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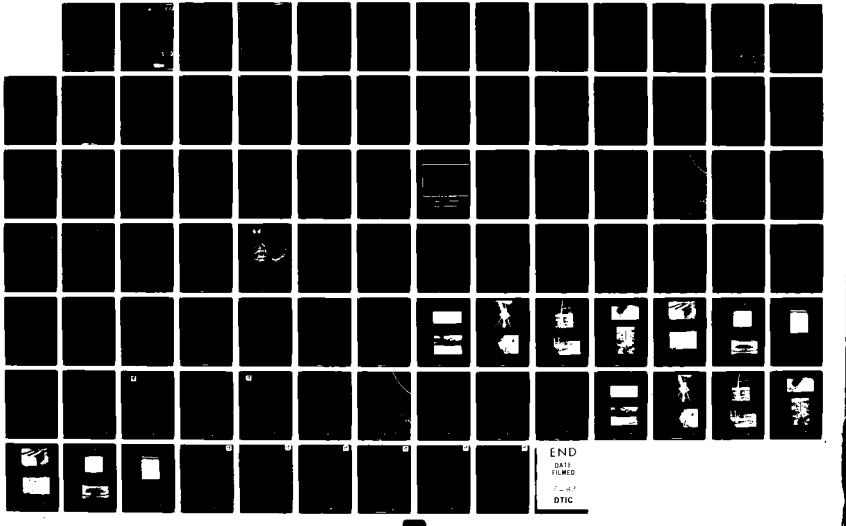

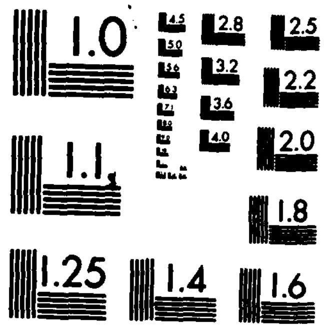

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Cultural Resource Survey for the Consolidated Space Operations Center Project near Colorado Springs, El Paso County, Colorado

by

Mark R. Guthrie

Prepared Under the Supervision of
Dr. Sarah M. Nelson, Principal Investigator

Archaeological Research Institute
Department of Anthropology
University of Denver

Administered by
The National Park Service
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A cultural resource survey was conducted on 640 acres of State land for the United States Air Force. The project was administered by the National Park Service, Rocky Mountain Regional Office, Branch of Interagency Archeological Services. The impact to the land will include the construction of the consolidated Space Operations Center. The report includes a regional overview of the area, a research design, the environment, field and analysis methods, inventory of the cultural properties, evaluation of the research, and management summary and recommendations. One historic site and six prehisoric isolated finds were recorded. The historic site is a ranching and livestock grazing area. The isolated finds include a projectile point (probably Woodland ca. 1,000 A.D.), two core fragments, and three flakes. None of the isolated finds or the site appear to be eligible to the National Register of Hisoric Places. Most of the research questions were addressed utilizing negative data. The research suggests that the specific area under study was only occupied occasionally prehistorically, probably during hunting. Evidence suggests that the area does not offer the needed environmental variables for occupation and use beyond that of hunting. Historically, the area is extensively utilized as a ranching and livestock grazing area. This began in the early 1920's and is present today.

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PREFACE

SARAH M. NELSON

The integration of small-scale surveys into a regional research design is a recent development in Colorado, which this report demonstrates to be of great practical value. Identifying major gaps in the data base, important problems of interpretation, and long range archaeological goals provides a framework for understanding traces of the past, whether historic or prehistoric, and whether profuse or sparse. In fact, regions of dense archaeological sites are considerably easier to interpret than scattered finds, and it is only within the larger regional picture that such findings have value.

In this context, negative results become meaningful. Relatively few artifacts were found in this square mile, but since historic utilization can be demonstrated to have been only for ranching purposes, it is unlikely that the area has ever been heavily searched for projectile points and other prehistoric finds. This lends weight to the interpretation of the area as only lightly and sporadically utilized in prehistoric times. The same variables account for little activity historically and prehistorically - most notably, lack of permanent water, and secondarily, lack of other resources other than the prairie grasses. These grasses provided grazing both for ranch animals in the historic period, and for wild grass-eating fauna, to attract hunters prehistorically.

But as this area was not prime habitable land for humans, it probably also did not support large herds except in transit. Therefore, the evidence of occasional hunting fits well with the total picture. Thus, prior consideration of expected evidence allows more extensive conclusions than would be possible inductively. Further research of this type will eventually provide an extensive understanding of the regional archaeology, and should be strongly encouraged.

ABSTRACT

A cultural resource survey was conducted on 640 acres of State land for the United States Air Force. The project was administered by the National Park Services, Rocky Mountain Regional Office, Branch of Interagency Archaeological Services. The impact to the land will include the construction of the consolidated Space Operations Center.

The report includes a regional overview of the area, a research design, the environment, field and analysis methods, inventory of the cultural properties, evaluation of the research, and management summary and recommendations.

One historic site and six prehistoric isolated finds were recorded. The historic site is a ranching and livestock grazing area. The isolated finds include a projectile point (probably Woodland ca. 1,000 A.D.), two core fragments, and three flakes. None of the isolated finds or the site appear to be eligible to the National Register of Historic Places.

Most of the research questions were addressed utilizing negative data. The research suggests that the specific area under study was only occupied occasionally prehistorically, probably during hunting. Evidence suggests that the area does not offer the needed environmental variables for occupation and use beyond that of hunting. Historically, the area is extensively utilized as a ranching and livestock grazing area. This began in the early 1920's and is present today.

ACKNOWLEDGMENTS

I would like to thank Bill Butler, Ann Johnson, and Don Fiero of IAS for their support during the project. Robert Norris, Jasper Ackerman and Mr. Verrier, all ranchers from the Colorado Springs area, provided important information on ranching for the area. Mr. Frank Meyer of the United States Air Force took a special interest in the project by flying out from California to participate in a day of the field work. I would especially like to thank the people from the State Board of Land Commissioners and the State Archives and Public Record for their special assistance. I would also like to thank David Ford and Powys Gadd for their help in the project. Dena Lewis drew the artifacts and maps. Helen Pustmueller assisted in the artifact analysis. Jean Sibley typed the report.

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INTRODUCTION

Between February 15, 1982 and February 19, 1982, Mark Guthrie, Project Archaeologist, David Ford, Staff Archaeologist, and assisted in part by Powys Gradd, Archaeologist for the Archaeological Research Institute, University of Denver, conducted a 100% cultural resource survey of 640 acres for the proposed Consolidated Space Operations Center (CSOC). The Project Archaeologist returned on March 17th to survey drainage banks previously covered by snow and to perform limited testing on an area where a large bone was eroding out from the bottom of a drainage bank. Dr. Sarah Nelson served as Principal Investigator for this project.

The survey was conducted in compliance with the National Historic Preservation Act as amended (16 USC 470) and Executive Order 11593, as implemented by 36 CFR 800.

The scope of the work entailed a cultural resource survey of 640 acres of State land for the United States Air Force. The project was administered by the National Park Service, Rocky Mountain Regional Office, Branch of Interagency Archaeological Services Contract Number CX1200-2-B007. The proposed impact to the area includes the construction of the Consolidated Space Operations Center facility.

The survey area is located east of Colorado Springs (Figure 1). The specific area is shown in more detail on the Corral Bluffs Quadrangle, 7.5 minutes, 1975 (Figure 2).

The purpose of this study is two-fold. First, to assist the United States Air Force in planning and environmental processes connected with the anticipated construction of CSOC. The second purpose of this study is to address regional research questions for the region under study. The questions presented in this report allows a small project, such as this one, to integrate data into a regional research context.

REGIONAL OVERVIEW

Prehistory

The project area is located just east of Colorado Springs, Colorado at the transition of the High Plains and the Rocky Mountain Foothills area. Work completed near the present project area consists of recent cultural resource management studies. A survey was conducted at the Fort Carson Military Reservation and work and analysis is continuing (Martin 1979). A small survey was

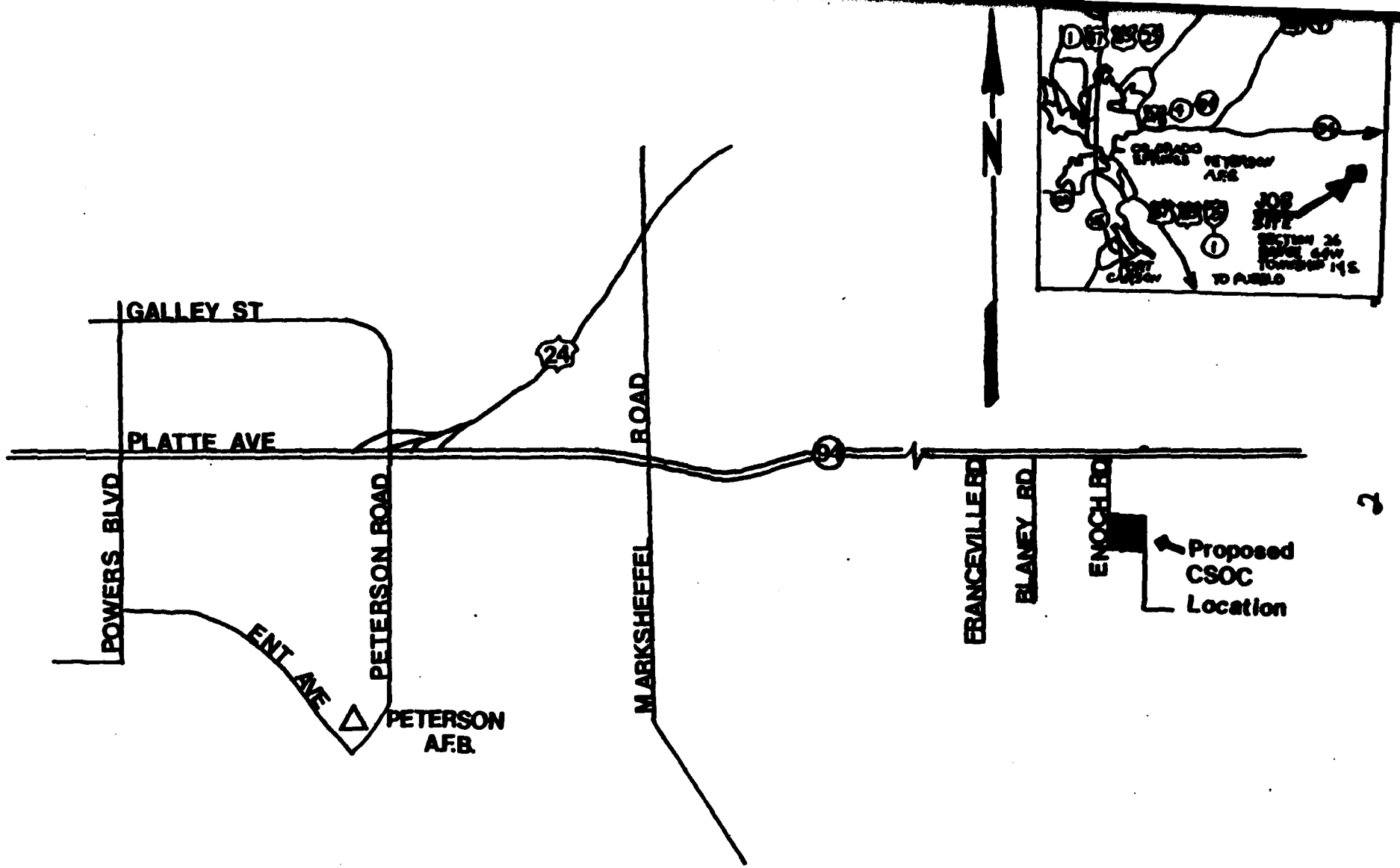


Figure 1: General Map of Project Area.

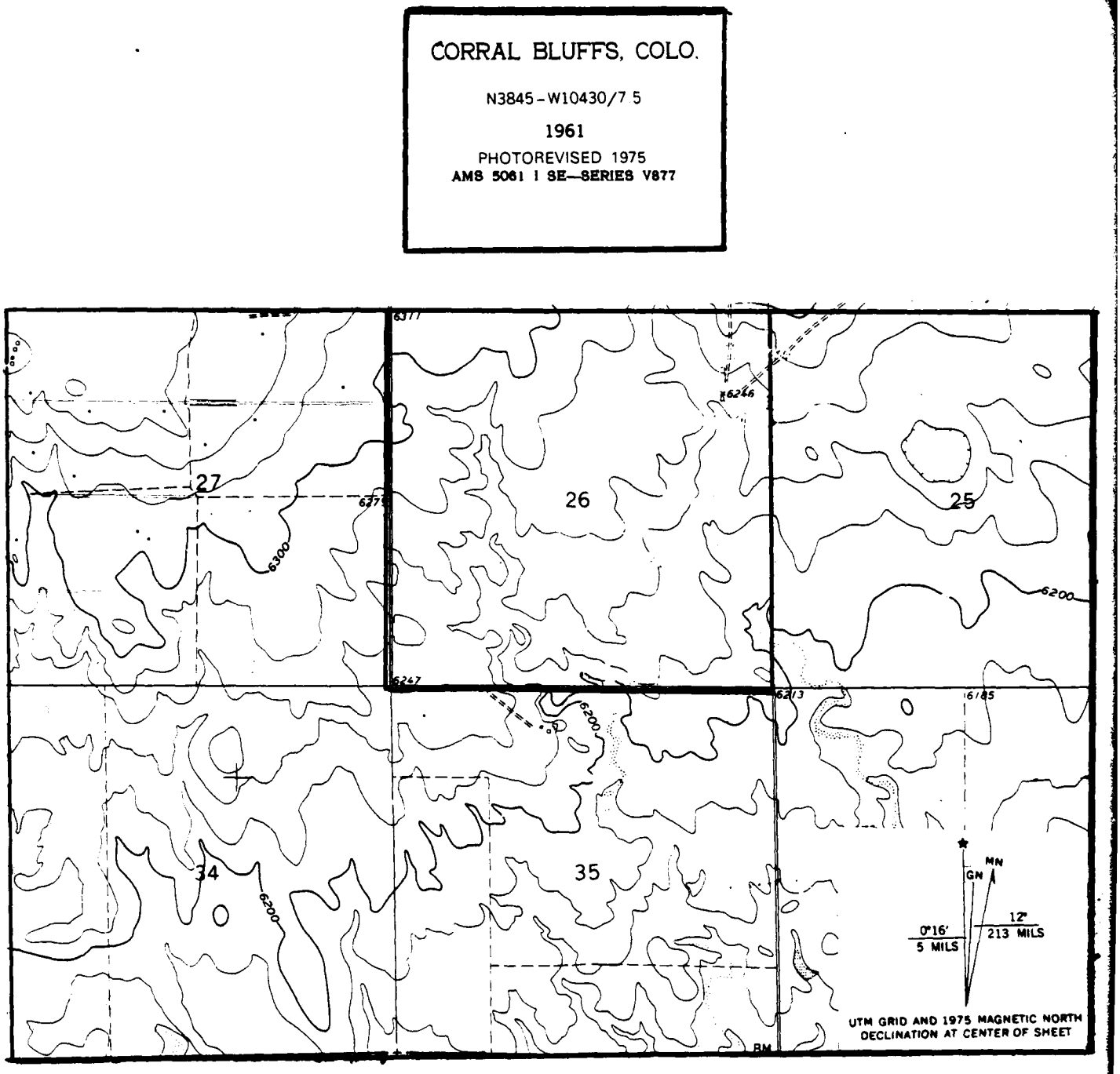


Figure 2: The Survey Area.

completed by the Colorado Preservation Office for Chapel Hills Park near Colorado Springs (Halasi 1980). John Gooding (1977) conducted a survey of the proposed Powers Boulevard Corridor in Colorado Springs. Other studies conducted in periphery areas or synthesis of work for eastern Colorado prehistory as a whole, also provides valuable information for research in the present project location.

Cultural resource management studies in peripheral areas include a survey of Castlewood Canyon State Park in Douglas County (Eddy 1981), a survey and test excavation of the Elizabeth Microwave Tower Site between Elizabeth and Kiowa, Colorado (Davis and Cassells 1981), the Fountain Valley Conduit/ Fryingpan-Arkansas Project, parts of which are in El Paso County (Buckles 1974), the Fountain Creek Project in Pueblo County (Anderson and Hall 1977), and the Two Forks Project (Windmiller and Eddy 1975).

Other studies and synthesis of eastern Colorado prehistory include a summary of the Southeastern Colorado Piedmont (Campbell 1969: 492-496), compilation of eastern Colorado radiocarbon dates from Pre-Clovis to Historic times (Breternitz 1969) and later with additional dates (Butler 1981), a Prehistoric Overview of eastern Colorado and the High Plains (Haug 1968; Wedel 1963a), a settlement analysis for northeastern Colorado (Kvamme 1979), and the initial formulation of a research design for eastern Colorado for the State Historic Preservation Plan (Butler 1980).

The aforementioned work and synthesis as well as many other studies throughout eastern Colorado has provided a foundation for the prehistoric chronology of the present project area. It has also identified a number of problem areas or gaps in the existing knowledge for the prehistory of the region.

The earliest definite known cultural tradition is the Paleo-Indian (ca. 10,000-5,000 B.C.). However, there is increasing evidence for an earlier Pre-Projectile Point Horizon (Chedd 1980; Stanford 1979). An example of this horizon is the Dutton and Selby sites in eastern Colorado. Remains include extinct faunal bones exhibiting flaking and spiral fracturing possibly produced by human means. However, these sites are rare and remain controversial.

The Paleo-Indian tradition is divided into three complexes: The Llano (ca. 10,000-8,500 B.C.); the Folsom (9,000-7,500 B.C.); and the Plano (8,200-5,000 B.C.).

Most of the evidence for the Paleo-Indian tradition exists in the form of isolated surface finds,distinctive points and tools.

Sites for the Llano complex include the Lamb Springs site (Chedd 1980:49) and near Greeley, Colorado, the Dent site (Wormington 1957:43 and Haynes 1964:1408).

The Folsom complex is represented from finds throughout the High Plains (Haug 1968:6). The Lindenmeier site, near Fort Collins, Colorado, is one of the most famous Folsom sites recorded. It allows insight into both the more common bison kill sites as well as a Folsom campsite (Wilmsen and Roberts 1978). Another Folsom site is the Powars site along the South Platte near Greeley, Colorado (Wormington 1957:39).

The Plano complex includes such points as the Hell Gap, Plainview, Eden, Agate Basin, Cody, Pryor Stemmed, James Allen, Angostura Forms, and Scottsbluff. There is Plano material from at least eight sites from the southeastern Colorado Piedmont located in the University of Denver collections (Campbell 1969:492). Important Plano kill sites in eastern Colorado include the Olsen-Chubbock site, where at least 190 bison were taken (Wheat 1972), the Lamb Springs site near Littleton, Colorado (Wedel 1963b), and the Frazier and Jurgens site (Wheat 1979).

Paleo-Indian information is lacking from surveys in the near vicinity (Martin 1979; Halasi 1980; Gooding 1977) of the present project area.

During the Paleo-Indian period (12,000-5000 B.C.), the natural environment consisted of plains and tundra which was probably similar to Northern Canada of today. The latter period has been termed the Anathermal (7000-5000 B.C.) and exhibited a cooler and wetter climate than today.

The Paleo-Indian people adapted to this environment by living in small bands. They were hunters and gatherers, following the seasonal movement of the large game animals as they spread throughout North America. The large, now-extinct animals that roamed the area consisted of mammoth, bison, giant

ground sloth, giant bear, dire wolves, etc., and were heavily exploited by the Paleo-Indians. Their tool assemblages consisted of finely crafted lanceolate projectile points, knives and scrapers. From a functional and adaptive standpoint, their tool types represent the exploitation of the large game animals that inhabited the environment.

Sometime in the latter part of the Paleo-Indian period, many of these large game animals became extinct. These large animals may have died off because of the changing climatic conditions, or they may have been over-exploited by the Paleo-Indians themselves, or maybe a combination of the two. Regardless of what factors caused the extinction of these animals, the environment, including the fauna and flora, was changing; thus, the socio-economic systems of the Indians were also changing to that of exploiting a wider spectrum of resources (Caldwell 1958).

The Archaic people were distinct from the earlier Paleo-Indians, adapting to a changing environment. With the extinction of the big game animals, they hunted and gathered a wider spectrum of resources. As a result of exploiting this wider range of resources, the Archaic population density increased. There was a climatic shift around 5000 B.C. to 2000 B.C., known as the Altithermal. This produced a markedly hotter and drier climate. Some people (i.e., Benedict and Olson 1978) have postulated that this hotter and drier climate may have forced some of the Eastern Archaic people out of the plains of Wyoming and Colorado and into the cooler Rocky Mountain areas.

The Archaic people were less dependent on herd movement, thus their socio-economic systems changed. This adaptation to a changing environment resulted in a socio-economic system and tool technology that was geared toward smaller game animals and more utilization of wild plants. Because of the increase in utilization of plant resources, grinding implements increased and the Archaic people were more aware of seasonal scheduling of plant resources. There was a transition from the larger lanceolate points to the smaller, corner-notched and side-notched points. Also, there was a change from the spear throwers and atlatles to the bows and arrows.

The early Archaic period dates to ca. 5500 B.C. to 3000 B.C. This period is noted for a cultural hiatus at lower elevations. Frison (1978:41) suggests

this is a result of insufficient sampling. Benedict, however, feels this was a time when climatic changes caused warmer temperatures, known as the Altithermal (1979). He suggests that this warmer period caused people to move out of the plains and lower elevations, and migrate to the cooler mountainous areas. Benedict has three early Archaic complexes for the Front Range that fall into this time range: the Albion Boardinghouse, Fourth of July and Mount Albion. Some of the characteristic point types have been found in other sites (i.e.-Magic Mountain, Irwin-Williams and Irwin (1966).

The evidence of occupation of the High Plains during the Altithermal is scarce. This may well be a result of people finding refuge in cooler, more moist areas. This Altithermal refuge problem is still being discussed and more research is needed for this problem area. Evidence for early Archaic occupation of the Front Range Foothills area is evident at the Magic Mountain complex (Irwin-Williams and Irwin 1966:178-179).

Evidence is scant for early Archaic sites in eastern Colorado but include the Wilbur Thomas Shelter in northeastern Colorado (Grady 1971:86). The Two Forks district near the foothills edge also produced early Archaic sites (Windmiller and Eddy 1975:353).

The Middle Archaic (ca. 3,000-1,000 B.C.) is found throughout Colorado. Characteristic points from this period are defined by the McKean Complex. These include the McKean, Duncan, Hanna varieties, Pinto Basin and Bajada points. There is an increase in the use of ground stone during the Middle Archaic which suggests an increase in the exploitations of wild plant resources (J. Jennings 1974:152-153; Frison 1978:46). This period is also well documented on the Front Range at the LoDaiska Site (Irwin and Irwin 1959) and the Magic Mountain Site (Irwin-Williams and Irwin 1966).

Other sites with material dating to Middle Archaic include the Bayou Gulch site and the Willow Creek Site, both near Franktown, Colorado (Butler 1981). Both the Apex complex and the Magic Mountain complex point types have been recorded during the Fountain Creek project (Anderson and Hall 1977: 13). A Middle Archaic site (McKean) was located during the Castlewood Canyon State Park survey (Eddy 1981). Occupation of Middle Archaic age has also been located in the Two Forks district (Windmiller and Eddy 1975). Surface projec-

tile point finds suggestive of Middle Archaic sites have been reported in eastern Colorado (Renaud 1931:48).

Near the present project area, Middle Archaic occupation has been reported for the Fort Carson area (Martin 1979) and the Powers Boulevard Corridor area (Gooding 1977), both near Colorado Springs.

The Late Archaic (ca. 1,000 B.C.-500 A.D.) shows a decrease in size and sophistication of manufacture in projectile points (Eddy 1981:18). Late Archaic sites are represented in southeastern Colorado (Campbell 1969:493) and in the Two Forks district (Windmiller and Eddy 1975). Near the present project area sites dating to this time period have been located near Colorado Springs (Martin 1979).

The Archaic stage lasted until ca. A.D. 400-500 for the foothills area of the Front Range (Windmiller and Eddy 1975:11). This is later than in eastern Colorado where Archaic terminates about A.D. 1.

The Late Prehistoric period (ca. A.D. 1-1,800) marks the appearance of the bow and arrow and its associated smaller corner-notched points, along with the use of agriculture and ceramics. Several sub-stages have been recognized for eastern Colorado. These include the Plains Woodland (ca. A.D. 1-1,000), Upper Republican (1,100-1,300) and Protohistoric Dismal River (1,700-1,800).

The Plains Woodland Tradition, beginning about A.D. 1 and lasting until A.D. 1,000, traditionally practiced agriculture, although it is not well documented in the foothills region. This is represented in surface sites and rock shelters. Windmiller and Eddy (1975-25-26) have radio-carbon dates of A.D. 460 for the Woodland occupation in Roxborough Park. Other sites manifesting Woodland occupation for the Foothills region include: Benedict's work (1975a and 1975b), the LoDaisKa site, and the Magic Mountain site. Both the LoDaisKa and the Magic Mountain sites have late Woodland occupation which may have Fremont and Upper Republican Influence (Irwin-Williams and Irwin 1966:216). From excavations in the Golden-Morrison area, dates of A.D. 600-1,000 have been obtained and referred to as the "Hog Back Phase" (Nelson 1971:11). Other sites which may have components of the "Hog Back Phase"

include the Willowbrook I site and the Hall-Woodland Cave site, both located on the Front Range.

Early Woodland pre-ceramic sites include the Van Bibber Creek site (Nelson 1969), Willowbrook Shelter, Michaud Site A, Krebs-Klein, and the Bayou Gulch sites (Butler 1981) (Eddy 1981:18).

The later Plains Woodland period marks the presence of smaller corner-notched points and cord-marked pottery. There are two foci identified for the South Platte River drainage. These include the Parker and the Franktown Foci (Withers 1954). The Parker focus is restricted to the Denver Basin, the South Platte River and its tributaries. It extends south and west to the Rio Grande River drainage in Alamosa County (Windmiller and Eddy 1975:15). This variant is characterized by cord-marked pottery with conoidal bases and straight or incurving rims. The projectile points include the medium to large corner-notched (Withers 1954:1). *Occupation belonging to the Parker Focus has* been reported from the Helmer Ranch and the Rainbow Creek site, the Van Bibber Creek site, and along the South Platte River drainage and in southern Colorado (Butler 1981), the Hutcheson burial, Michaud Site A, Krebs-Klein, Willowbrook Shelter, Graeber Cave, and the Bayou Gulch site (Eddy 1981:19).

The Franktown Focus is geographically defined as to the southern tributaries of the South Platte River (Withers 1954:2). Projectile point styles include the small to medium side-notched variety and pottery includes wide-mouthed vessels with conoidal bases and incurving rims. The cord-marked pottery is usually smoothed (Withers 1954:2). This focus is basically a transition between Late Woodland and Upper Republican. Much of the basis for this focus comes from the excavation of Franktown Cave. Recently there has been a report on the material excavated from the Franktown Cave by the University of Denver (Nelson and Pustmueller 1974). Other Franktown Focus occupations include Spring Gulch and Jarre Creek (Butler 1981).

Plains Woodland sites are also found on the southeastern Colorado Piedmont (Campbell 1969:494), on the Two Forks Project (Windmiller and Eddy 1975:356), and in the Chatfield Reservoir area (Nelson 1979). Nearer to the present project area, Plains Woodland sites have been located during the

Fort Carson Reservation Survey (Martin 1979) and the Colorado Springs Powers Boulevard Corridor Survey (Gooding 1977).

Following the Plains Woodland is the Upper Republican. Pottery vessels changed to round-bottomed form and have an out-curved rim to form a collar. Projectile points include the small, side-notched variety (Withers 1954:2). There is little evidence to indicate that the Upper Republican peoples occupied the foothills region (Nelson 1967:11-12; Wood 1971:75). Upper Republican components, nearest the present project area, include the Buick and Smiley Shelter sites near Limon, Colorado (Wood 1971).

Near Colorado Springs and the present project area, a few Upper Republican sites have been reported by Martin (1979) for the Fort Carson area and Gooding (1977) for the Powers Boulevard Corridor.

The area was inhabited or was visited by a number of proto-historic and historic tribes. These include the Ute, Shoshone, Arapahoe, Cheyenne and Commanche. The plains Apache also occupied Southeastern Colorado. Dismal River sites have been reported in the Two Forks Reservoir area (Windmiller and Eddy 1975:331).

Dismal River pottery from the Two Forks area had dark, micaceous tempered and carbon paste sherds (Eddy 1981:19). Dismal River sites have also been found on the southeastern Colorado Piedmont (Campbell 1969:495) and near Colorado Springs (Martin 1979).

Shoshonean and Ute sites have been reported from the Two Forks Reservoir study. This includes a Shoshonean brown paste sherd and a historic Ute encampment (Eddy 1981:19).

The Shoshonean (including the Utes) were from the Desert of Western Archaic Great Basin culture. The Indians' exploitation of the intermontane steppes and desert environment constituted a distinct socio-economic system. The Shoshonean and Utes were primarily small game hunters and gatherers.

The unit of exploitation for these Indians was the family (Steward 1938: Thomas 1974). However, Service (1971:83-88) argues that prior to contact, the Shoshone were characterized by a patrilocal band form of organiza-

tion. The Indians traveled in association with the distribution of environmental resources. The horse was not introduced to the Northern Basin Shoshonean until the early 1800's, and though short-lived, from the early 1800's to about 1870, the horse markedly changed the Indians' lives (Steward 1967:252).

Ethnohistoric accounts have placed the Jicarilla Apache in southeastern Colorado in the early 1700's. By 1720, the Comanche had pushed the Apache from the area and by the 1800's Kiowa, Kiowa-Apache, Cheyenne, and Arapahoe were occupying the area. There were many intense conflicts (i.e. Sand Creek 1864 and Beecher's Island 1865) between the historic Plains Indians and the White Men. By the 1870's they were removed to reservations (Campbell 1969: 496).

Historic

The historic period for the Colorado Front Range and the present project area can be classified into five major themes. These include Exploration, Fur Trapping, Mining, Railroads/Homestead/Tourism, and Ranching/ Farming.

The first known Europeans to enter into the general area was in 1776 when men traveled to Colorado from Spain, via Mexico. During this time the Spaniards were having problems over territories with the French explorers. As well, both nations were being discouraged by the Plains Indians (Ubbelohde, et al 1976). The first Anglos to enter the present-day Colorado Springs area was in 1806 when fur trappers Zebulon Pike and James Purcell began their expedition along the Arkansas River.

By the end of the month, they had reached the present site of Pueblo, and Pike's party divided, with Pike and some men heading north. They could see a large peak from the prairies. Pike made an effort to climb the peak, but failed short because of the lack of food and clothing. Though Pike did not make the summit, he was the first Anglo to describe the mountain and it became known as Pike's Peak (Ubbelohde, et al 1976:21).

In 1820 Major Stephen Long led an expedition of nineteen men, including scientists, to the Rocky Mountains. By June 1820, they had the Rocky Mountains in view, and in July they had made their way through the present sites of Greeley and Denver. The team crossed the divide betwen the Platte and

Arkansas valleys, and followed Monument Creek to the present-day town of Colorado Springs. A young scientist on the expedition, Edwin James, attempted to climb Pike's Peak. Equipped with blankets, buffalo meat and corn meal they started their climb and reached the summit by mid-afternoon. They were the first Anglos to actually reach the Peak. Major Long named the mountain "Jame's Peak" but it still held the name "Pike's Peak" throughout history (ibid:26-30).

The next theme is Fur Trapping (ca. 1800's-1840). The area along the Front Range including the Cherry Creek and South Platte drainages were a major transportation route for the fur trading period. Trapping for beaver was important, as beaver pelts were in high demand in Europe. Men set out alone or under support from eastern companies to trap the beavers. Many of these earlier trappers, including Esekiel Williams, in 1811 trapped along the Front Range (Chittenden 1954:652). August P. Chouteau, an eastern merchant, had men trapping and trading along the Platte and Arkansas Rivers (Cleland 1963: 124).

Much trading was going on for the furs with such items as whiskey and Indian trade goods. This resulted in a number of trading centers along the South Platte and Arkansas Rivers. In 1833, St. Vrain Company began a trading post near the present site of LaJunta which is known as Bent's Old Fort (Hafen 1954). Fort Vasquez was constructed on the South Platte. Other trading posts, like Fort Lookout, Fort George and Fort St. Vrain, were built in 1837, also along the South Platte (Hafen 1952). Trading occurred from St. Louis to Bent's Fort, up the Arkansas River, to trading centers at Pueblo, and up Fountain Creek (near the present project area) to the South Platte trading posts. This was along the Santa Fe Trail.

Fur trading continued to function through the early 1840's and, due to the decreasing demand for beaver pelts, it was abandoned shortly thereafter. However, the fur trading trail was bringing gold seekers into Colorado along the Front Range.

The gold seekers were to replace the fur traders in the mid-1800's, which began the Mining theme along the Front Range of Colorado. John Beck, a Cherokee Indian, discovered gold in Ralston Creek and, as a result, a number

of gold seekers were formed in Georgia, Kansas and Missouri. William Green Russell, in 1858, from Georgia, traveled down the Arkansas River, up Fountain Creek to Cherry Creek and to the Platte River. After being disappointed with their findings at Ralston Creek, the group went back and tried their luck at the confluence of Cherry Creek and the South Platte River, which was to later become Denver. Here, in 1858, they hit pay dirt and John Cantress took some of the dirt back to Missouri. His report of the gold-bearing dust began the Gold Rush to Colorado (Hafen 1941).

One of the main routes for the gold seekers was along the Arkansas River to Pueblo and up Fountain Creek to "Jimmy's Camp" near Colorado Springs, and then on to Cherry Creek (Eddy 1981:22). It was "Pike's Peak or Bust." From 1858-1859, the gold seekers that traveled the Arkansas River route used the landmark of Pike's Peak to guide them to the gold fields. As a result, most of the region around Pike's Peak was well prospected. However, little was found. It was not until 1874 that the area around Pike's Peak had any mineral recognition. However, this was short-lived as well as a second gold rush in 1884 (Ubbelohde 1972:199-201).

Though many people came to get their fortunes in gold, most were unsuccessful, and some stayed behind to settle and farm. The Homestead Act of 1862 began the Homestead theme for Colorado. Many people were coming in to farm the permanent rivers such as the South Platte and Arkansas Rivers. Mining, ranching, farming and homesteading were possible in Colorado in part because of the railroads such as the Denver Pacific and the Denver and Rio Grande.

In 1871, General William Palmer, director of the Kansas Pacific line, built a narrow gauge from Denver to the vicinity of Colorado City. There the Colorado Springs Company began, and a new town was laid out - Colorado Springs (ibid:119). Tourists were coming to Colorado by way of railroads. Many were coming to seek the hot mineral springs as well as to ride on the Pike's Peak Express. Both immigrants and tourists were by-passing Denver and traveling directly to Colorado Springs. In 1890, one was able to travel to Pike's Peak in a railroad coach with the opening of Manitou and Pike's Peak Railroad. By 1918, truck freighting brought an end to Colorado historic railroads (ibid:199, 234).

Many of the permanent settlers began farming and ranching. There were a number of successive dry years that caused crops to fail and resulted in some abandonment of the land (Davis and Cassells 1981:16). With the introduction of irrigation system, farming became much more productive. Today, ranching and farming is a very important industry for the area surrounding Colorado Springs.

Near the present study area, a number of studies have identified historic remains during the surveys. The survey of the Fort Carson Military Reservation, Martin (1979) reports 21 historic sites, representing the themes: Farming, Ranching and Mining. Other more peripheral regions to the present project area have reported historic sites that fit into the above various themes (Anderson and Hall 1977; Buckles 1974; Windmiller and Eddy 1975; Eddy 1981). Most of these fit into the Homestead and Ranching themes with a number of sites consisting of Anglo dumps or trash area. Only a few sites can be placed in the Mining theme.

RESEARCH DESIGN

Introduction

In devising a research strategy for the 640 acres site at the Consolidated Space Operations Center, every effort is made to integrate the data from this small project into a larger regional framework. This type of approach is important as it allows small projects, such as this one to make a contribution to the overall scientific research for the prehistory and history of Colorado.

On a regional level, there have been a number of problem-oriented research domains identified and discussed during the Colorado Eastern Plains Research Design seminars, chaired by William Butler and held at the University of Denver on February 27 and 28, 1981. The following research design uses as a basis a number of the problem-oriented areas that resulted from these meetings. This will allow the data from the present study to be integrated into this larger research design. Many of the research questions are specific for the study area under question, but are nonetheless designed

to be integrated into the regional work. The following research design was presented in the proposal prior to going into the field.

The topics to be addressed include Chronology/Cultural Affiliation, Site Typology and Function, Settlement Patterns, Exchange/Intergroup Interaction, Resource Utilization and Technology.

Chronology/Cultural Affiliation

Preliminary research of the general region indicates that the area has been occupied continuously for over 10,000 years (see Regional Overview). However, for the specific area under investigation, evidence indicates (Martin 1979; Halasi 1980; Gooding 1977) that the area has been occupied from Middle Archaic to Historic times. Attempts will be made to better define the periods, in both a temporal and cultural context. Sites with dating potential will be tested in an attempt to obtain absolute dates (i.e. C_{14}). The absolute dates, site type and function, and projectile point types will be compared with data from other areas (see Regional Overview) in defining the chronology and cultural affiliation of the area.

Review of the historic literature indicates that the region has been occupied from the early 1800's to the present (see Regional Overview). However, data from studies (Martin 1979; Anderson and Hall 1977; Buckles 1974; Windmiller and Eddy 1975; Eddy 1981) in the specific area under question suggest that the area was most heavily used during the homestead and ranching periods, from ca. late 1800's to the present.

Besides overall better defining the chronology and cultural affiliations for the area, specific hypotheses are as follows:

Hypothesis 1

The area was occupied during the Paleo-Indian times, for at least 10,000 years.

Test: Identify Paleo-Indian sites or artifacts and compare with dated sites and artifacts (i.e. collection at the University of Denver).

Hypothesis 2

The area was occupied during various Archaic periods: Early, Middle and Late Archaic periods.

Test: Identify and define each of these periods through absolute dates and/or diagnostic artifacts.

Hypothesis 3

The area should show somewhat of a cultural hiatus for Early Archaic complexes due to Altithermal refuge to cooler and more moist areas.

Test: Identify diagnostic artifacts or absolute dates from this period. Compare with data from well-dated Altithermal sites.

Hypothesis 4

The Historic period for the study area has been utilized based on a number of historic themes: Exploration, Fur Trapping, Mining, Railroads/Homestead/Tourism, and Ranching/Farming.

Test: Identify and define through functional use historic sites that represent the various themes.

Hypothesis 5

The most abundant themes for the specific area under question were Homestead and Ranching.

Test: Identify and define through functional classifications historic sites that belong to these themes. Compute their frequency and distribution and compare with other historic site themes for the area.

Site Typology and Function

A meaningful Site Typology will be constructed using artifact manufacture, technology, site function and site location. The site typology for this study will vary as data is collected, but will follow, with some modification, the typology presented by Binford (1980:10-12). For the exact area under investigation, a site typology has not been constructed, primarily as a result of lack of sites.

Binford (1980), in his recent work on Hunter-Gatherer Settlement Systems, distinguishes between two types of hunting-gathering systems. One is classified as Foragers who gather food on a daily basis and the other is classified as Collectors who store some of their food (Binford 1980:5-12).

Binford distinguishes five site types for the Collector system: residential base, location, field camp, station, and cache (1980:10). Based on their procurement strategy, he (1980:10-13) defines these as residential base being the maintenance, manufacturing and processing sites. This is where the collecting parties form. These I would consider as habitation sites. Locations are

areas where specific tasks are performed. This is where they procure and/or process the raw material (i.e.-quarries or kill sites). These I would include as limited activity sites with features. Field Camps are temporary operational centers away from the residential base. These I would include as camp sites (i.e.-fishing camps, hunting camps). Stations are special purpose task sites for gathering information (i.e.-observation points). These I would also classify as limited activity sites without features (i.e.-hearths). The last site type is the cache, which is classified as a temporary storage and procurement of the resources. The following site typology will be utilized for the study area, and is based on the above Binford typology with modification. Again, this typology is not stagnant and may change as data is collected in the field.

Caches: This site type is characterized by non-habitational structural features. This would include such things as storage cists.

Stations: This site type is classified as a limited activity site with low artifact diversity and non-habitational structures and no features. Limited activity refers to only one task taking place (i.e.-observation point). Non-habitational structures would include a structure that is not lived in (i.e.-blind). Features are classified as fire hearths or rock piles, and there should be no features for this site type.

Locations: This site type has limited activity with low artifact diversity and no habitational structures. This site type may or may not have features such as hearths, stone piles or non-habitational stone alignments or circles. Stone circles which seem to be ceremonial and are not habitational are classified here. Other examples of this site type might be a secondary chipping station, a tool finishing area, a game drive system, or rock art. This may also be classified as a short-term camp site.

Field Camps: This is classified as multiactivity site with high artifact diversity. There are no habitational structures, but features such as hearths should exist. This has been classified elsewhere as base camps (Plog and Hill 1971; Lischka et al 1980; Guthrie 1981b). These sites are multiactivity sites with high artifact diversity, because these are "home-away-from-home" sites. Thus a variety of activities take place here, and thus results in high artifact diversity. This may include ground stone and

tools, as well as a variety of flake types (i.e.-primary, secondary, interior). As Binford notes, "...the greater the number of generic types of functions a site may serve, the greater the number of possible combinations, and hence the greater the range of intersite variability which we may expect." (1980:12)

Residential Base: Residential base sites are field camps with habitational structures (i.e.-structural enclosures). This is classified as multi-activity site with high artifact diversity and features such as hearths.

In summary, after all the data is collected and analyzed, a meaningful site typology based on the above Binford model will be constructed. Anything less than three artifacts will be considered an isolated find.

Hypothesis 1

Due to the nature of the environmental variables, the location of the project area and past surveys (Gooding 1977; Halasi 1980; Martin 1979) near the project area, the majority of prehistoric sites will consist of "Locations" or Field Camps."

Test: Identify and assess site function based on frequency and diversity of artifacts and features. Compute frequency and distribution of functional types and compare with frequency and distribution of other functional site types.

Hypothesis 2

Most Historic sites will consist of sites functioning in a Homestead and/or Ranching theme. This will be like the Residential Base type for prehistoric sites.

Test: Identify and assess site function based on frequency and diversity of artifacts and features. Compute frequency and distribution of functional types and compare with frequency and distribution of other functional site types. Research historic documents.

Settlement Patterns

Site selection by prehistoric peoples is an important process to examine regarding settlement patterns. Assuming site selection is an active process, it is based on social, cultural, and biological needs, thus maximizing efficiency

and minimizing the effort involved to procure resources. Site location and how it relates to ecological resources is an important study regarding human behavior and economic adaptation.

The determination of Settlement Patterns will be based on a number of ecological and environmental variables. These may include, but not be limited to:

1) Altitude
2) Degree of slope
3) Aspect
4) Distance to water
5) Vertical distance to water
6) Type of water (i.e. permanent or seasonal)
7) Rank of stream
8) Water accessibility
9) Vegetation zone
10) Specific vegetation
11) Underlying bedrock geology
12) Soil type/depth
13) Geographic provenience
14) Topography

As well as the examination of Settlement systems, the reasons why the prehistoric people chose these areas will be examined (i.e.-migration route), and how this settlement pattern relates to the interaction between human behavior and ecological resources. Site type (i.e.-multiactivity field camp site vs. limited activity lithic scatter) will be examined in relationship to ecological/environmental variables. Attempts will be made to see if there is a correlation between certain site types and particular environmental variables. If a correlation does exist, an attempt will be made to examine what economic adaptation exists to explain such associations.

This problem domain is also important if little or no sites are located. Reasons for this will be examined in relation to environmental factors such as climate, elevation, flora and fauna food potentials, etc.

Hypothesis 1

Based on previous studies in Colorado (i.e.-Grady 1980) sites found in high density will occur near water, but not directly next to water, on a relatively gentle slope, and topography that includes benches/terraces,

floodplain, and confluence of drainages.

Test: Compile site data in terms of water, topography and vegetation. Identify what utilization of these environmental variables, including biotic and abiotic resources, that were important. Examine why these were important.

Hypothesis 2

Due to the small survey area, there should be little diversity in site types and their relationship to ecological zones.

Test: Identify and plot the distribution of site types and corresponding environmental variables. Compare and integrate with other regional models that have been successful: Lischka (1980), Grady (1980) and Kvamme (1980).

Hypothesis 3

Historic site types will show a high correlation with landforms and other environmental variables associated with Homestead and Ranching adaptation.

Test: Identify and plot the distribution of historic site types and corresponding environmental variables.

Exchange/Intergroup Interaction

The location of the project area, just east of Colorado Springs, is at a transitional point between the Eastern Plains and the Colorado Rocky Mountain Foothills area and Front Range. This location allows an opportunity to investigate trade and exchange networks between the Intermontane area, the more Eastern Plains cultures, and the Southwest. This will involve not only trade and exchange of goods, but also of ideas.

Historically, this area was a center for trade and exchange from beginning of historic times. The area was a "stopping off" place for explorers, fur traders and miners before they made their long journey into the Rocky Mountains. As well, many stayed behind to become homesteaders/ranchers and farmers.

Hypothesis 1

The location of the project area provided a center for trade and exchange

between various culture groups.

Test: Examine what interactions, economic ideas and goods were exchanged between the various culture groups. Identify this through artifacts, and their origins. Compare artifacts with data from other cultural areas: The Intermontane, Southwest and Eastern Plains.

Hypothesis 2

During the trade and exchange interaction, some diffusion took place, affecting the overall social organization.

Test: Identify trade goods that indicate diffusion of ideas. Identify the evidence, if any, for conflict between these various cultural groups.

Hypothesis 3

Historically the location of the project area is an excellent place for trade and exchange. Eastern lifestyles and goods were maintained and brought out and intermixed with the western culture.

Test: Identify eastern goods or ideas (architectural styles) and to what degree they have mixed with the western culture.

Resource Utilization and Technology

The environmental information collected from the sites as well as the environmental data researched for settlement systems (see Settlement Patterns) will be compared and synthesized with the examination and analysis of the artifacts collected from the sites. This should tell us much about the technology and how it relates to the exploitation of the resources in the area. For example, on a large site near Leadville, Colorado (5LK385), surface examination showed a number of separate technologies on the site, which indicated the exploitation of different natural resources (Guthrie 1981a). Attempts will be made to examine the technology and resource utilization in regard to migration organizational strategies.

Much can be deduced from lithic surface finds by examining lithic technology and functional aspects of tools. Binford (1972) utilized tool technology and function in examining the physical environment and subsistence, maintenance of cultural systems.

Hypothesis 1

The technology for each cultural group will be explicit and will relate to the exploitation of resources for the particular environment and cultural

group. That is, each cultural group will have a distinct technology based on environmental exploitation.

Test: Identify function and classifications of artifact types. Compare these with the technology of each cultural group.

Hypothesis 2

Historic sites will exhibit a high correlation with functional aspects of the technology and environmental exploitation. Each theme shows a functional tool technology, only associated with that particular theme (i.e., Mining-Mining tool technology; Ranching-Ranching tool technology, etc.).

Test: Identify functional aspects of tool technology for historic sites. Compare these technologies with various themes.

The preceding research design has attempted to address regional problems in relation to the project location. Certainly this small project is not going to answer all of the above questions. However, if the data from this project is integrated into the aforementioned regional problem domains, most of the questions can be addressed.

The following are a few additional and more specific questions.

1. What is the distribution of Paleo-Indian sites?
2. What are the individual groups or cultures that existed during the Archaic Period.
3. What is the evidence or lack of evidence for horticulture during the Woodland Period.
4. What historic aboriginal occupants were in the area and how can this be identified in site remains?
5. Is it possible to locate and identify Upper Republican sites in the project area? (See Regional Overview).

ENVIRONMENT

Geography/Geology

The survey area as well as the general region is part of the larger physiographic Colorado Piedmont Province. Geological events include exposures of sedimentary deposits of Mesozoic and Paleozoic ages which were uplifted in the Tertiary and Pleistocene. This uplift resulted in the Pikes Peak Massif.

The Colorado Piedmont sediments from the mountains to the west spread into the plains to the east. The topography is chacterized by relatively young flat lying surficial unconsolidated rock material overlying consolidated sedimentary rock units to the east. The surface of the present Piedmont has been exposed by erosional remains of the Rocky Mountain Peneplain during the Pleistocene (Larsen 1981; Tator 1952).

Hydrology

The survey area is shown in Figure 2. Elevation only varies by 100 feet; 6300 feet at the northwest part of the survey area and dropping slightly to 6200 feet at the southeast portion of the survey area. There are two water sources in the target area. These consist of two intermittent unnamed drainages flowing south. These drainages do not flow into any major drainage but dry up approximately two miles south of the survey area, according to USGS map. There are also two small man-made reservoirs, one on each drainage. The nearest natural permanent water source is Fountain Creek some 15 miles to the southwest.

Flora/Fauna

Most of the vegetation has been overgrazed. Flora, consisting of mostly grasses with a couple of flowers, include blue grama, needleandthread, side-oats grama, sand dropseed, buckwheat and western wheat grass (Larsen 1981). Presently wildlife includes ring-necked pheasant, mourning dove, pronghorn antelope and a variety of small rodents (Larsen 1981). Other fauna that inhabit the general area today include a variety of birds and reptiles, such as the prairie rattlesnake, jack rabbits, desert cottontails, coyotes, skunks, ground squirrels, pocket gophers, wolves, mule deer, whitetail deer, beaver, and porcupine (Larsen 1981; Gooding 1977:4; Eddy 1981:7). Bison were known to inhabit the area prehistorically and historically, but do not exist in the area today.

The above plants and animals, except for bison, inhabit the region today, and most likely did prehistorically. There was probably little use of the grasses or the few flowers by the Indians, as none are edible (Harrington 1967). The grasses do, however, offer food for the wildlife which were hunted by the prehistoric inhabitants. Even today the flora is used for grazing livestock in the area. Most of the animals presented above could have been hunted by the Indians.

Soils

The overall soil for the area is the Stoneham-Ascalon-Fort Collins soil series. This includes well-drained soils that formed in mixed alluvial and eolian material. The specific soils for the survey area is shown in Figure 3. This includes:

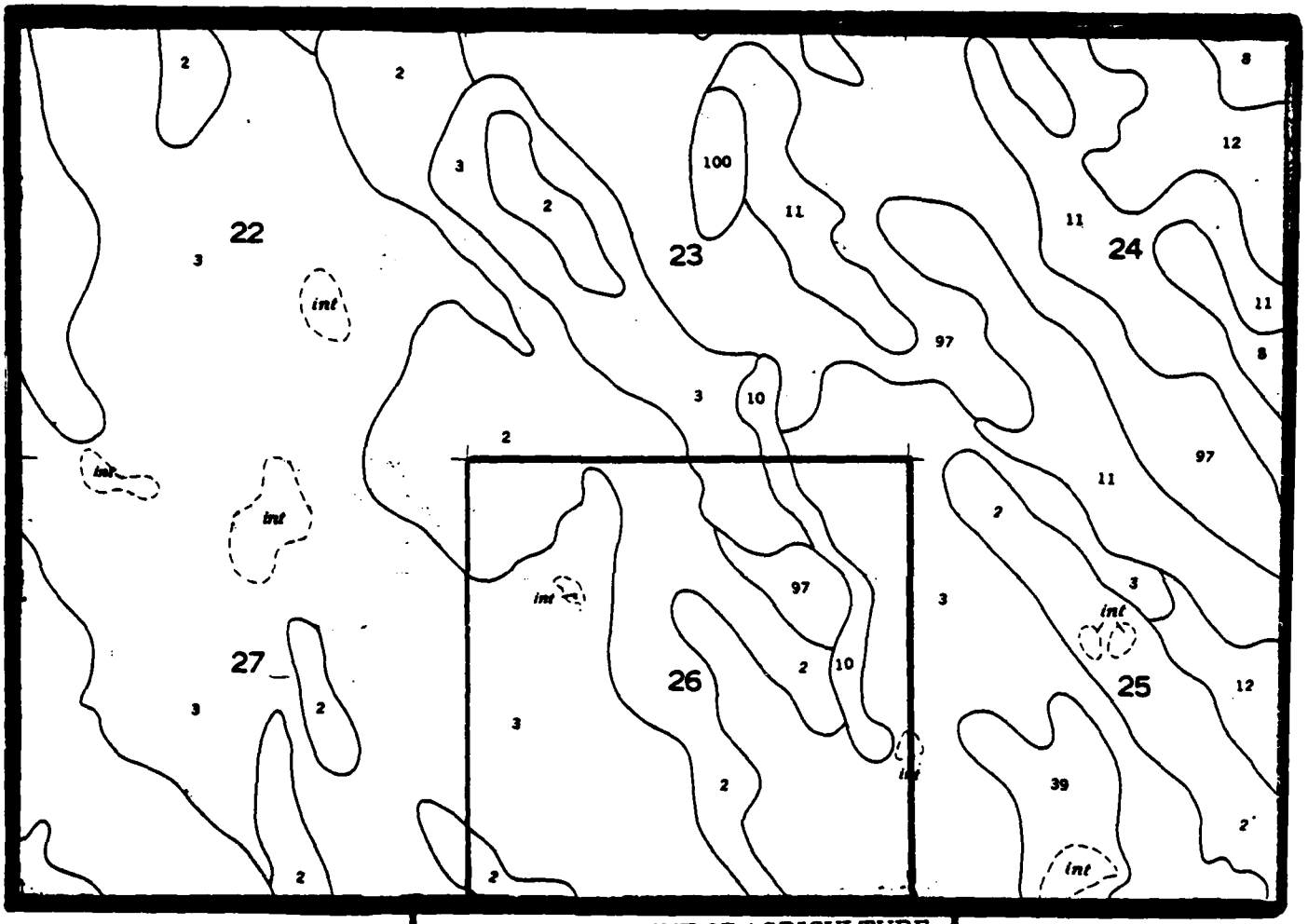
Number 2 & 3 - Ascalon Sandy Loam: This is a deep, well-drained soil formed in mixed alluvium and wind-laid material. The surface is a brown sandy loam about 8 inches thick with a subsoil about 22 inches thick with a brown, yellowish brown, and pale brown sandy clay loam. The substratum is a calcareous, very pale brown sand loam and loamy sand (Larsen 1981:8,9).

Number 10 - Blendon Sandy Loam: This soil type represents a small percentage of the total survey area. It consists of a deep, well-drained soil. The surface is about 10 inches thick consisting of a dark grayish brown sandy loam. The subsoil is dark grayish brown and brown sandy loam, approximately 26 inches thick. The substratum is a light brownish gray gravelly sandy loam (Larsen 1981:12-13).

Number 97 - Truckton Sandy Loam: This soil also represents a small percentage of the survey area. It is a deep, well-drained soil with a surface layer of grayish brown sandy loam about 5 inches thick. The second layer is about 3 inches thick and consists of a dark grayish brown sandy loam. The subsoil is a brown sandy loam approximately 16 inches thick (Larsen 1981: 60-61).

All soil areas exhibit surface runoff that is slow to medium, and erosion and soil blowing that is moderate. This suggests that archaeological sites should be exposed but at the same time would not be totally obliterated by over-erosion.

SHEET NO. 18
EL PASO COUNTY AREA, COLORADO
(CORRAL BLUFFS QUADRANGLE)



U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1974 and 1975 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

Scale 1:24000

EL PASO COUNTY AREA, COLORADO NO. 18

Figure 3: Soil Map of Survey Area.

Climate

The area is generally hot in the summer and cool in the winter. The average temperature in the winter is 31.0 degrees F with a daily minimum of 17.7 degrees. The average summer temperature is 67.4 degrees with a daily maximum of 82.3 degrees.

Annual precipitation has an average of 15-21 inches. This precipitation occurs mainly in the form of thunderstorms during the period April through September. The potential growing season occurs during this highest precipitation. However, the potential for dryland crops is limited by this low average annual precipitation (Larsen 1981:2).

This climatic history, if indicative of prehistoric times, would not be a too unpleasant place to live. Horticulture would have been possible, but without some kind of water control or irrigation, it would have been relatively difficult, and the growing season would have been short.

Condition of Land

The vegetation today is overgrazed and thus erosion may be occurring at a faster rate. Ground visibility varied but was usually in the range of 40% to 60%. Consequently, it was very easy to see the ground. A general scatter of modern trash was found throughout the survey area.

Raw Lithic Resources

Raw Lithic resources do not occur within the project boundary. Petrified wood is known to occur locally around Corral Bluffs (Powys Gadd, personal communication).

FIELD METHODS

The survey consisted of a 100%, on the ground survey, of 640 acres. The survey team consisted of three archaeologists, spaced no greater than 30 meters apart, walking north-south transects. After the north-south transects were completed, the survey team walked along the two unnamed drainages within the survey boundary. This was conducted by having one archaeologist walk in the drainage bottom, examining the drainage banks for exposed cultural resources, while the two other crew members walked along the top terrace of the drainage, one on each side. It was discovered during this part of the survey that some drainage banks still had snow on them, and thus prevented thorough examination of the bank. Consequently, the Project

Archaeologist returned at a later time, once the snow had melted off, to re-examine the banks. When a site or isolated find was encountered, pin flags were used and the specific area was examined extensively for more cultural material.

When sites were encountered, their exact locations were placed on a U.S.G.S. Topographic map. State Inventory Record Forms were filled out and sketch maps were made. Black and white photographs were also taken. Isolated finds were recorded on State Isolated Find Forms. Environmental information was noted, and notes were taken during the entire survey. All diagnostic artifacts were collected for analysis in the laboratories. Trowel testing was performed on all isolated finds. This was conducted to ensure there were no subsurface cultural materials.

Limited testing was also performed on the location where a probable bison mandible was observed. This was conducted by excavating the slump that was overlaying the partially exposed bone. A trowel was used and the excavation proceeded in 10 cm levels. All soil near the bone was screened using a 1/16" screen. After the mandible was pedestalled, mapped, photographed and removed, a shovel was utilized to remove about 50 cm of the bank where the bone was located. No cultural material or any more bone was observed.

LABORATORY METHODS AND ANALYSIS

The major objective in the analysis process was to gather sufficient data to address the research questions. Collected material includes the projectile point fragment (5EP229), the large petrified wood core fragment showing signs of scraping activity (5EP232), and a well rod and large milk can from site 5EP226. This material was returned to the University of Denver Archaeology Laboratories for analysis. All artifacts were washed and catalogued. Tool function was based on microscopic examination of edge wear and morphological classifications. Analysis of the two Lithic artifacts collected followed the same procedure as outlined by Ahler for Rogers Shelter (1971).

The artifacts not collected were analyzed in the field. Each item was recorded as to its length, width, utilization (if any), material type, and color.

Research on site 5EP226, the livestock watering site, included a literature review of State and County files in Colorado Springs, The Colorado State Board of Land Commissioners and extensive research of the Division of State Archives and Public Records, both in Denver. Once the date and function of the site was documented by written records, no furtner analysis was conducted on the historic artifacts collected.

SITE AND ISOLATED FIND DESCRIPTIONS

Site 5EP226

The site, an historic windmill and stock watering area, is located at the bottom of a gentle south facing slope in the northeast part of the survey area. The elevation is 6246 feet. The site is located approximately 50 meters northeast of an unnamed intermittent drainage. Native vegetation includes dominantly blue grama, needleandthread, side-oats grama, sand dropseed, buckwheat, and western wheat grass. However, overgrazing is evident and the grasses are extremely short.

The soil is Ascalon Sandy Loam with the subsoil a brown, yellowish brown, and pale brown sandy clay loam about 22 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981: 9-13).

The site consists of a livestock water and grazing area. Its dimensions are 120 meters north-south by 130 meters east-west. However, this boundary is based on the extent of the structures and features, and does not include the total grazing area used or the associated Ranch. These dimensions are unknown. The site has eight features (Figure 4).

Feature 1 - Feature one is the windmill. It is 2 x 2 meters at the base and is approximately 10.6 meters high. Construction materials consist of oak wood boards, galvanized steel, galvanized and lead pipe, bolts and nuts, angle iron, and twisted wire for the stabilizer. Associated with this feature arewell rods made of oak circular wood with split steel and galvanized connecting hoods. The steel blade at the top of the windmill has the factory name "Airmotor" written on the blade. The windmill was once utilized to pump water from the old well for the livestock. It is no longer in use. The condition of the windmill is in moderate phase of deterioration.

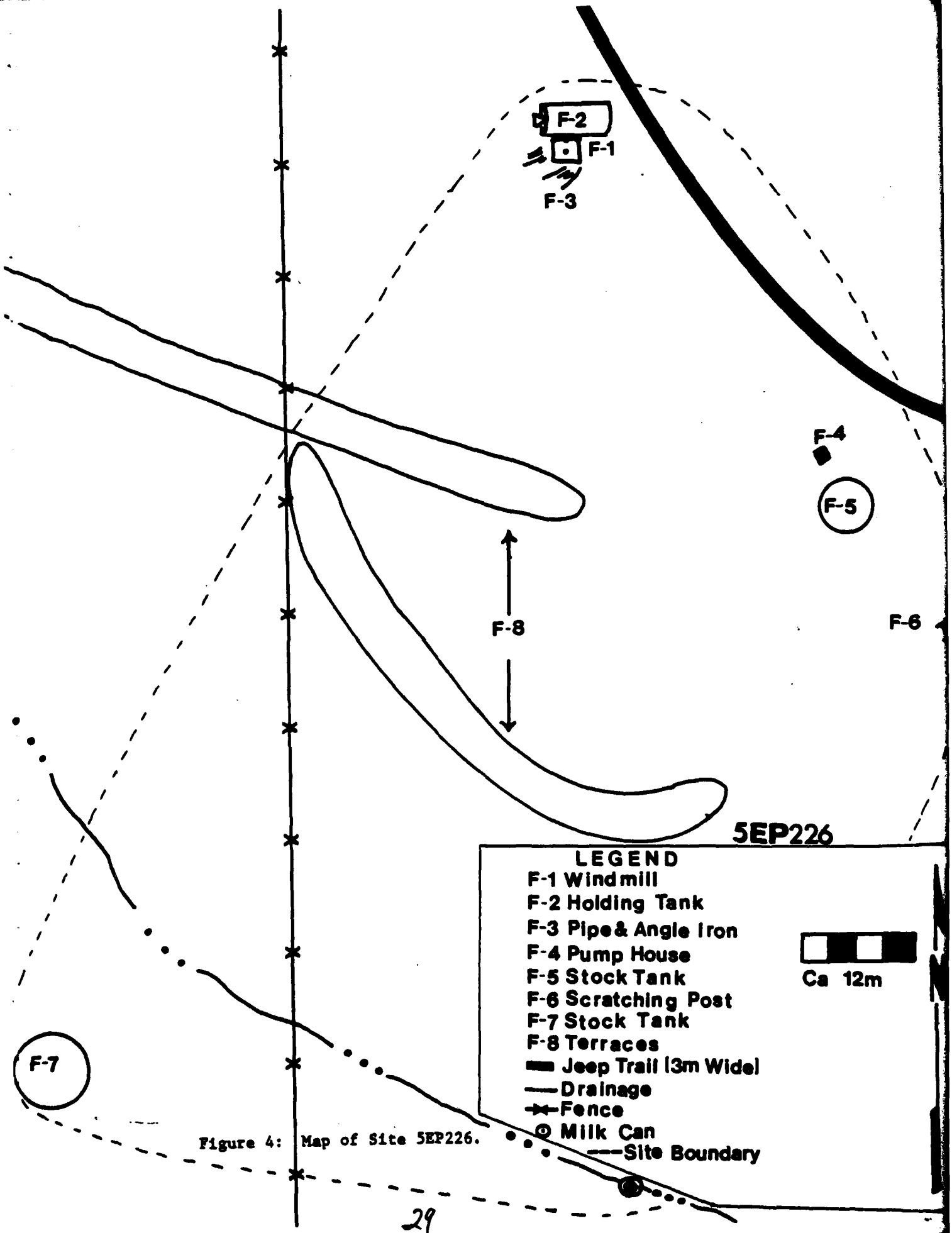


Figure 4: Map of Site 5EP226.

Feature 2 - Feature two consists of a large holding tank. It is 7 meters in length by 2 meters in width. The tank is 3.2 meters in diameter. Approximately one-half of the tank is buried in the ground. Construction consists of ½" steel riveted panels with silver metal paint over it. Some spot welding occurs on the corner plates. The west end of the tank has recent plastic pipe with screw clamps. This is enclosed in a wood frame. The construction and the appearance indicates a more recent structure than the windmill. This may be used to hold water after the windmill was no longer in use.

Feature 3 - Feature three is a general scatter of pipe and angle iron. This is also the location of the oak circular wood well rods with split steel and galvanized connecting hoods.

Feature 4 - Feature four is the pump house. It is 1 x 1 meter and about 60 cm high. The base is made of cement with a wood top. The condition of this structure is very good and it also appears to be more recent than the windmill. The pump house may still be used to pump water from the large holding tank (Feature 2) to the stock tanks (Features 5 and 7).

Feature 5 - Feature five is the smaller stock tank located near the pump house (Feature 4). The tank is circular with a 3.85 meter diameter. The rim of the tank is approximately 60 cm above the base of the tank. The rim is made of galvanized steel and the base is made of concrete. The rim is held together with large nuts and bolts. There is a similar shape depression nearby which indicates another tank may have been used there at one time.

Feature 6 - Feature six consists of a livestock scratching post. It is an H-frame made of wood with the actual scratching board missing. It is about 2.1 meters high and 2 meters in length. Round nails are used in the construction.

Feature 7 - Feature seven is the larger of the two stock tanks and is located a considerable distance away from the rest of the features. It also is made of a concrete base with a galvanized steel rim held together by nuts and bolts. It is 6 meters in diameter and the rim extends 90 cm above the base of the tank. Both stock tanks (Features 5 and 7) are in good condition.

Feature 8 - Feature eight consists of man-made terraces. These were probably bulldozed to prevent erosion and soil blowing. The terraces vary, but are approximately 2 meters high and 5 meters in width.

Also associated with the site is a jeep trail that leads to the windmill from the north. An old large milk can was also observed in the bottom of an unnamed intermittent drainage, located at south part of the site. Overall disturbance of the site is minimal and most of it appears to be kept up, and may still be in use. The windmill, however, has not been in use for some time. Its condition and construction appear to be older than the rest of the structures.

A literature search at the Division of State Archives and Public Records showed that the land was unleased in the 1920's but was used by Henry Bledsoe in 1938. There was probably an earlier lease on the land, but there is a gap in the records earlier than 1938. The documents show that a windmill was on the land by 1953 and there is mention of water drilling prior to 1948.

A letter found in the files (See Figure 5) from the State Board of Land Commissioners to Honorable Ed C. Johnson, Governor, dated January 27th, 1956, gives the most valuable information regarding the date of the site. With this letter and the other records, the area was used for grazing in the 1920's and 1930's. There is a gap in the records and in 1938, Mr. Bledsoe leased the land and improvements were made prior to 1948.

Thus, the site may have been utilized sometime in the 1920's and/or 1930's. However, the windmill which appears to be the earliest structure on the site, was probably constructed by Bledsoe sometime after 1938. The remaining structures at the site appear to still be in use.

Isolated Find 5EP227

The isolated find, one flake, is located on a gentle southwest facing slope, 100 meters east southeast of the windmill site (5EP226). An unnamed intermittent drainage is located 100 meters to the southwest. The flake was found at an elevation of 6245 feet. Natural vegetation includes dominantly blue grama, needleandthread, side-oats grama, sand dropseed, and buckwheat. The soil is Ascalon Sandy Loam. The subsoil is 22 inches thick and consists of a brown, yellowish-brown, and pale brown sandy clay loam. Surface runoff

General

19482-8

22298-8

Cross file -

3-26397

Henry Bledsoe

January 27th, 1958

Honorable Ed C. Johnson, Governor,
State of Colorado,
State Capitol Building,
Denver, Colorado.

Dear Governor Johnson:

Agreeable to your request I am making a brief report on the record of Henry Bledsoe as to his leasing of State lands.

During the 1930s there was a large acreage of State land in Otero and Crowley counties which was unleased. A great portion of this land was being used as public domain by the adjoining stockmen. Most of this land had no livestock water. The cattlemen would use it following a rain, and the sheep men would use it when there was snow on the ground in the winter. The records show that some of this land was used by Boone Veal in his sheep operations, along with some land that he had leased.

In 1938 Mr. Bledsoe came up from Texas and, after a very careful investigation, negotiated a lease on a total of 62,585.71 acres of State land at 4¢ per acre. In his agreement with the State Land Board he stated that he would fence this land and develop adequate water for livestock operations.

The second lease which was issued in 1943 started out at 4¢ per acre, but was issued on a sliding scale, and the rental rate for the last year was 8¢ per acre.

In 1948 when Mr. Bledsoe's lease was up for the second renewal, we refused to renew the lease at 8¢. After considerable negotiation, Mr. Bledsoe said that he could not afford to pay more than 8¢ per acre. He further stated that if he could get his money out of the improvements he would turn the lease to anyone we directed. He asked for an extension of time in order to effect a sale. We extended his lease one year at 8¢ per acre. The same conditions prevailed in 1949, and the lease was again extended for one year at 8¢ per acre, giving Mr. Bledsoe time to effect a sale of his ranch, including an assignment of the State leases.

Figure 5: Letter from State Board of Land Commissioners.

In 1950 Mr. Bledsoe came to us and said that he had finally succeeded in selling his ranch to a Mr. Lewis, but it was with the understanding that the rental rate on the State land would be 2¢ per acre. We told him we could not grant him a lease at 2¢ per acre. After some negotiation we agreed to renew the lease at 9¢ per acre per annum, providing he would pay an additional rental of $5,630.20. This figured the over-all rental which the State received at 11-1/3¢ per acre per annum. This proposition was accepted by Mr. Bledsoe. Two assignments had previously been made, and following the issuance of the 9¢ lease, an assignment was made to Mr. Lewis embracing 50,578.20 acres.

During the two years that the lease was extended the Board made several unsuccessful attempts to find someone with resources enough to take over the Bledsoe lease and pay for the improvements located upon the State land.

The facts are that there was a large acreage of State land unleased and which, because no one had taken care of it, was in poor condition. Mr. Bledsoe leased this land and built, according to the records, 40 miles of new fence, and rebuilt 67 miles of old fence, some of which had remained on the land since the land was leased in the 1920s. He also put down five deep wells and installed adequate power units to raise the water for livestock purposes. He installed adequate tanks and, having divided the ranch into numerous pastures, he laid several miles of water pipe from the various wells so that each pasture could have adequate water. By deferred grazing and rotation of the use of the various pastures, the grass was restored until now the ranch has a very desirable sod covering.

Mr. Bledsoe's report shows that the total cost of improvements on the State land was $72,512.77, of which the Federal Government paid $6,668.30. We were unable to check these costs conclusively, but we did check them to such an extent that we believed them to be essentially correct.

The over-all picture is that because of Mr. Bledsoe's expenditure of money and his work and effort, the State now owns a large block of land which is adequately watered and adequately fenced, and under normal weather conditions is a very desirable livestock ranch. This may be, in fact, another case where the State Land Board did not keep up with the inflation, but in my opinion the over-all picture is good for the State of Colorado, and there is no reason why the schools of Colorado cannot support Mr. Bledsoe's appointment to any position you may elect.

Very truly yours,

J. J. [illegible], Register
STATE BOARD OF LAND COMMISSIONERS

JJR:mp

is slow to medium with moderate erosion and soil blowing (Larsen 1981:9).

The isolated find consists of a secondary flake of brown/gold petrified wood (body) and tan/light brown petrified cortex (the bark). It is 3 cm x 3 cm x 1 cm.

No other cultural material was located in the area. The flake was found on the surface and there was no indication of subsurface deposits. Limited testing was conducted, but nothing else was located. The cultural affiliation and time period for this artifact is unknown.

Isolated Find 5EP228

The isolated find, one flake, is located on top of a small rolling hill that overlooks an unnamed intermittent drainage near the windmill site (5EP226). This drainage is located 140 meters east of the flake. The elevation of the isolated find is 6263 feet. Natural vegetation is dominantly western wheat grass, needleandthread, and side-oats grama. The soil is Truckton Sandy Loam. The surface layer is grayish brown loam about 5 inches thick. The second layer is a dark grayish brown sandy loam about 3 inches thick. The subsoil is brown sandy loam about 16 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981:61).

The isolated find consists of a tertiary flake of Golden/Brown petrified wood. This appears to be a similar material to isolated find 5EP227 located approximately 250 meters to the northeast. No association is made, however. The flake is 2.1 cm x 2.9 cm.

No other cultural material was observed in the area. The flake was found on the surface and limited testing resulted in no subsurface cultural deposits. Cultural affiliation and time period is unknown.

Isolated Find 5EP229

This consists of a point fragment located on a slight south facing slope. An unnamed intermittent drainage is located 330 meters to the east. The elevation of the isolated find is 6255 feet. Natural vegetation is predominantly blue grama, needleandthread, side-oats grama, sand dropseed, and buckwheat. The soil is Ascalon Sandy Loam with the subsoil a brown, yellowish-brown, and pale brown sandy clay loam about 22 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981-9).

The isolated find consists of an off-white to pink translucent cryptocrystalline (chert) projectile point fragment (Figure 6). The measurements for this projectile point are presented in Table 1 and follow the measurement system described by Ahler (1971). The exact date of the artifact is unknown because there is no associated absolute data. However, the attributes, style and material are similar to Woodland points found elsewhere. Specifically, it is very similar to the Woodland MM35 points which date to ca. 1,000 A.D. (Irwin-Williams and Irwin 1966:93-94).

No other cultural material was observed in the area. The point was found on the surface and limited testing resulted in no subsurface deposits. The point may have been dropped or lost during hunting.

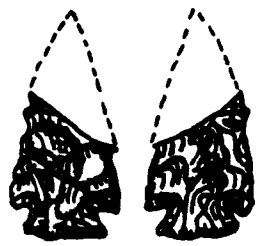
Isolated Find 5EP230

This flake is located on a man-made terrace produced by a bulldozer. This terrace is approximately 20 meters in length and shows extensive burning. There is no vegetation on the terrace. The elevation for this find is 6250 feet. An unnamed intermittent drainage is located 210 meters to the northwest. Natural vegetation around the terrace includes blue grama, needleandthread, side-oats grama, sand dropseed, and buckwheat. The soil is Ascalon Sandy Loam with the subsoil a brown, yellowish-brown, and pale brown sandy clay loam about 22 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981: 9).

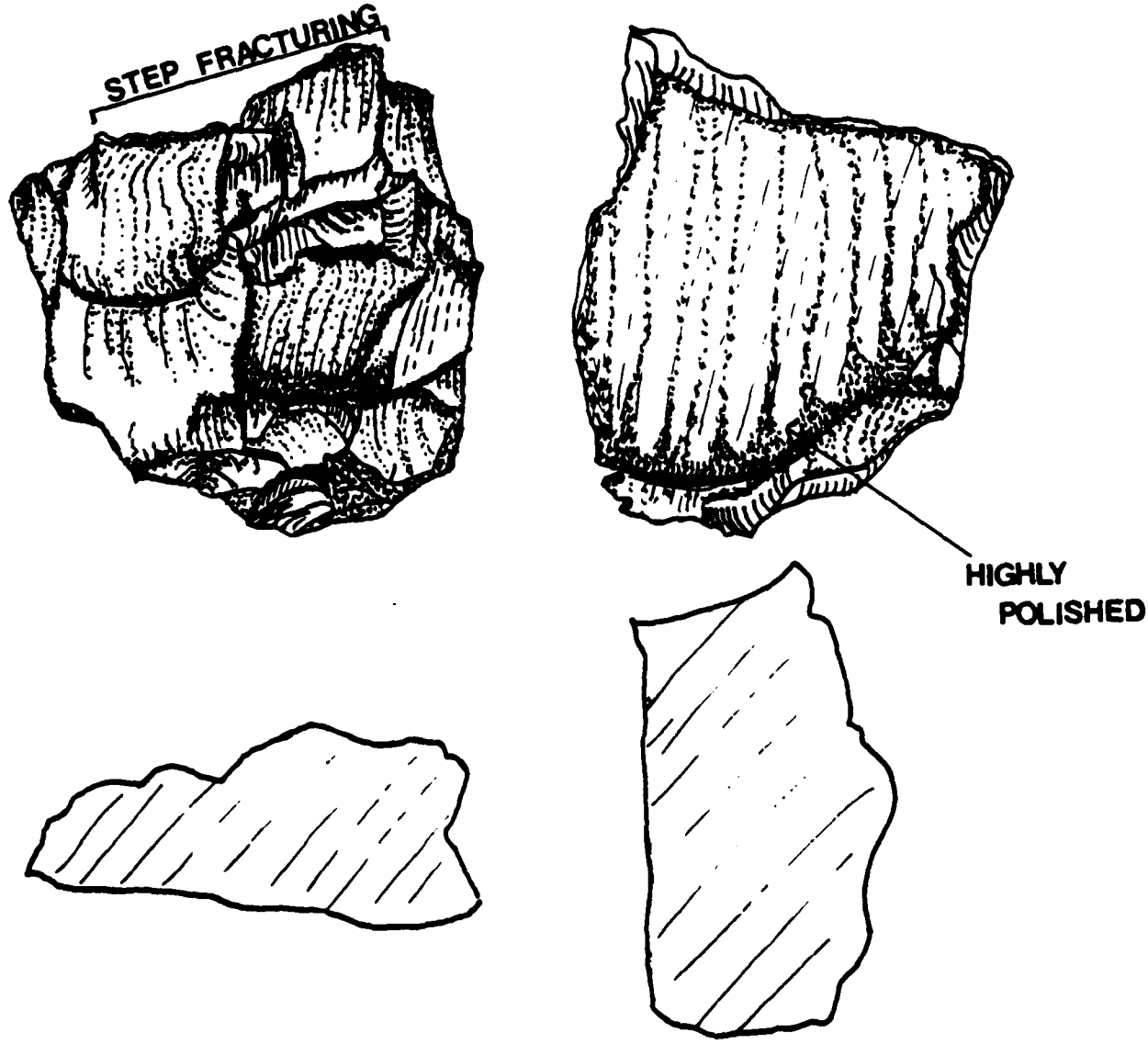
The isolated find includes a small chalcedony interior flake. The pressure flake is .6 cm x .9 cm. No other cultural material was observed in the area. The flake was found on the surface and limited testing resulted in no observable subsurface cultural deposits. Cultural affiliation and time period is unknown.

Isolated Find 5EP231

This isolated find consisting of an exhausted core, is located on a flat area at a high point in the survey area. Elevation is 6260 feet. An unnamed intermittent drainage is located 220 meters to the west. Vegetation is dominantly blue grama, needleandthread, side-oats grama, sand dropseed, and buckwheat. Soil is Ascalon Sandy Loam with the subsoil a brown, yellowish sandy clay loam about 22 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981:9).



5EP229



5EP 232

Figure 6: Tools collected from Sites 5EP229 and 5EP232.

TABLE 1

Projectile Point (5EP229) Measurements
(after Ahler 1971)

Projectile Point - Cryptocrystalline - off-white to pink translucent- Chert

1.	Total length estimated	(26.5) MM
2.	Basal contact width	0.0
3.	Basal centerpoint width	0.0
4.	Proximal haft width	10.0
5.	Proximal haft length	0.8
6.	Distal haft width	8.2
7.	Distal haft length	4.5
8.	Blade base width	13.3
9.	Blade base length	3.5
10.	Maximum width	14.2
11.	Maximum width length	4.5
12.	Maximum thickness	2.3
13.	Maximum thickness length	8.0
14.	Basal dulling width	10.0
15.	Lateral haft dulling length	0.0
16.	Basal thinning length	5.3
17.	Blade edge angle	23°
18.	Weight (broken)	.7grams

The core remnant is a lavender/white chert with 50% cortex remaining. It is 2 cm x 2.5 cm. The core shows evidence of heat exposure indicated by polish on the exterior and spaulding. The interior is grainier and exhibits flake scars and fractures.

No other cultural material was observed and limited testing did not show any signs of subsurface cultural deposits. Cultural affiliation and time period are unknown.

Isolated Find 5EP232

This large core remnant was located at the bottom of an unnamed drainage, just north of a ranch house and 5 meters north of the fence on Enoch Road. Elevation here is 6210 feet. Vegetation surrounding the drainage includes blue grama, needleandthread, side-oats grama, sand dropseed, and buckwheat. Soil is Ascalon Sandy Loam with the subsoil brown, yellowish sandy clay loam about 22 inches thick. Surface runoff is slow to medium with moderate erosion and soil blowing (Larsen 1981:9).

The petrified wood core was collected for analysis. This core is not the same petrified wood material as the flakes observed at isolated finds 5EP227 and 5EP228. The texture, grain and color are different between the core and the flakes. It is large: 7.2 cm in length by 6.6 cm in width by 3.4 cm in thickness. It has no cortex, is rectangular, and is unifacially and unidirectionally flaked. It has been utilized as a scraper by the evidence of step flaking. On the opposite end, the tool exhibits high polish, suggesting it was held at this point (See Figure 6).

No other cultural material was observed in the area. The location of this artifact in the bottom of the drainage probably does not indicate where it was originally deposited. It could have been washed down there from anywhere along the drainage. Cultural affiliation and time period are unknown.

Bone Location

A probable bison mandible was observed eroding out of the bottom of a bank along an unnamed drainage. The mandible was exposed at 2.4 meters below the drainage surface. The area was thoroughly examined for cultural material, but none was located. Controlled testing was performed on the slump overlaying the bone. This slump was 1.6 meters above the drainage

bottom. The mandible was located .62 meters below the top of the slump. The testing resulted in no more bones being discovered, nor was any cultural material observed.

The depth of the mandible below the surface of the bank, as well as its partial mineralization, would suggest a relatively old age and probably bison.

The fact that the mandible was in total isolation would suggest that it had been washed down the drainage from another location and deposited where it was found. There is no sign of any cultural remains indicating human association with the bone. It does, however, present evidence that bison roamed the area in the past.

EVALUATION OF RESEARCH

The evaluation of the research design presented earlier will now be examined. Most of the problem-oriented questions can be addressed with the use of negative data. This is important for small projects, such as this one, to make a contribution to the overall scientific research for the prehistory and history of the general area. The following is the evaluation of each specific hypothesis.

Chronology/Cultural Affiliation

Little information was gained from this small project to better define the chronology and cultural affiliation of the area. Prehistorically, one projectile point fragment (5EP229) was found that is very similar to Woodland points, specifically MM35 (Irwin-Williams and Irwin 1966:93-94). This might suggest a chronology of about 1,000 A.D. and a cultural affiliation of Woodland occupation of the project area. However, no absolute dates are associated with this isolated find, so caution should be taken in making this comparison. Historically, Site 5EP226 was occupied from the 1920's or 1930's to the present. This site represents the theme ranching and livestock grazing and watering.

Hypothesis 1

There is no indication of Paleo-Indian occupation in the project boundaries. There is, however, evidence for bison in the area, with the location of the probable bison mandible. The absence of Paleo-Indian

cultural material does not negate the possibility of non-exposed Paleo-Indian sites in the project area.

Hypothesis 2 and Hypothesis 3

There is no indication in the project boundary for Archaic occupation or a hiatus for early Archaic complexes. There is evidence for Archaic occupation near the project area (See Martin 1979; Halasi 1980; Goodig 1977).

The fact that no cultural material from this time period exists in the present project area is probably more a result of settlement patterns than the fact that they were not in the area altogether.

Hypothesis 4

Through the examination of functional use of Site 5EP226, a Ranching theme was identified and defined. This ranching theme began in the project boundary sometime in the early 1920's and still exists in the area today. No other historic themes were identified within the project boundary.

Hypothesis 5

For the specific project area, this hypothesis was shown to be correct. The most abundant theme, and the only theme, was ranching.

Site Typology and Function

Little information prehistorically was gained from the project. All data was in the form of isolated finds. This suggests that the specific project area was only utilized occasionally, possibly during hunting.

Hypothesis 1

No information was assessed for site type because of the lack of prehistoric sites. The isolated finds suggest only occasional use of the specific project area.

Hypothesis 2

This hypothesis was correct for the project area. Site 5EP226 functioned in a ranching theme which is like the Residential Base type for prehistoric sites.

Settlement Patterns

Information was obtained for this research domain. It is negative data but very important for understanding Settlement Patterns.

As discussed in the Research Design certain ecological and environ-

mental variables seem to be important regarding the determination of settlement patterns (For example, see Lischka 1980; Grady 1980; Kvamme 1980). One important variable includes the accessibility to water. Recently, it has been demonstrated (Kvamme 1980:96) that the accessibility to permanent water is very important.

This critical variable, the accessibility to a permanent water source, is missing in the present project area. The project area has only two intermittent drainages. These drainages appear to only have water in them during thunderstorms. The nearest natural permanent water source is Fountain Creek some 15 miles to the southwest. Consequently, the accessibility for a permanent water source is poor. Prehistorically, availability of water in the specific project area was probably very limited. In addition, no springs could be located in the area.

Other important variables determining occupations not located in the present project area are: 1) the lack of shelter, 2) resources such as for fuel and vegetational areas, 3) topography such as benches and terraces, and 4) the confluence of drainages. Variables that are in the project area and appear to be satisfactory for prehistoric occupation include altitude, aspect, and degree of slope.

Hypothesis 1

Sites found in high density should occur when certain environmental variables are present, such as the accessibility of water, topographical features, shelter, fuel, confluence of drainages, etc. If these variables are missing, then it is predicted that high density sites will not occur. This hypothesis is shown to be correct as a number of critical variables do not exist in the project area; and, consequently, no prehistoric sites were located. With the lack of water, shelter, fuel and plant foods, the project area would not be an attractive place for occupation and utilization. The area was, however, probably occasionally utilized for hunting.

Hypothesis 2

Since no site types were identified, no information is available to examine the diversity in site types and their relationship to ecological zones.

Hypothesis 3

This hypothesis is correct. There is an association with certain environmental variables and ranching adaptation. These include a variety of grasses (See Environment) for livestock grazing, gentle landscape, and the availability for man-made watering systems (i.e., wells).

Exchange/Intergroup Interaction

There is not enough data available to adequately address the hypothesis under this research topic.

Resource Utilization and Technology

There is not adequate information to address Hypothesis 1 regarding cultural groups and a distinct technology based on environmental exploitation. However, some statements can be made regarding prehistoric resource utilization and Lithic technology.

The potential resource utilization such as the lack of edible plant resources for humans, the availability of animal resources, and the variety of grasses for game animals grazing would offer an environmental suitable for hunting.

The Lithic technology does not dispute the hunting exploitation explanation for resource utilization for the project area. The Lithic material includes a projectile point, two core fragments, one of which was utilized as a scraper and a few flakes. All of the Lithic material can be associated with the technology of animal exploitation through hunting.

Hypothesis 2

This hypothesis is shown to be correct. The ranching theme shows a functional tool technology, only associated with the ranching theme. This includes a well in which to obtain water for the livestock, a windmill to operate the well, a large holding tank to store the water, a pump house, and stock tanks for the livestock to drink from (See Site Descriptions).

None of the more specific questions could be addressed because of the lack of sufficient data.

Summary

In summary, the results of the survey and research indicates that the specific project area was only utilized occasionally by prehistoric people,

probably during hunting. Moderate erosion of the soils and excellent ground visibility would indicate that most archaeological sites would be located. However, environmentally the area is not an attractive place for prehistoric occupation beyond that of hunting, which is what the findings of research suggest.

Historically, the project was heavily utilized by the ranching industry. This ranching and livestock grazing probably began in the early 1920's and still exists in the area today.

MANAGEMENT SUMMARY AND RECOMMENDATIONS

Site 5EP226

This site consists of a livestock watering area. The site will be either directly or indirectly affected by the layout of the proposed CSOC facility. The site has a number of features including an old windmill, a present day well, pump house, holding tank and watering tanks. Research indicates that the use of the site area may date to as early as the 1920's. The oldest feature at the site is the windmill, which is an "Airmotor." The windmill is factory-made and the type is common (Dave Ford, personal communication).

Though information from the site addressed a number of the problem-oriented questions, research on the site indicated that it does not appear to be 1) associated with events significant to our history, 2) associated with lives of significant persons of the past, or 3) have distinctive characteristics of type, period or method of construction.

As a result of the above information, Site 5EP226 does not appear to meet the criteria for inclusion to the National Register of Historic Places. No further work is recommended for the site.

Isolated Finds 5EP227, 228, 229, 230, 231 and 232

Isolated Find 5EP229 consists of an isolated projectile point. 5EP231 and 232 consists of two core fragments, one of which has been utilized as a scraper. 5EP227, 228 and 230 consists of isolated flakes. All the isolated finds will be directly or indirectly affected by the construction of the CSOC facility. None of these locations appeared to have any subsurface cultural material. The information from these isolated finds did supply

some data to address some of the research questions. However, none of the isolated finds addressed any research question in such a manner as to provide important information regarding the prehistory of the area.

As a result of the above information, none of the isolated finds appear to meet the criteria for the National Register of Historic Places. No further work is recommended.

It is recommended that if any subsurface cultural material is encountered during construction, specifically along the banks of the intermittent drainages, the Colorado Preservation Office be contacted immediately.

A summary of recommendations for the site and isolated finds discussed above is presented in Table 2.

TABLE 2

Site/Isolated Finds	Type	Eligibility to National Register	Management Suggestion
5EP226	Livestock Watering Area	Not Eligible	No further work
5EP227	Isolated Flake	Not Eligible	No further work
5EP228	Isolated Flake	Not Eligible	No further work
5EP229	Isolated Projectile Point	Not Eligible	No further work
5EP230	Isolated Flake	Not Eligible	No further work
5EP231	Isolated Core Fragment	Not Eligible	No further work
5EP232	Isolated Core Fragment	Not Eliglble	No further work

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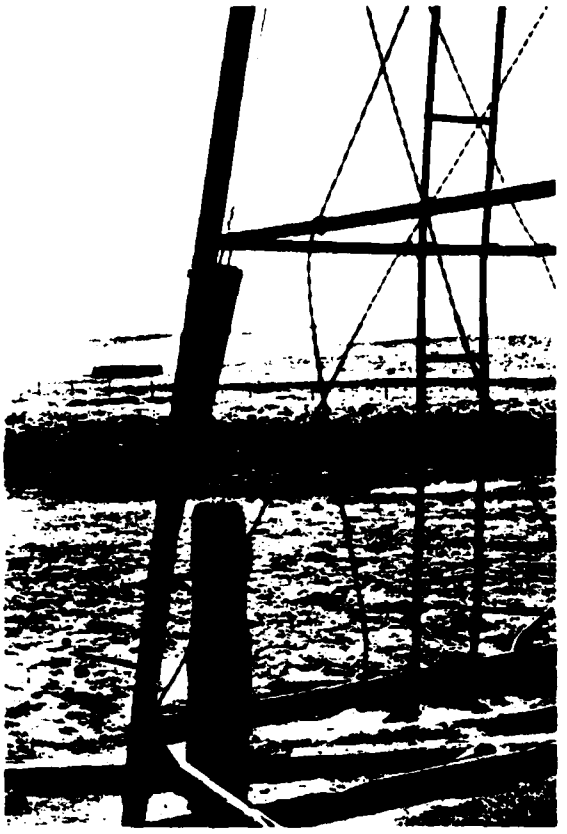
APPENDIX

Overview of Survey Area. Notice drainage and ranch house in center distance. Photo taken looking south southeast.

Overview of Site 5EP226 showing windmill (Feature 1), holding tank (Feature 2), pump house (Feature 4), and a stock tank (Feature 5). Photo taken looking north northwest.

Closeup of Feature 1 - Windmill, Site 5EP226
Notice wire and the state of deterioration.

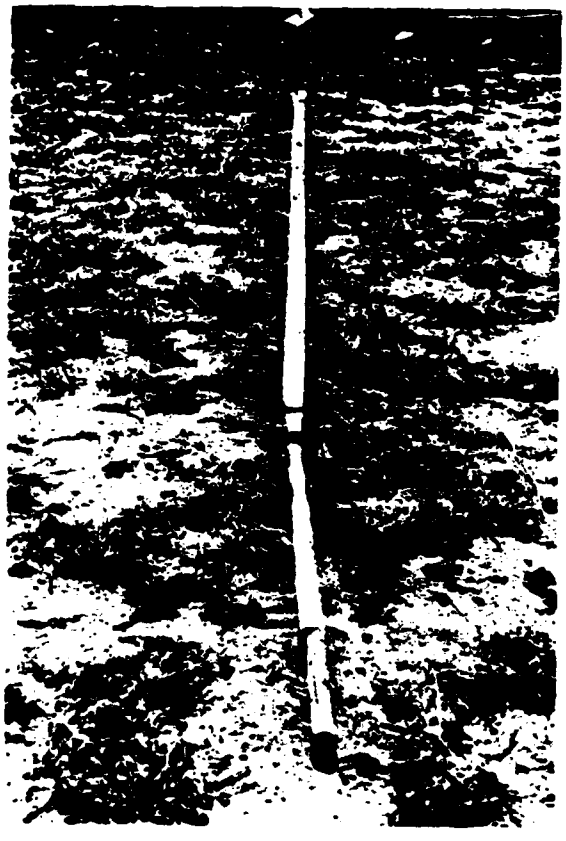
Closeup of Feature 1 - Windmill, Site 5EP226.
Notice "Airmotor Chicago" written on blade.



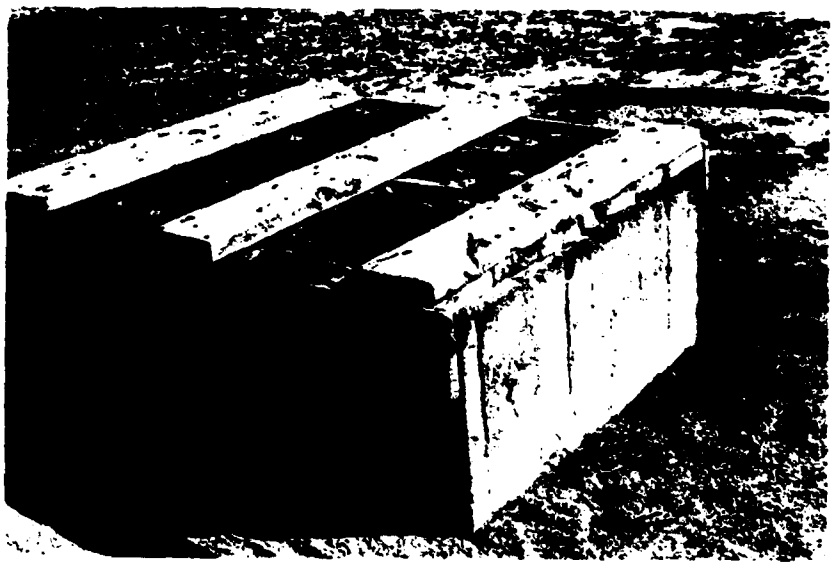
Site 5EP226. Photo taken from Windmill (Feature 1) looking south southwest. Notice terrace in center and large stock tank (Feature 7) in left distance.

Site 5EP226. Photo taken from Windmill (Feature 1) looking south southeast. Notice pump house (Feature 4), small stock tank (Feature 5), and scratching post (Feature 6) in center.

Site 5EP226. Closeup of Feature 2 - large holding tank. Photo taken looking west.



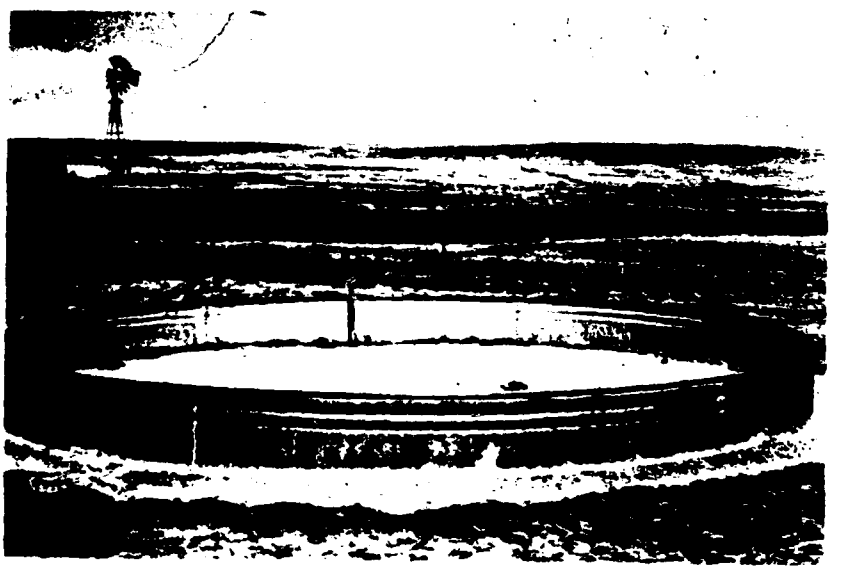
Site 5EP226. Closeup of oak circular wood well rod with split steel and galvanized connecting hoods. This is found in Feature 3.



Site 5EP226. Closeup of pump house (Feature 4). Photo taken looking south southeast.

Site 5EP226. Closeup of Feature 5 (Smaller stock tank). Photo taken looking east.

Site 5EP226. Closeup of inside stock tank (Feature). Notice scratching post (Feature 6) in distance. Photo taken looking south southeast.



Site 5EP226. Closeup of large holding tank (Feature 7). Notice the remainder of the site in the background. Photo taken looking north northeast.

Site 5EP226. Closeup of milk can. Notice windmill (Feature 1) and holding tank (Feature 2) in distance. Photo taken looking north.

Cultural Resource Survey
for the
Consolidated Space Operations Center Project
near
Colorado Springs, El Paso County, Colorado

SITE FORMS

by

Mark R. Guthrie

Prepared Under the Supervision of
Dr. Sarah M. Nelson, Principal Investigator

Archaeological Research Institute
Department of Anthropology
University of Denver

Administered by
The National Park Service
Rocky Mountain Regional Office
Interagency Archaeological Services

Funded by
The United States Air Force

Contract No. CX1200-2-B007
Permit No. 82-5

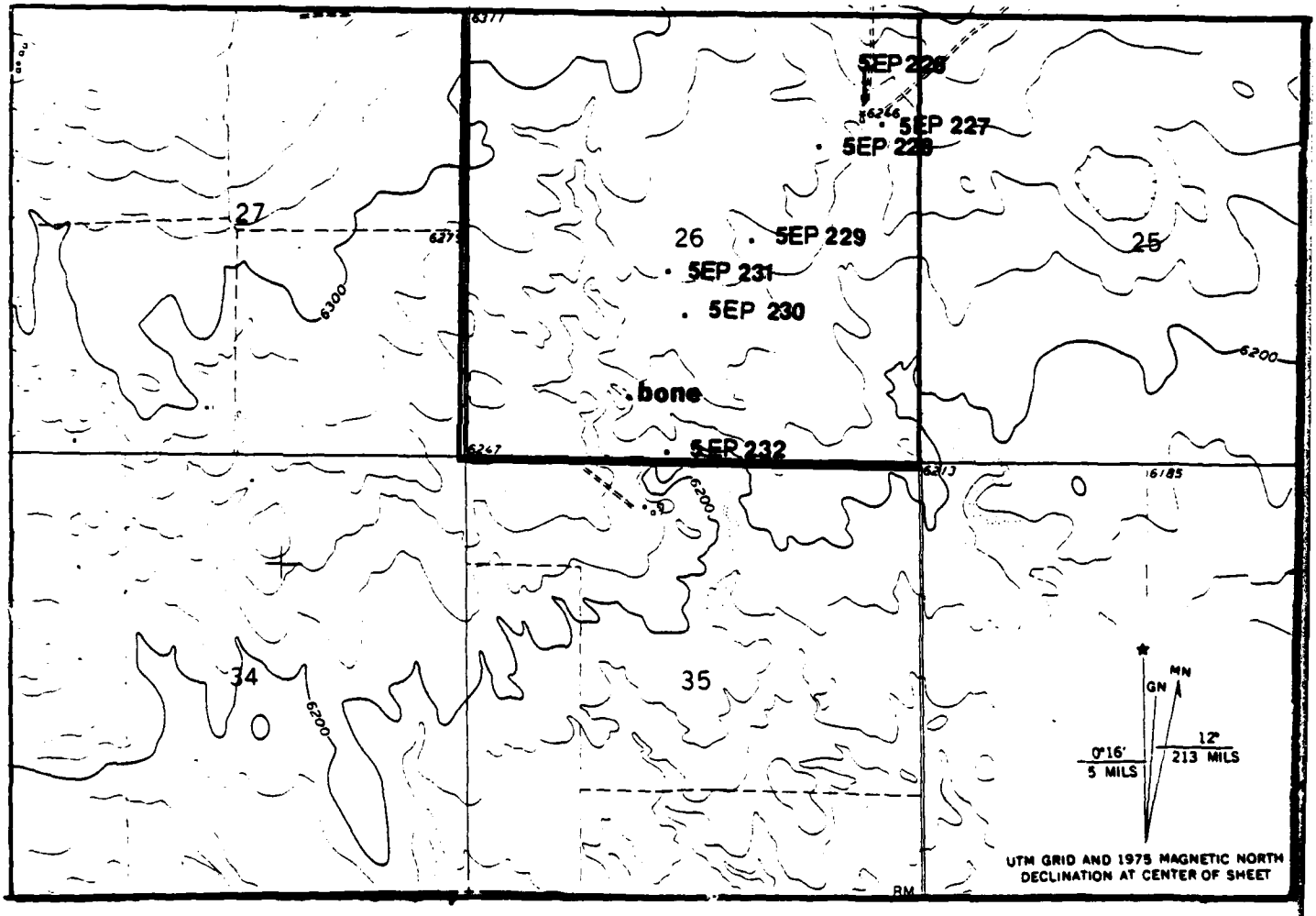
-1982-

CORRAL BLUFFS, COLO.

N3845-W10430/7 5

1961

AMS 5061 I SE—SERIES V877



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETRE

CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

2

COLORADO CULTURAL RESOURCE SURVEY

OSAC/DHP
1300 Broadway, Denver, CO 80203

INVENTORY RECORD

IMPORTANT: COMPLETE THIS SHEET FOR EACH RESOURCE PLUS EITHER AN ARCHAEOLOGICAL OR HISTORIC/ ARCHITECTURAL COMPONENT FORM. ADDITIONAL COMPONENT FORMS MAY BE ATTACHED FOR MULTI-COMPONENT RESOURCES.

NOT FOR FIELD USE
__ Det. Elig.
__ Det. Not Elig.
__ Nominated
__ Listed
Date Listed_____

I. IDENTIFICATION: 1) Resource No. 5EP226

2) Temp. No. CS-Site-1 3) Resource Name_____

4) Category: Arch. Site__, Hist./Archit. Structure X, Hist./Archit. District__

5) (For sites) In a District: yes__ no X ;Name_____

II. LOCATION: 6) Township 14^{S} ;Range 64^{W} ; SE ¼ of SW ¼ of NE ¼ of NE ¼ of Section 26 ; P.M. 6th. 7) County El Paso

8) UTM Reference:USGS Quad Coral Bluffs ; 7.5 X 15 ;Date 1975
(Attach photocopy portion of USGS Quad. Clearly show site. One UTM may be given for site under 10 acres.)

A. 13 | 5 4 1 8 6 0 mE; 4 2 9 5 1 8 0 mN. B. _ | _ _ _ _ _ _ mE; _ _ _ _ _ _ mN.

C. _ | _ _ _ _ _ _ mE; _ _ _ _ _ _ mN. D. _ | _ _ _ _ _ _ mE; _ _ _ _ _ _ mN.

9) Resource Address or Vicinity: N/A

10) City/Town N/A Lot No. ------ Block No. ----------

III. MANAGEMENT DATA: 11) Field Assessment: Eligible__ Not Eligible XX Need Data__

12) Owner/Address State

13) Known Gov't Involvement: County__ State X Federal__: Agency_____

14) Size: 17,280 sq ft._____ acres. 15)Threatened: Yes X No__ Unknown__

16) Source of Threat: Water Erosion__ Wind Erosion__ Animal Disturbance__ Neglect X
Vandalism__ Recreation__ Construction/Development X Other__

17) Recommendations: The site is characteristic of the many windmills and stock watering areas on Colorado eastern plains. No further work is recommened.

IV. REFERENCE: 18) Project/Agency Name: Consolidated Space Operations Center

19) Report Title: Cultural Resource Survey for the Consolidated Space Operations Center ~~Project Near Colorado Springs, El Paso County, Colorado~~

20) State/Fed. Permit No. State - 82-5 21) Photo Nos.RI-13-20; RII 1-17

22) Photos on File at: Department of Anthropology, University of Denver

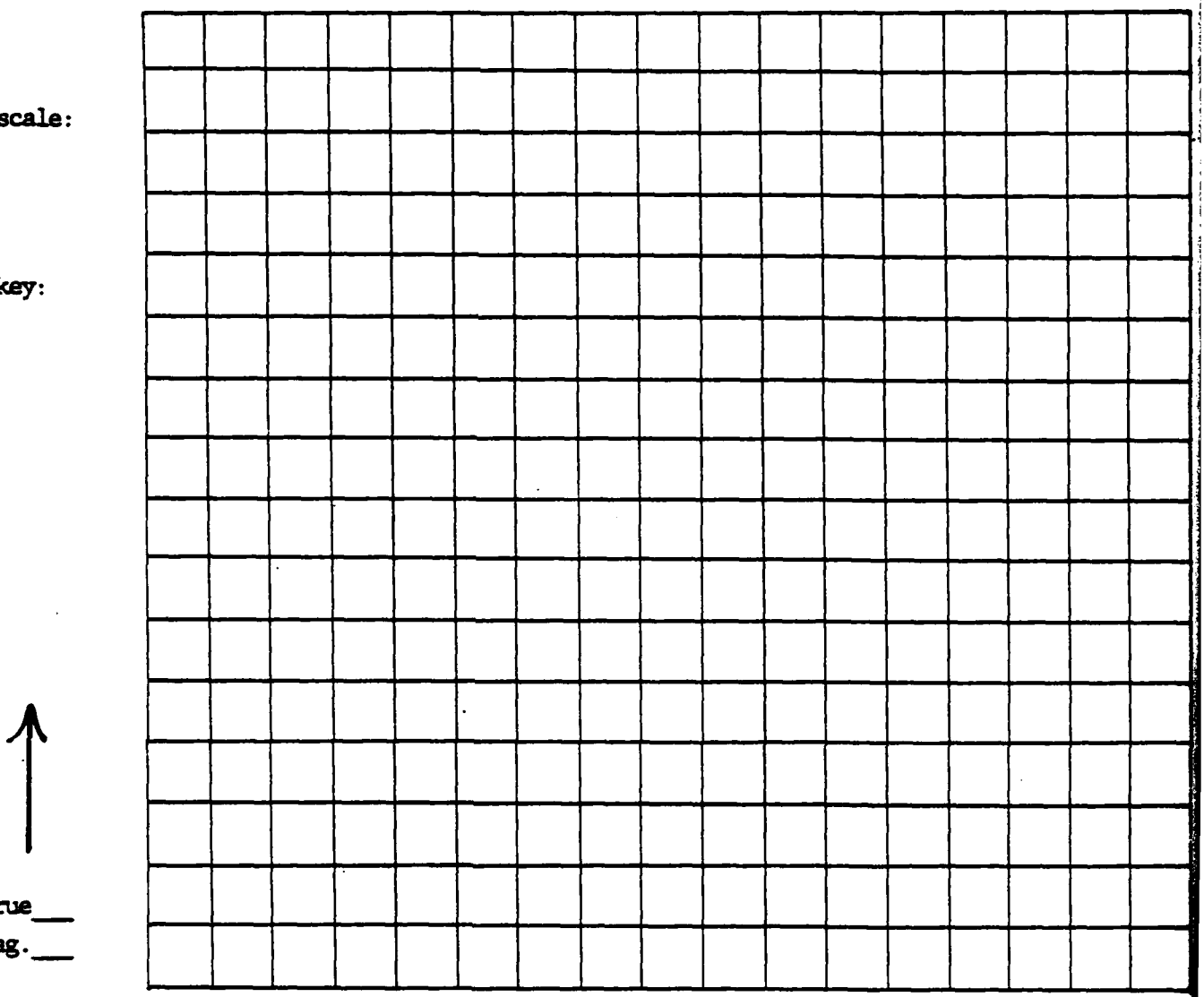
23) Recorder Guthrie/Ford 24) Phone No. 753-2406

25) Recorder Affiliation ARI, Dept. of Anthro., University of Denver 26) Date 2/19/82

V. SKETCH MAP: Indicate extent and nature of the resource area and all major topographic features, permanent modern features, and vegetation zones (if applicable). Give approximate distances and directional data.

scale:

key:



true
mag.

26) Location/Access: Take Highway 94 east out of Colorado Springs for approximately 9.2 miles (to Enoch Street). Go South on Enoch Street 2.2 miles. Look East to Windmill which is the site (.75 miles east of Enoch Street).

27) Boundary Description: (Do not complete if you have shown boundaries drawn to scale on a sketch map of have indicated lot and block number.)

SEE SKETCH MAP

28) Boundary Justification: (Complete for all resources which are more than an acre.)

Based on Structures. However, it is not known the extent of land used for grazing.

COLORADO CULTURAL RESOURCE SURVEY

Colorado Preservation Office
1300 Broadway, Denver, CO 80203

ARCHITECTURAL/HISTORICAL COMPONENT FORM

IMPORTANT: USE IN CONJUNCTION WITH THE GREEN INVENTORY RECORD FORM FOR FOR RECORDING HISTORIC STRUCTURES AND DISTRICTS. USE SEPARATELY FOR RECORDING STRUCTURES LOCATED WITHIN DISTRICT BOUNDARIES.

1) Resource No. 5EP226 2) Temp No. CS-Site 1 3) Name _____

4) Address El Paso Cty. East of Colorado Sprgs 5) District Name _____

I. INTEGRITY: 6) Condition: Good ___ Fair X Deteriorated ___

7) Original Use Ranching/Cattle Hoing 8) Present Use Same

9) Original Site X Moved ___ Date(s) of Move: _____

10) Unaltered ___ Altered X Explain: Took out well at Windmill.

II. DESCRIPTION: 11) Building Materials See Attached Sheets

12) Construction Date 1930's 13) Architect/Builder Typical Plains Windmill

14) Architectural Style(s) Typical Plains Windmill Aermotor Chicago

15) Special Features/Surroundings: Pull rods for well which indicate early construction

16) Archaeological Potential: Yes ___ No X Unknown ___ Explain: _____

III. CULTURAL ACTIVITIES: Key the resource type (ie: house, barn, shed, school, church, etc) to the cultural activity theme and sub-theme category associated with it.

17) THEME	Ranching		
18) SUB-THEME	Livestock Grazing and Watering		
19) TYPES	Well and Windmill		

5

Form No. 618

RESOURCE NO. 5EP226

(Attach Photographs)

See Attached Sheets

Frame Number ____

Roll Number ____

Facade Orientation ____

IV. SIGNIFICANCE: Assess whether or not the resource has any historical or architectural merit by checking appropriate categories and justifying below. Include any relevant historical data.

20) Architectural Significance:

__ Represents work of a master
__ Possesses high artistic values
__ Represents a type, period, or method of construction

21) Historical Significance:

__ Associated with significant persons
__ Associated with significant events or patterns
__ Contributes to the significance of an historic district

22) List Any Associated Cultural Group: _____

V. REFERENCES:

RECORDER Guthrie/Ford DATE 2/19/82

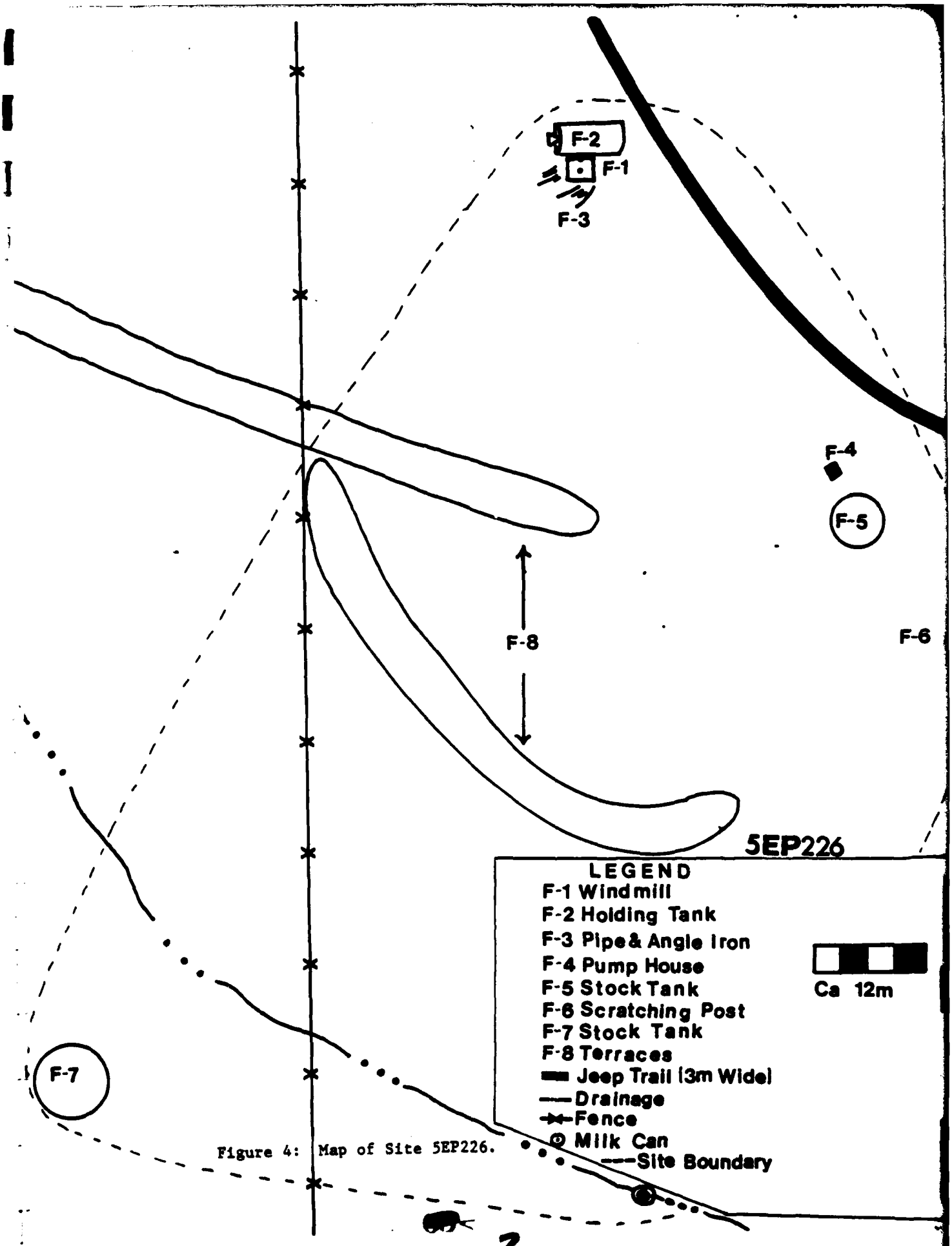


Figure 4: Map of Site 5EP226.

Site 5EP226

The site, an historic windmill and stock watering area, is located at the bottom of a gentle south facing slope in the northeast part of the survey area. The elevation is 6246 feet. The site is located approximately 50 meters northeast of an unnamed intermittent drainage.

The site consists of a livestock water and grazing area. Its dimensions are 120 meters north-south by 130 meters east-west. However, this boundary is based on the extent of the structures and features, and does not include the total grazing area used or the associated ranch. These dimensions are unknown. The site has either features (See Site Map).

Feature 1 - Feature one is the windmill. It is 2 x 2 meters at the base and is approximately 10.6 meters high. Construction material consists of oak wood boards, galvanized steel, galvanized and lead pipe, bolts and nuts, angle iron, and twisted wire for the stabilizer. Associated with this feature is well rods made of oak circular wood with split steel and galvanized connecting hoods. The steel blade at the top of the windmill has the factory name "Airmotor" written on the blade. The windmill was once utilized to pump water from the old well for the livestock. It is no longer in use. The condition of the windmill is in moderate phase of deterioration.

Feature 2 - Feature two consists of a large holding tank. It is 7 meters in length by 2 meters in width. The tank is 3.2 meters in diameter. Approximately one-half of the tank is buried in the ground. Construction consists of ¼" steel riveted panels with silver metal paint over it. Some spot welding occurs on the corner plates. The west end of the tank has recent plastic pipe with screw clamps. This is enclosed in a wood frame. The construction and the appearance indicates a more recent structure than the windmill. This may have been used to hold water after the well and windmill were no longer in use.

Feature 3 - Feature three is a general scatter of pipe and angle iron. This is also the location of the oak circular wood well rods with split steel and galvanized connecting hoods.

Feature 4 - Feature four is the pump house. It is 1 by 1 meter and about 60 cm high. The base is made of cement with a wood top. The condition of this structure is very good and it also appears to be more recent

than the windmill. The pump house may still be used to pump water from the large holding tank (Feature 2) to the stock tanks (Features 5 and 7).

Feature 5 - Feature five is the smaller stock tank located near the pump house (Feature 4). The tank is circular with a 3.85 meter diameter. The rim of the tank is approximately 60 cm above the base of the tank. The rim is made of galvanized steel and the base is made of concrete. The rim is held together with large nuts and bolts. There is a similar shape depression nearby which indicates another tank may have been used there at one time.

Feature 6 - Feature six consists of a livestock scratching post. It is an H-frame made of wood with the actual scratching board missing. It is about 2.1 meters high and 2 meters in length. Round nails are used in the construction.

Feature 7 - Feature seven is the larger of the two stock tanks and is located a considerable distance away from the rest of the features. It also is made of a concrete base with a galvanized steel rim held together by nuts and bolts. It is 6 meters in diameter and the rim extends 90 cm above the base of the tank. Both stock tanks (Features 5 and 7) are in good condition.

Feature 8 - Feature eight consists of man-made terraces. These were probably bulldozed to prevent erosion and soil blowing. The terraces vary, but are approximately 2 meters high and 5 meters in width.

Also associated with the site is a jeep trail that leads to the windmill from the north. An old large milk can was also observed in the bottom of an unnamed intermittent drainage located at south part of the site. Overall disturbance of the site is minimal and most of it appears to be kept up and may still be in use. The windmill, however, has not been in use for some time. Its condition and construction appear to be older than the rest of the structures.

A literature search at the Division of State Archives and Public Records showed that the land was unleased in the 1920's but was used by stockmen. The land was leased by Henry Bledsoe in 1938. There was probably an earlier lease on the land but there is a gap in the records earlier than 1938. The documents show that a windmill was on the land by 1953 and there is mention

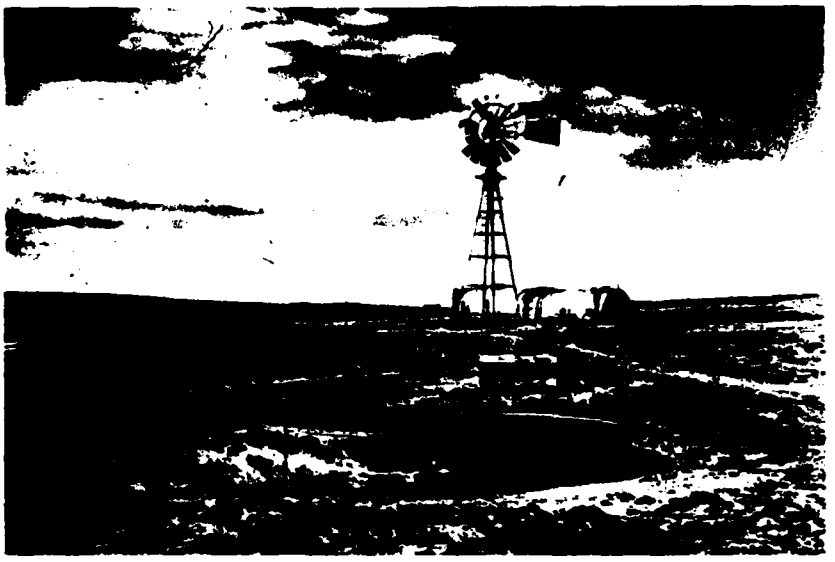
of water drilling prior to 1948.

A letter found in the files (See letter) from the State Board of Land Commissioners to Honorable Ed C. Johnson, Governor, dated January 27th, 1956, gives the most valuable information regarding the date of the site. With this letter and the other records, the area was used for grazing in the 1920's and 1930's. There is a gap in the records, and in 1938, Mr. Bledsoe leased the land and improvements were made prior to 1948.

Thus, the site may have been utilized sometime in the 1920's and/or 1930's. However, the windmill which appears to be the earliest structure on the site, was probably constructed by Bledsoe sometime after 1938. The remaining structures at the site appear to still be in use.

The milk can and a piece of well rod were collected to see if a date could be determined on these artifacts. However, the literature documentation gives a more accurate date of use and construction for the site. The milk can and well rod appear to date to the 1930's.

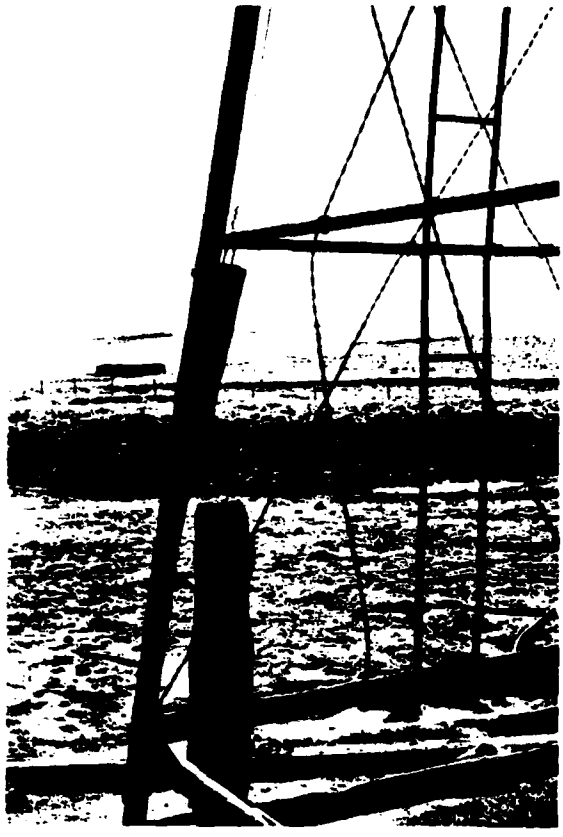
Overview of Survey Area. Notice drainage and ranch house in center distance. Photo taken looking south southeast.



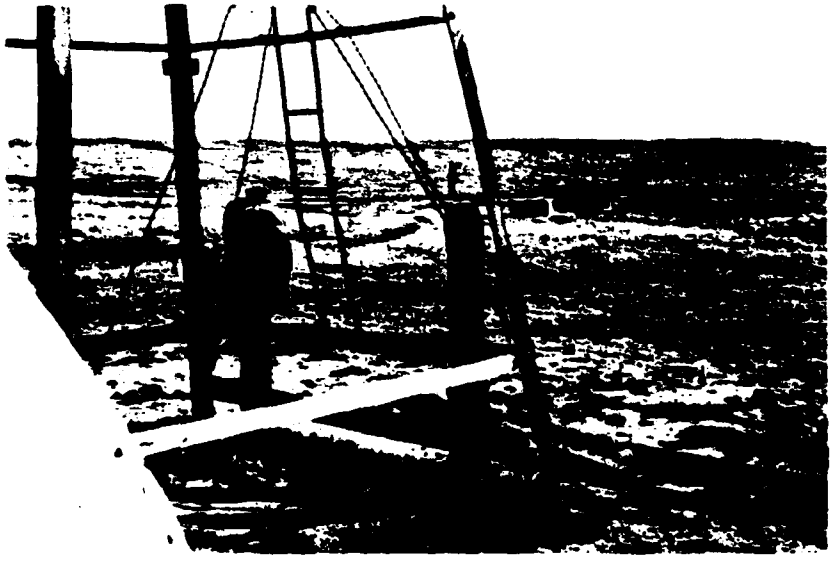
Overview of Site 5EP226 showing windmill (Feature 1), holding tank (Feature 2), pump house (Feature 4), and a stock tank (Feature 5). Photo taken looking north northwest.

Closeup of Feature 1 - Windmill, Site 5EP226
Notice wire and the state of deterioration.

Closeup of Feature 1 - Windmill, Site 5EP226.
Notice "Airmotor Chicago" written on blade.

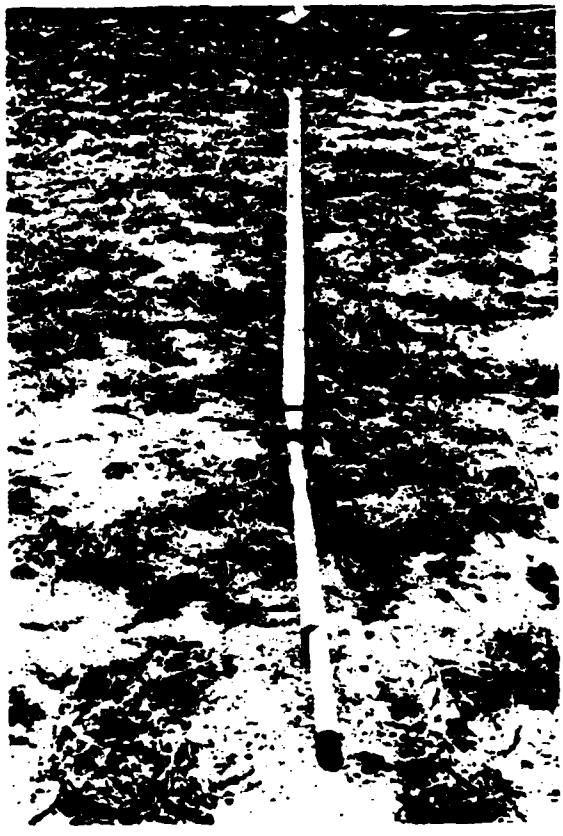


Site 5EP226. Photo taken from Windmill (Feature 1) looking south southwest. Notice terrace in center and large stock tank (Feature 7) in left distance.

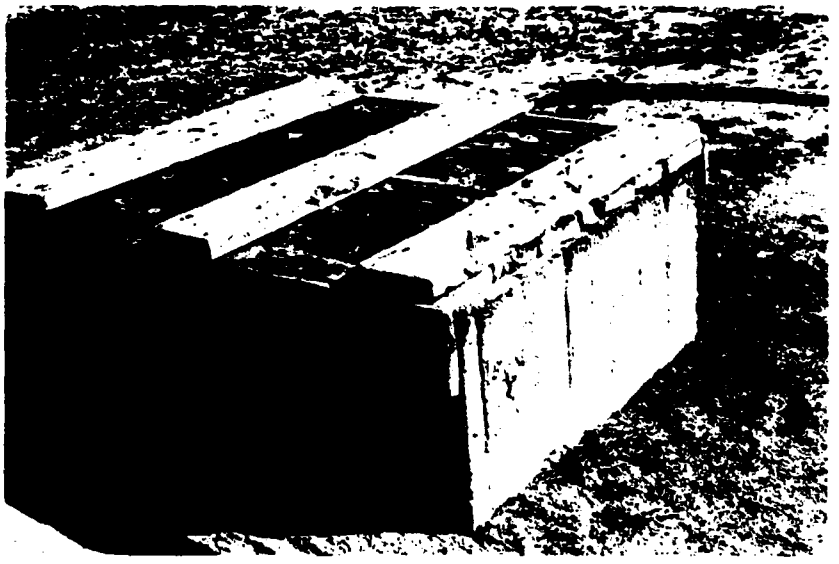


Site 5EP226. Photo taken from Windmill (Feature 1) looking south southeast. Notice pump house (Feature 4), small stock tank (Feature 5), and scratching post (Feature 6) in center.

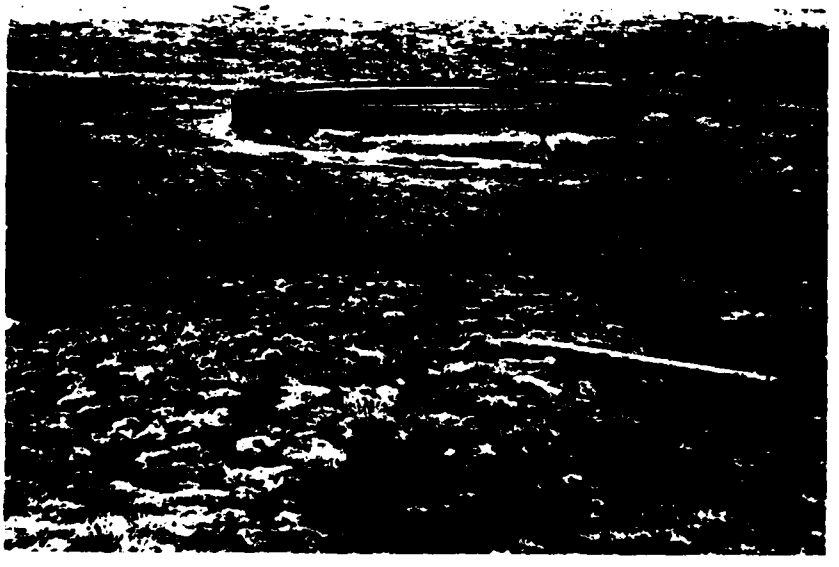
Site 5EP226. Closeup of Feature 2 - large holding tank. Photo taken looking west.



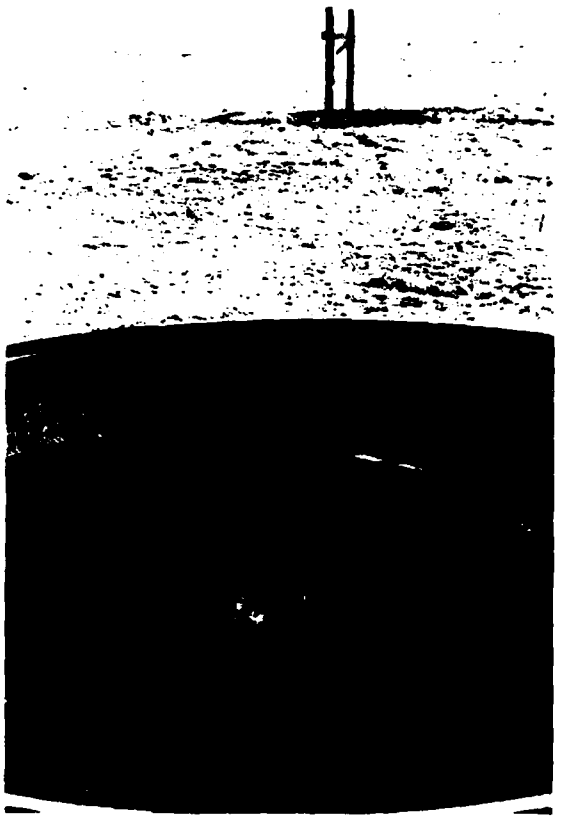
Site 5EP226. Closeup of oak circular wood well rod with split steel and galvanized connecting hoods. This is found in Feature 3.



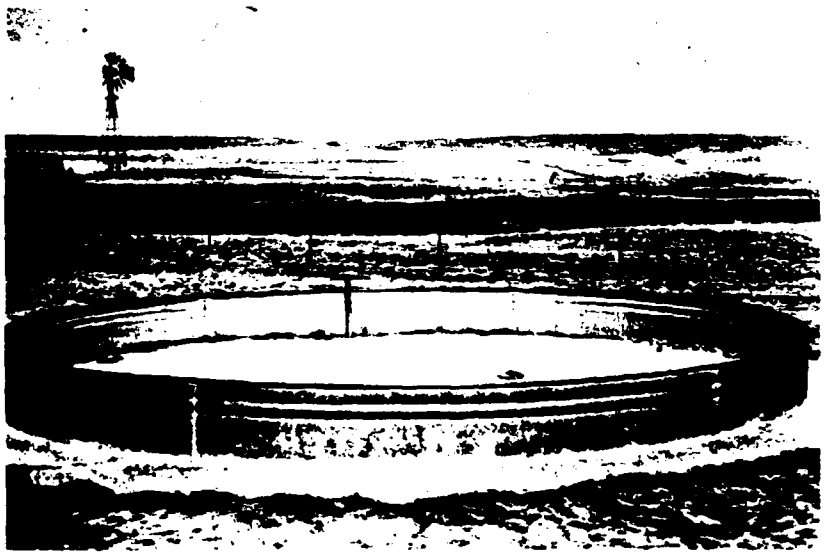
Site 5EP226. Closeup of pump house (Feature 4). Photo taken looking south southeast.



Site 5EP226. Closeup of Feature 5 (Smaller stock tank). Photo taken looking east.



Site 5EP226. Closeup of inside stock tank (Feature). Notice scratching post (Feature 6) in distance. Photo taken looking south southeast.



Site 5EP226. Closeup of large holding tank (Feature 7). Notice the remainder of the site in the background. Photo taken looking north northeast.

Site 5EP226. Closeup of milk can. Notice windmill (Feature 1) and holding tank (Feature 2) in distance. Photo taken looking north.

COLORADO PRESERVATION OFFICE
1300 Broadway
Denver, CO 80203
(303) 839-3391

CS-IF-#1

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP227 (2) Temp. No.: CS-IF-1 3) County El Paso

I. LOCATION

4) Legal Location: NW ¼, NE ¼, SE ¼, NE ¼, Sec. 26 T 14S R 64W PM 6th

5) USGS Quad: Name Corral Bluffs, Colorado Size 7.5' Date 1961-1975 Photo Re

6) UTM: Zone 13, 5 4 1 9 4 0 mE, 4 2 9 5 1 3 0 mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts: /Petrified Wood Brown/Gold (body) tan/light brown cortex appears to be Secondary Flake petrified wood.

8) Inferred function/description: secondary lithic reduction

9) Cultural Affiliation ? Time Period ? BC AD

10) IF Dimensions 3 cm long X 3 cm wide

III. ENVIRONMENTAL DATA:

11) Elev. 6245 ft. 1903.4 m. 12) Soil Ascalon Sandy loam

13) Topography slope of small knoll/Rolling hills 14) Slope: site 4° surrounding same

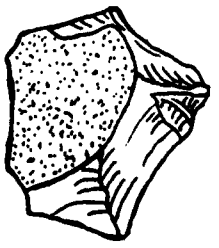
15) Nearest water: name/nature Unnamed Intermitten drainage elev. 6235 dist. 100m direction SW

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 2.1km direction NW

16) Veg. on site blue grama, needle and thread 17) Surrounding veg. same
side-oats grama, sand dropseed, and buckwheat.

Additional Comments:

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)



V. REFERENCE DATA:

18) Collection: yes __ no X describe

19) Repository: Dept. of Anthro. D.U. 20) Landowner state

21) Report title Cult. Res. Survey for the Cons. Space Oper. Center, CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation Dept. of Anth., D.U., ARI 24) Date 2 / 15 / 82

Form No. 602

18

COLORADO PRESERVATION OFFICE
1300 Broadway
Denver, CO 80203
(303) 839-3391

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP228 (2) Temp. No.: CS-IF-2 3) County El Paso

I. LOCATION

4) Legal Location: NW ¼, NW ¼, SE ¼, NE ¼, Sec. 26 T 14 S R 64 W PM 6th

5) USGS Quad: Name Corral Bluffs, Colorado Size 7.5 m Date 1961-1975 Phot. Rev.

6) UTM: Zone 13, 5 4 1 7 3 0 mE, 4 2 9 5 0 5 0 mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts:

1 Tertiary flake

8) Inferred function/description: Lithic reduction

9) Cultural Affiliation ? Time Period ? BC AD

10) IF Dimensions 2.1 cm. X 2.9 cm.

III. ENVIRONMENTAL DATA:

11) Elev. 6263 ft. 1908 m. 12) Soil Truckton sandy loam

13) Topography Top of knoll/ Rolling knoll 14) Slope: site 1° surrounding same

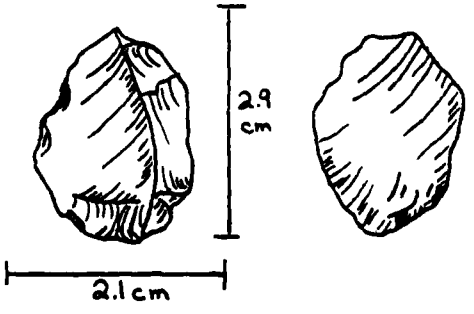
15) Nearest water: name/nature Unnamed Intermitten drainage elev. 6235 dist. 140m direction E

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 1.8 km direction NW

16) Veg. on site western wheat grass, side-oats gr., needle and thread 17) Surrounding veg. same

Additional Comments.

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)



V. REFERENCE DATA:

18) Collection: yes no X describe

19) Repository: Dept. of Anthropology, D.U. 20) Landowner State

21) Report title Cult. Res. Survey for Cons. Space Center Proj. CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation Dept. of Anthropology, D.U. 24) Date 2 / 15 / 82

Form No. 60

19

OFFICE OF THE STATE ARCHAEOLOGIST
1300 Broadway
Denver, CO 80203
(303) 839-3391

CS-IF-3

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP229 (2) Temp. No.: CS-IF-3 3) County El Paso

I. LOCATION

4) Legal Location: NW ¼, NE ¼, NW ¼, SE ¼, Sec. 26 T 14S R 64W PM 6th

5) USGS Quad: Name Corral Bluffs, Colorado Size 7.5' Date 1961-1975 Photo Rev.

6) UTM: Zone 13, 5 4 1 5 1 0mE, 4 2 9 4 7 3 0mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts: Point fragment
pink/white cryptocrystallin

8) Inferred function/description: small point in isolated setting with no other cult material around. Possibly lost during hunting?

9) Cultural Affiliation Probable Woodland Culture Time Period Ca. 1,000 AD BC AD

10) IF Dimensions 1.9 cm. long X 1 cm. wide

III. ENVIRONMENTAL DATA:

11) Elev. 6255 ft. 2132 m. 12) Soil Ascalon sandy loam

13) Topography Slope of small knoll/Rolling hill 14) Slope: site 4° surrounding same

15) Nearest water: name/nature Unnamed Intermitten Drainage elev. 6230 dist. 330m. direction E

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 1.6km direction NW

16) Veg. on site blue grama, needle and thread 17) Surrounding veg. same

Additional Comments: side oats grama, sand dropseed, buckwheat.

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)

V. REFERENCE DATA:

18) Collection: yes X no describe 100% of diagnostic

19) Repository: Dept. of Anthropology, D.U. 20) Landowner State

21) Report title Cult. Res. Survey for Cons. Space Oper. Center, CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation Dept. of Anthropology, D.U. 24) Date 2 / 16 / 82

Form No. 60.

COLORADO PRESERVATION OFFICE
1300 Broadway
Denver, CO 80203
(303) 839-3391

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP230 (2) Temp. No.: CS-IF-4 3) County EL Paso

I. LOCATION

4) Legal Location: NE ¼, SE ¼, NE ¼, SW ¼, Sec. 26 T 14S R 64W PM 6th

5) USGS Quad: Name Corral Bluffs, CO Size 7.5 Date 1961 Rev. 1975

6) UTM: Zone 13, 5 4 1 2 2 0mE, 4 2 9 4 4 5 0mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts: Pressure Flake. Chalcedony interior flake

8) Inferred function/description: Unknown.

9) Cultural Affiliation ? Time Period ? BC AD

10) IF Dimensions .6cm X .9cm

III. ENVIRONMENTAL DATA:

11) Elev. 6250 ft. 1905 m. 12) Soil Ascalon Sandy Loam

13) Topography Flat to slight roll 14) Slope: site 3° surrounding flat

15) Nearest water: name/nature Unnamed intermittent drainage elev. 6240 dist. 210M direction NW

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 1.5KM direction NW

16) Veg. on site None - Found on Terrace 17) Surrounding veg. Blue grama, needleand-thread, side-oats grama, sand dropseed, buckwheat.

Additional Comments:

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)

V. REFERENCE DATA:

18) Collection: yes no x describe

19) Repository: 20) Landowner State

21) Report title Cult. Res. Survey for Cons. Space Oper. Center Proj. CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation ~~Dept. of Anth. DU, ARI~~ 24) Date 2 / 17 / 82

Form No. 60

24

COLORADO PRESERVATION OFFICE
1300 Broadway
Denver, CO 80203
(303) 839-3391

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP231 (2) Temp. No.: CS-IF-5 3) County El Paso

I. LOCATION

4) Legal Location: SW ¼, NE ¼, NE ¼, SW ¼, Sec. 26 T 14S R 64W PM 6th

5) USGS Quad: Name Corral Bluffs, Colorado Size 7.5' Date 1961-1975 Phot Rev

6) UTM: Zone 13, 5 4 1 1 5 0 mE, 4 2 9 4 6 0 0 mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts: core remnant - lavender/white chert 50% cortex
Heat exposure

8) Inferred function/description: secondary lithic reduction?

9) Cultural Affiliation ? Time Period ? BC AD

10) IF Dimensions 2 cm. length X 2.5 cm. width

III. ENVIRONMENTAL DATA:

11) Elev. 6260 ft. 1908 m. 12) Soil Ascalon sandy loam

13) Topography Slight slope - Flat to Rolling 14) Slope: site 2-3° surrounding same

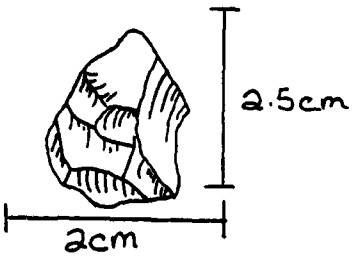
15) Nearest water: name/nature Unnamed Intermitten drainage elev. 6240 dist. 220M direction W

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 1.4 KM direction NW

16) Veg. on site Blue grama, needleandthread, 17) Surrounding veg. same
side-oats grama, sand dropseed, buckwheat.

Additional Comment

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)



V. REFERENCE DATA:

18) Collection: yes ___ no x describe

19) Repository: Dept. of Anthropology, D.U. 20) Landowner State

21) Report title Cult. Res. Survey for Cons. Space Oper. Center Proj. CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation Dept. of Anthropology, D.U., ARI 24) Date 2 / 17 / 82

Form No. 602

22

COLORADO PRESERVATION OFFICE
1300 Broadway
Denver, CO 80203
(303) 839-3391

ISOLATED FIND RECORD

1) OSAC Site No.: 5EP232 (2) Temp. No.: CS-IF-6 3) County El Paso

I. LOCATION

4) Legal Location: SW ¼, SE ¼, SE ¼, SW ¼, Sec. 26 T 14S R 64W PM 6th

5) USGS Quad: Name Corral Bluffs, CO Size 7.5 Date 1961 Rev. 1975

6) UTM: Zone 13, 5 4 1 1 6 0 mE, 4 2 9 3 9 5 0 mN. Attach copy of portion of USGS Quad.

II. ARCHAEOLOGICAL DATA:

7) Artifacts: Large Petrified Wood core remnant.

8) Inferred function/description: Used as a scraper.

9) Cultural Affiliation ? Time Period ? BC AD

10) IF Dimensions 72mm length X 66mm width X 34mm thickness

III. ENVIRONMENTAL DATA:

11) Elev. 6210 ft. 1892 m. 12) Soil Ascalon Sandy Loam

13) Topography Drainage bottom near road 14) Slope: site 0 surrounding 0-4

15) Nearest water: name/nature Unnamed Intermittent drainage elev. 6210 dist. found in drainage direction

Nearest permanent water Unnamed Reservoir elev. 6350 dist. 1.7KM direction NW

16) Veg. on site None - found in drainage. 17) Surrounding veg. blue grama, needleandthread side-oats grama, sand dropseed, and buckwheat.

Additional Comments:

IV. ADDITIONAL INFORMATION: (Narrative, drawings, sketch map)

V. REFERENCE DATA:

18) Collection: yes x no describe

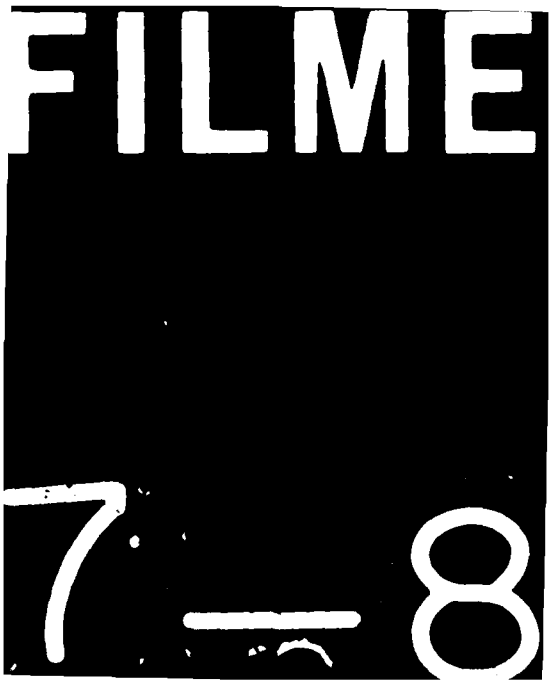
19) Repository: Dept. of Anth Univ. of Denver 20) Landowner State

21) Report title Cult. Res. Survey for Cons. Space Oper. Cent Proj. CO Springs, CO 22) Recorder Guthrie/Ford

23) Affiliation Dept. of Anth. DU, ARI 24) Date 2 / 17 / 82

Form No. 60

< 23


FILME
7-8