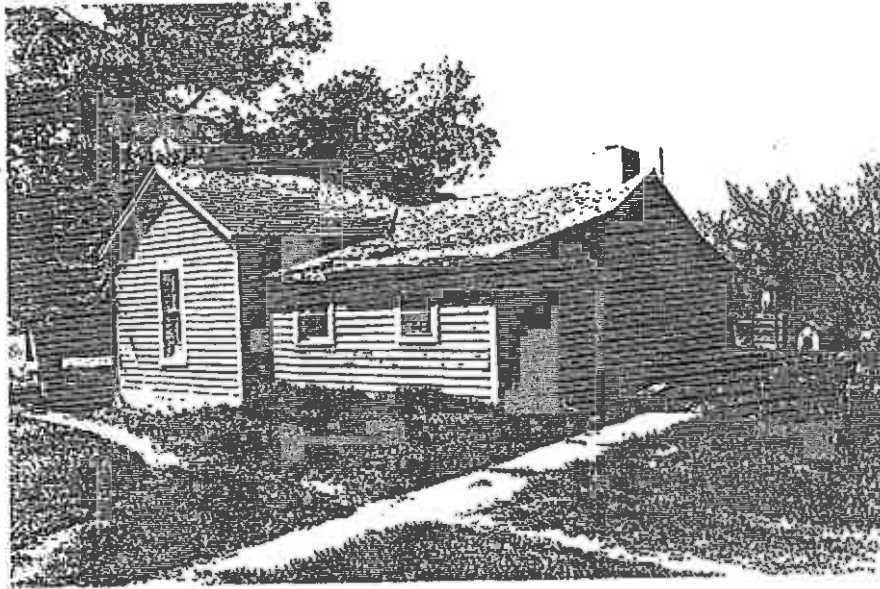
Table 18. Summary of structures recorded at the Gibbons/Ehlers Place (25DW00-26) during the 1987 investigation; Crow Butte Project, Dawes County, Nebraska.

Feature Number	Description and Structural Details	Exterior Dimension (m)
1	house; one-story; balloon frame; gable roof; concrete foundation; wire nails	8.5 x 7.7
2	cellar; earth and concrete construction; wooden door	3.0 x 1.0
3	shed; 1 1/2 stories; balloon frame; gable roof; wood foundation; wire nails	3.9 x 3.1
4	tack shop; balloon frame; gable roof; concrete foundation; wire nails	12.8 x 3.8
5	shop; balloon frame; gable roof; wood foundation; wire nails	4.9 x 3.1
6	barn; balloon frame; gable roof; concrete foundation; wire nails	13.5 x 7.8
7	stable; heavy frame; gable roof; concrete foundation; wire nails and wood pegs	11.0 x 7.0
8	shed; heavy frame; gable roof; wood foundation; wire nails	2.5 x 2.0
9	garage; balloon frame; gable roof; wood foundation; wire nails	5.0 x 3.0
10	chicken coop; balloon frame; shed roof; wood foundation; wire nails	6.0 x 2.0
11	single stall stable; balloon frame; gable roof; wood foundation; wire nails	5.0 x 2.5
12	single stall stable; balloon frame; gable roof; wood foundation; wire nails	4.0 x 2.0

NOTE: The location of each feature is shown on the site map (see Figure 21).

This figure has been redacted per 10 C.F.R. § 2.390(a) (3),
the National Historic Preservation Act, Section 304
(16 U.S.C. § 470w-3(a), and Nebraska Revised
Statutes § 84-712.05(13).

Figure 21. Sketch plan of site 25W00-26 (Elmer Place); Crow Butte Project, Davis County, Nebraska.



A



B

Figure 22. Photographs of site 25DW00-26 (Ehlers Place). A) house (Feature 1) south and east elevations; B) barns (Features 6 and 7) south elevation.

FIELD NUMBER-1

This locality consists of an isolated fragment of chipped stone flaking debris located on a west facing terrace slope approximately 20 meters east of Squaw Creek at 3840 ft elevation. The observed specimen is a small brown chert percussion flake. No additional cultural materials were located, however, a small lithic scatter [REDACTED] was identified approximately 200 meters southeast of FN-1.

The surface specimen is not temporally diagnostic and the locality is not assignable to a particular cultural period. Verification of potential subsurface materials and possible relationship to site 25DW116 would require limited subsurface testing of the west facing Squaw Creek terrace slope within and between these site areas.

FIELD NUMBER-2

This locality consists of a buried horizon of bone (Bovidae) and charcoal exposed in an approximately 50 meter extent of the west bank of Squaw Creek at 3830 ft elevation. The majority of these materials occur in two soil levels of light brown/gray mottled silty sand. Surface depth of these levels ranges from ca. 1.00-1.50 meters. A very limited quantity of bone and charcoal was observed in an upper level of medium grey/brown mottled fine silty sand (0.20-0.40 meters s.d.).

A controlled profile of the bank was excavated and matrix was dry screened through 1/4 in hardware cloth. Materials recovered through these procedures included approximately 20 large mammal bones (see Table 19). No cultural materials were observed in the creek bank or recovered through the screening process.

All recovered vertebrate materials appear to be Bovidae (cow/bison). Two elements (fibular tarsal and metacarpal) compare well with bison materials. Most of the remaining elements also appear to be bison but positive identification could not be made due to the incomplete and eroded condition of the specimens.

No information gathered during investigation of FN-2 suggests this deposit of bone and charcoal is the result of human activity. However, given the limited nature of the testing during the spring 1982 investigation as well as the association of bison bone and charcoal, future cutbank profiling and subsurface testing on the overlying creek bottom surface may be warranted to clarify the origin of these materials.

FIELD NUMBER-3 (CROW BUTTE CEMETERY)

This locality is the site of the Crow Butte Cemetery which is situated on a nearly level bluff top on the western margin of Section 19 at 3910 ft elevation. The cemetery contains at least 16 headstones with dates of death ranging from 1888-1971. Dimensions of the site area are ca. 90x30 meters and it is surrounded by a barbed wire fence with wooden posts. A gate is located in the fence line along the western margin.

In that cemeteries are ordinarily not considered eligible for National Register involvement (36CFR60.6), this location was not further documented or evaluated.

DISCUSSION AND RECOMMENDATIONS

PRELIMINARY NATIONAL REGISTER EVALUATION

Intensive subsurface testing or other National Register documentation tasks were not formally programmed into the Crow Butte study efforts. Therefore, as future development operations are defined, additional field investigations may be required to assess impact levels, data potential and integrity of some resources. Preliminary National Register evaluations for each of the twenty-one recorded resource locations are summarized below and in Table 20.

Evaluation of any properties' National Register eligibility is based on consideration of four significance criteria set forth in 36CFR60.6 (redesignated CFR1202). In addition to addressing significance values, a site's physical integrity must be established prior to further consideration of eligibility. In general the most relevant significance criterion is whether a site "has yielded, or may be likely to yield, information important

Table 19. Summary of vertebrate remains recovered during 1982 from controlled bank profile #1 at site FN-2, Crow Butte Project, Dawes County, Nebraska.

Cat. No.	Depth (S.D.)	Taxa	Element	Side/Portion	Comment
1	0.25 m	Bovidae	unidentified long bone	unidentified diaphysis fragment	
2	1.35 m	<u>Bison bison</u>	fibular tarsal	right complete	
3	1.40 m	Bison bison	metacarpal	left proximal	rodent gnawing
4	1.30 m	Bovidae	1st phalange	left complete	carnivore gnawing
5	bank slump	Bovidae	mandible	right posterior (m/2)	
5	bank slump	Bovidae	patella	right complete	carnivore gnawing
6	bank slump	Bovidae	rib fragments (7)	unidentified	
7	1.05 m	Bovidae	cranial fragments (6)	unidentified	
8	0.80 m	Bovidae	rib fragment	unidentified	rodent gnawing

NOTE: See Appendix C for drawing of bank profile.

Table 20. Preliminary resource evaluation and recommendations for sites identified during the 1982 and 1987 field investigations; Crow Butte Project, Dawes County, Nebraska.

Site Number (Name)	Site Type and Period of Use	Preliminary Evaluation and National Register Potential	Relationship to 1987 CSA Boundary	Recommendation
25DW111 (Harvey ?)	surface debris (former homestead?); ca. 1888-?	limited historical (local) value; limited data recovery potential (archeological); not eligible	600 m outside limits of CSA	no further work
25DW112 (Wulf/ Daniels Place)	abandoned farm building ca. 1889-1960s	moderate historic (local) value; probably architectural (regional) interest; produc- tive data recovery potential (architectural); potentially eligible	within limits of CSA	avoid physical or visual effects
25DW113 (Fiandt ?)	surface debris; depressions, (former homestead?) ca. 1888-?	moderate historic value (local); limited data recovery potential (archeo- logical), not eligible	within limits of CSA	no further work
25DW114	surface; lithic, bone trade goods; Paleo- Indian through historic periods (principal com- ponents Middle Archaic and Late Prehistoric)	probable scientific value; productive data recovery potential (archeological); potentially eligible	western margin within limits of CSA	avoid physical effects; test or monitor if to be impacted
25DW115 (School No. 25)	surface debris (former school and/or church); ca. 1886-1930s(?)	moderate historic (local) value; limited data recovery potential (archeo- logical); not eligible	150 m outside limits of CSA	no further work
25DW116	surface; lithic; un- assigned Native American	limited scientific value; limited data recovery potential; not eligible	within limits of CSA	no further work
25DW117 (Fleming ?)	unused livestock watering facilities; contemporary	limited historic value; limited data recovery potential; not eligible	within limits of CSA	no further work
25DW191 (Dougherty/ Smith ?)	surface debris; depress- ions, non-residential structure (former home- stead?) ca. 1880s-?	moderate historic value (local); limited data recovery potential; not eligible	within limits of CSA	no further work
25DW192 (Stetson/ Roby ?)	surface debris; depress- ions, foundations (former homestead); ca. 1883- 1915	moderate historic value (local); productive data recovery potential; potentially eligible	ca. 50 m out- side limits of CSA	no further work

Table 20. (continued)

Site Number (Name)	Site Type and Period of Use	Preliminary Evaluation and National Register Potential	Relationship to 1987 CSA Boundary	Recommendation
25DW193 (School No. 9/25)	surface debris, founda- tions (former school) ca. 1903-1976	moderate historic value (local); limited data recovery potential; not eligible	on limits of CSA	no further work
25DW194	surface/buried; lithic, bone, burials (reported); unassigned Native American and possible historic Native American components	moderate scientific value; moderate data recovery potential; potentially eligible	within limits of CSA	avoid physical effects; test or monitor if to be impacted
25DW195	surface; lithic, bone; unassigned Native American	limited scientific value; limited data recovery potential; not eligible	within limits of CSA	no further work
25DW196	surface; lithic, bone; unassigned Native American	limited scientific value; limited data recovery potential; not eligible	on limits of CSA	no further work
25DW197	surface, lithic, bone; unassigned Native American	unknown scientific value; unknown data recovery potential; not eligible	on limits of CSA	no further work
25DW198	surface/buried; lithic; unassigned Native American	moderate scientific value; moderate data recovery potential; potentially eligible	within limits of CSA	avoid physical effects; test or monitor if to be impacted
25DW199 (Crawford Ice House)	foundation, pond (former commercial ice house); ca. 1910-1940s	limited historic value (local); limited data recovery potential; not eligible	150m outside limits of CSA	no further work
25DW00-25 (Stetson Place)	occupied farmstead; ca. 1880-present	moderate historic value (local); probable archi- tectural interest (regional); productive data recovery potential; potentially eligible	within limits of CSA; exempt from develop- ment	avoid visual effect
25DW00-26 (Gibbons/ Ehlers Place)	occupied farmstead; ca. 1900-present	moderate historic value (local); limited archi- tectural interest; not eligible	within limits of CSA; exempt from develop- ment	no further work

Table 20. (continued)

Site Number (Name)	Site Type and Period of Use	Preliminary Evaluation and National Register Potential	Relationship to 1987 CSA Boundary	Recommendation
FN-1	isolated; lithic; unassigned Native American	limited scientific value; limited data recovery potential; not eligible	within limits of CSA	no further work
FN-2	buried; bone, charcoal; unknown cultural association	unknown scientific value	within limits of CSA	no further work
FN-3 (cemetery)	Crow Butte Cemetery	not eligible for National Register consideration	200m outside limits of CSA	no further work

in history or prehistory" (36CFR60.6(d)). Assessment of what information categories are "important" involves association of site characteristics with previously formulated research questions. Normally those questions are a component of state cultural resource management plans or other regional research efforts. Such a plan is presently in preparation for Nebraska, but at this juncture is not available for practical use. As a result we must turn to more general regional research questions and priorities developed under a variety of circumstances.

Native American Resources. The eight locations containing evidence of Native American remains are all located along terraces or ridges adjacent to Squaw, English or White Clay Creeks within 300 m of the stream channels. A ninth location consisting of buried bone (cf. bison) and charcoal exposed in a Squaw Creek cutbank, is of uncertain cultural association.

Two of these sites, 25DW116 and FN-1, are represented by very limited surface materials (four chipped stone specimens). Sites 25DW195 and 25DW196 are adjacent to one another on an upland ridge/slope system and possess more extensive surface scatters. Subsurface testing and visual inspection in this vicinity however indicates the ridge has been extensively plowed and terraced. Regular plowing and erosion over the years appears to have deflated this surface resulting in artifacts being laterally and vertically displaced throughout the present plow zone. We do not anticipate intact cultural material or features remain at these locations. A major portion of a fifth site, 25DW197, has also been compromised by agriculture. A small segment of this site may contain intact deposits but is outside the CSA limits and was not tested. Based on present evidence, these five sites are not felt to possess productive data recovery potentials and are not considered appropriate for further National Register evaluation.

Three sites, 25DW114, 25DW194 and 25DW198, are more clearly of potential research interest in that they may contain materials relevant to taxonomic, functional or subsistence considerations, along with a greater likelihood for intact subsurface remains.

Site 25DW114 is the product of multiple Native American use episodes carried out intermittently for as long as 8,000-10,000 years. Based on projectiles recovered during the 1982 survey and examined in the Ehlers collection, the primary component(s) at the site is attributed to the McKean Complex. McKean is a Middle Archaic period archeological unit principally associated with the Northwestern and Northern Plains (see e.g. Mulloy 1954; Wedel 1961:250-251; Frison 1978:40-56; and Kornfeld and Todd 1985). The most common Middle Archaic projectile forms from 25DW114 include McKean, Oxbow, Duncan and Hanna (Wheeler 1954:85:7). At least six sites in the Nebraska panhandle are attributed to the McKean Complex and dated within a 5000-3500 B.P. time frame (Carlson and Steinacher 1978: 5-6).

Projectiles associated with the Pelican Lake complex are also common in the Ehlers collection. Pelican Lake is a Northwestern and Northern Plains manifestation attributed to the Late Archaic Period -- 3,000-1,500 B.P. (Wattlauffer 1958; Reeves 1983:76-91). Reeves attributes five sites in the Nebraska panhandle to the "Glendo Subphase" (Reeves 1983:316-317).

Previous systematic investigation of Middle and Late Archaic components have not been initiated within the Pine Ridge District of Nebraska. Much of the research regarding these units has been carried out in Wyoming, Montana and the Dakotas (see e.g. Mulloy 1954; Gant and Hurt 1965; Reeves 1983; Tratebas 1984; Greiser 1985), but these complexes in general are not well understood.

The final well represented period at the site is based on the presence of a number of small triangular side-notched projectiles. The forms are attributed to the Late Prehistoric period (A.D. 0 - 1750) and are common throughout the Central and Eastern Plains at a variety of Plains Village Tradition communities (e.g. Wedel 1961:95, 198), as well as hunting camps and kill sites in the Western Plains (Frison 1970:34-39; Reher and Frison 1980:25-28; Speth 1983:37; Ludwickson and Bozell n.d.). It is unclear whether kills and camps are the remains of village populations on seasonal hunts, or are affiliated with seminomadic Western Plains residents.

Other periods represented only by several Ehlers collection specimens include late Paleo-Indian (10,000-8,000 B.P.), Early Archaic (8,000-5,000 B.P.) and Historic (1750-1890).

In summary, site 25DW114 appears to possess remains significant for addressing a broad spectrum of research questions relating to most major cultural periods identified for the region. On a local level the site may represent an important locality for evaluating the nature of White River tributary use by Native Americans. While the site is considered to be "potentially eligible" for the National Register, a formal determination must be preceded by subsurface test excavations and surface collection to establish horizontal limits and determine if the location has any remaining integrity.

Sites 25DW194 and 25DW198 were both the subject of subsurface testing which indicated these resources do possess intact, although sparse, subsurface remains below the sod/plow zone.

Only a narrow strip of 25DW194 appears to be intact. The remaining portions of the site have probably suffered major agricultural damage. An Historic Native American burial was exposed over 30 years ago in a ridge directly adjacent to the site. This ridge and one immediately south of the site may contain undetected burials or other archeological features.

Plains equestrian nomad archeology has largely been ignored because 1) these sites generally have low archeological visibility, and 2) the historical record for this period, particularly regarding the military frontier, is quite rich. In addition, the wealth of information available on Western Plains tribes has generally showcased spectacular events and noteworthy individuals. The archeological value of historic Indian sites in the Western Plains has yet to be determined. For example, we know very little about historic Native use of the area prior to the late 19th century, however nomadic historic tribes entered the region in the early 19th century (Hanson 1983:17). Also semisedentary tribes such as the Pawnee and Arikara probably used the area prior to the 1800s. The potential for burials or other undisturbed features in the vicinity of 25DW194 relating to historic (or prehistoric) groups argue in favor of the site's inclusion on the inventory of potentially eligible sites.

No diagnostic remains were recovered from site 25DW198, however, the location does possess intact deposits of chipped stone tools and debris. The site has suffered little, if any, agricultural impact and it is felt the entire known limits of the resource can be assigned a high integrity value. Due to the site's lack of a temporal association, linking it to previously formulated research questions is difficult. However, it is one of only several White River tributary artifact scatters which have documented subsurface remains and it provides an opportunity to evaluate small scale limited activity sites important to understanding the full range of local prehistoric site variability. As a result, the site, is considered potentially eligible for the National Register.

Euroamerican Archeological Resources. Nine Euroamerican sites with few, if any, extant structures were recorded. These include two former schoolhouses, three probable 19th century homestead sites, one commercial operation, one cemetery and two locations of unknown association. All but one, 25DW192 (Stetson/Roby Homestead), are considered ineligible for listing in the National Register for reasons discussed below.

The school sites consist of a light artifact scatter (25DW115) and foundation remains (25DW193). While the latter may possess archeological integrity, neither are likely to yield information regarding rural settlement and education in the area which cannot be more efficiently obtained through historical and archival research.

Two of the three homestead sites (25DW113 and 25DW191) are represented by only depressions and have been subject to cultivation or other disturbance following abandonment. They no longer retain elements which convey feelings and association with their period of historic significance (1880s - 1920s) and further archeological investigations are not likely to provide significant information with which to interpret early settlement in northwest Nebraska.

The Crawford Ice House (25DW199) is a somewhat unique resource (Rapp and Beranek 1984:124-125) and likely possesses intact remains, but is considered of limited interpretive value in adding to the historic and archival record. The site may deserve fresh evaluation when industrial archeology significance values are developed in the state cultural resource management plan.

Sites 25DW111 and 25DW117 are a light surface artifact scatter and contemporary windmill complex respectively. Periods of use and relevant

personalities could not be firmly established. Neither property is presently eligible for National Register listing.

The final ineligible Euroamerican archeological site is FN-1, the Crow Butte Cemetery, which dates to the period 1888-1971. Unless under unusual circumstances, marked cemeteries are not eligible for National Register consideration (36CFR60.6).

The Stetson/Roby Homestead (25DW192) is considered potentially eligible for the National Register. The land was originally claimed by Elisha Stetson in 1893, who held title until 1901, at which point the tract was sold to Godfrey Roby. The land remained largely under Roby ownership until the 1950s. Homestead files summarizing Stetson's proof testimony indicate he constructed two houses, a stable, a hen house, a shed and a cellar during the period 1890-1896. It is unclear if Roby made additional improvements.

The site does not appear on any historic map source and Anna Stetson, who has resided in the area most of her life, does not recall standing structures at the property, indicating buildings were removed prior to ca. 1913-1915. The site was apparently constructed and occupied for less than eight years by Elisha Stetson. Godfrey Roby may have also resided on the property for a short while, however he had purchased an adjacent tract in 1892 which likely contains the remains of his residence, if he in fact lived on his holdings.

Unlike other project area homestead sites (25DW113, 25DW191), Stetson/Roby likely appears much the way it did shortly following abandonment and removal of structures. The site and its surrounding environs do not appear to have been cultivated or otherwise modified and this property is the only project homestead site with intact foundation remains present. Surface artifacts are not abundant at the site, however, it is likely sealed deposits are present in association with features. Two similar properties have been identified in the Pine Ridge area and are considered potentially eligible (see Cassells and Agenbroad 1981:175-176; Moore and Rosenberg 1985:64-65). In general, the site is of local and state significance in that it offers a high integrity, restricted use period, example of an early northwestern Nebraska homestead. The property is likely to contain intact archeological deposits of scientific value.

Euroamerican Architectural Resources. Three sites contain architectural features. One, the Ehlers/Gibbons Place (25DW00-26), is not considered eligible in that the property lacks chronological and locational integrity with respect to the origin of buildings and construction dates.

The Wulf/Daniels Place (25DW112-0017) is an abandoned farmstead of potential architectural significance. In particular, the dwelling (Feature 1) at this site may provide an example of architectural developments that are represented by a limited number of houses in Nebraska and are not normally associated with the period during which the structure was likely constructed.

The original component of this house apparently consisted of a single upright unit at the south end of the building. The upright and wing which extends to the north at the front central portion of the house may represent the initial stage of modification in developing the present structural form. Alone, the small, nearly square (4.4 x 5 meter) upright component represents a minimal housing unit (Glassie 1975:118) such as that utilized for early colonial dwellings as derived from the English "Hall" or one-bay cottage house generally of about 16 ft (ca. 5 meters) in length (Foley 1980:14). The vertical planking beneath the horizontal clapboard siding of this unit may also indicate an English traditional influence and suggests the possibility that this portion of the structure may be constructed of timber framing rather than balloon framing more commonly used during the late nineteenth century.

In considering the upright and northern wing as a composite house unit, this component is referable to Greek Revival forms which are typified by a door in the gable end with one or two wings extending from the sides of the house (Glassie 1968:129). This formal architectural style was largely associated with the period 1820-1860 (Whiffen 1969:37-47) but apparently continued in folk construction beyond the mid-nineteenth century (Glassie 1968:133).

Although the building would be of interest in either case noted above, further consideration of these possibilities will require inspection of the house interior to develop floor plans, structural details, and clarification of the sequence of construction of the various components.

The Stetson Farmstead (25DW00-25) is presently occupied by Anna Stetson, the daughter-in-law of Eugene Stetson who claimed the tract in 1887, and constructed the home ca. 1910. The Stetson family immigrated to Dawes County during the period 1886-1889 from Wisconsin. The family shortly became locally prominent through land holdings and involvement in community development.

Historic architectural interest in the Stetson Place centers on the full farmstead unit and may extend to certain individual structures as well. In contrast to many cases where farmsteads are built up or modified over a period of years, often involving accumulated structures of uncertain origins, the Stetson Place appears to represent a unified construction episode, perhaps during a relatively brief period. Key structures are substantial constructions, characterized by extensive use of masonry and concrete in both foundations and walls. These buildings were probably added as replacements for the initial homestead features around the turn of the century, a period of general economic prosperity and expansion in the state. Importantly, this construction appears to reflect the heightened attention to formal site planning and organization of farmsteads being advocated at that time (see e.g. Saunders Publishing Co. 1905:11-14). Indeed, materials and methods utilized in many of the structures, as well as building arrangement, seem consistent with such published efforts to update and modernize the turn-of-the-century farmstead. The multipurpose barn, however, can be more specifically referred to traditional and ethnic architectural influences, although materials and typical bent of the framing could be viewed as "modern". The side-entry form and tripartite functional zoning of the framed upper component (loft) are similar to that of the traditional "English barn," as commonly represented in the New England states (cf. e.g., Glassie 1968:133-140; Glassie 1974; Arthur and Witney 1972:58-83). The full, two-level banked structure, however, may be more closely related to building traditions of Upper Bavaria. In the United States these traditions are characterized by barns built by Swiss and German immigrants in Pennsylvania, a type often referred to as the "Pennsylvania barn" (cf. e.g., Glassie 1968:55-62, 140-141; Arthur and Witney 1972:84-113). While the Stetson barn lacks the projecting laube or forebay of the Upper Bavarian model, its form and interior zoning are generally consistent with traditions represented by the Pennsylvania barn type. Glassie (1968:141) suggests such loose interpretations of earlier Pennsylvania traditions may have been prompted by plans in agricultural publications of the post-Civil War period. The possible mixing of traditional influences with turn-of-the-century "modern" ideas for farm planning and construction at the Stetson Place, given its apparent physical and temporal integrity, makes the full farmstead unit significant for historic architectural research. This site could contribute important information toward developing an appropriate historic context and evaluating related High Plains agricultural resources of northwestern Nebraska.

Based on both architectural interest and association with locally prominent individuals, the Stetson Place is considered potentially eligible for inclusion on the National Register.

POTENTIAL PROJECT IMPACTS

Criteria of effect are as defined in 36CFR800.3 and involve direct or indirect changes resulting from project development that alter the integrity of location, setting, materials, or other characteristics relevant to potential National Register qualifications of the subject resources. Direct environmental alterations considered here are short range, immediate effects including surface modifications and constructed features associated with the R&D building site, access roads, R&D production locations and commercial scale mining locations that could potentially result in: 1) physical disturbance of resources locations; or 2) introduction of visual elements that are out of character and disrupt or alter the setting of applicable resources. Other than the R&D facility, location of commercial uranium extraction sites are not presently defined. Therefore impact to cultural resources can only be identified on a general level (e.g. relationship to CSA limits).

Considerations relevant to the R&D and commercial scale operations are as follows:

1. No properties previously listed in the National Register of Historic Places or registered as natural or historic landmarks occur within the CSA survey unit and no pending plans in this regard were identified.

2. Twenty-one identified resource locations were recorded as a result of the survey, but data recovery sufficient to fully assess National Register eligibilities was not programmed as part of this work.
3. On the basis of present information, six of the twenty-one newly recorded resource locations are potentially eligible for the National Register but may warrant further field investigation and assessment with respect to significance and integrity criteria. These locations are of potential site-specific importance on the basis of scientific data recovery opportunities (25DW114, 25DW192, 25DW194 and 25DW198) and architectural merit (25DW112 and 25DW00-25).
4. Four potentially eligible sites are situated within the CSA boundary (25DW112, 25DW00-25, 25DW194 and 25DW198). One, 25DW00-25, is exempt from on-site development but may be the subject of temporary visual intrusion. Site 25DW114 is largely outside of the CSA boundary, however the documented western margin of the site is contained within the project area. It is also likely the site extends into the 25DW112 farmyard although ground cover prohibited surface visibility. If commercial mining is scheduled in this area, access road facilities outside CSA limits may result in impact to a larger area of the site. Site 25DW192 lies approximately 50m outside CSA limits, but could also potentially be impacted by ancillary activities.
5. The R&D facility layout involves a plant building (ca. 70 x 100 ft) of approximately two stories in height, two evaporation ponds, and a well field. These and other minor features are contained within an area of approximately 8 ha (20 ac). This location occupies a resource free area directly south of Squaw Creek. The existing building is west (ca. 350 meters or 1150 ft) of site 25DW113 and is southwest (ca. 330 meters or 1100 ft) across Squaw creek from the southern margin of sites 25DW112 and 25DW114.
6. The R&D facility does not physically disturb any of the identified resources. The unimposing size and orientation of the R&D structures do not significantly disturb the rural character of this area, which is germane to the potential significance of site 25DW112.

RECOMMENDATIONS

Cultural remains recorded at fifteen of the twenty-one newly identified resources located within the survey unit appear to represent limited site-specific historical values and data recovery potentials and in themselves do not presently warrant National Register consideration. Further field work at these sites is not recommended on the basis of extant information. Although it is unlikely that these fifteen sites will be important in consideration of resource significance at a project wide level, it remains possible that further professional evaluation could be required should subsurface remains be encountered as a result of project development.

The six resources (25DW112, 25DW114, 25DW192, 25DW194, 25DW198 and 25DW00-25) which do warrant further consideration of potential National Register eligibilities have not been directly affected by development of the R&D site but continued assessment of these resources may become necessary prior to commercial scale production.

In sum, general and site-specific recommendations regarding the survey unit area as follows:

1. No further reconnaissance level survey is required for the CSA as presently defined. Clearance is recommended for all resource free areas as well as all locations containing ineligible properties.
2. Continued coordination between the Nebraska State Historical Society and project staff will be required during development in the immediate vicinity of the six potentially eligible sites. Detailed locational maps of these properties have been provided to project development staff and are available for professional review at the Nebraska State Historical Society.
3. Avoidance of long-term visual impact at sites 25DW112 and 25DW00-25; and direct effect for all six sites is the recommended course of action.
4. If avoidance in any area(s) is judged to be unreasonable due to adverse design modification or anticipated reduction in the commercial success of the undertaking, then arrangements will need to be made for either infield earth

moving monitoring or intensive National Register documentation to facilitate formal eligibility determinations and recommendation for mitigative action.

5. If opted for, National Register level evaluation for the two architectural sites should involve the following procedures for the house at site 25DW112 and the full farmyard at site 25DW00-25: develop floor plans and record interior details to complete stylistic and temporal assessments, and inspect accessible wall and roof exposures to identify structural systems and determine construction sequence. Additional archival research may also be required to clarify certain historic attributes of these properties.

6. If opted for, National Register level evaluation for the four archeological sites should involve initiation of systematic subsurface testing programs of a sufficient magnitude to determine horizontal limits and subsurface integrity values. Further archival research may also be required if evaluation of site 25DW192 becomes necessary.

7. In the event subsurface cultural deposits are encountered during commercial scale operations throughout the project area, professional evaluation should be permitted to determine the need for data recovery.

SUMMARY AND CONCLUSIONS

The Research and Development stage of cultural resources investigations within the proposed Crow Butte Uranium Project near Crawford, Dawes County, Nebraska, was carried out during March and April 1982 under a contractual agreement between Wyoming Fuel Company and the University of Nebraska. Further investigations were completed for the remaining Commercial Size Area land during April and May, 1987, by the Nebraska State Historical Society under contract to Resource Technologies Group. Preliminary background and archival research were initiated in conjunction with intensive field surveys to obtain data required for preparation of both Research and Development and Commercial Scale Applications. This work established a basis for addressing potential effects of the proposed undertaking on identified cultural resources. Pertinent results and conclusions are outlined below.

1. Preliminary literature and records research indicated that systematic investigations had not been previously conducted within the study area and that no National Register eligible properties had been recorded within or immediately adjacent to the survey unit.

2. Limited previous studies in surrounding areas provided evidence that a wide range of paleontological, prehistoric and historic resources of potential significance to regional studies are present in the near vicinity and could likely be encountered on project lands. Registered National Historic Landmarks representing military and Native American reservation period use of the study area are located near the proposed Crow Butte project.

3. Intensive (100% coverage) pedestrian inspection of the R&D area and the full CSA-scale survey unit (1350 ac) resulted in identification of twenty-one newly recorded resource locations. Included are eight sites representing Native American components, twelve Euroamerican locations, and a buried bone deposit of undetermined cultural association.

4. Fifteen of these newly identified resources contained limited observed evidence of scientifically important cultural remains or were not determined to be of significant historic value on the basis of the archival research. These sites do not warrant further National Register consideration.

5. The remaining six sites are of potential archeological data recovery importance (25DW114, 25DW192, 25DW194 and 25DW198) and possible architectural interest (25DW112 and 25DW00-25). Further information would be required to more completely determine potential National Register eligibilities.

6. The planned R&D facility has not directly affected any of the resources identified within the survey unit and clearance of this area for R&D operations was previously recommended.

7. Although no further investigations are needed at this point, project planning should allow for professional evaluation if needed during major earth moving operations and should provide for avoidance, monitoring or assessment of the six potentially eligible sites during future phases of the Crow Butte Project.

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