

VII -

Report Number DA-053

HISTORY AND HISTORIC ARCHAEOLOGY

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ABSTRACT

The Dolores Archaeological Program will mitigate the archaeological remains in the area to be inundated by the McPhee Reservoir. This mitigation plan calls for a complete synthesis of the historic period in the Dolores area.

Beginning with the Protohistoric Utes and Navajo, the Historic Studies 1979 field year volume will report on the eighteenth century Spanish explorers and the nineteenth century Euro-American settlers. Results of the historic survey, oral history program, and artifact analysis will be described. This summary and syntheses will incorporate the above into a concise description of the historic occupation and settlement of the Dolores River Valley.

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INTRODUCTION

The Dolores Project Cultural Resources Mitigation Program focuses on the prehistoric and historic occupations of the Dolores River in Southwestern Colorado. ^(15 miles) The Dolores Archaeological Program (DAP) is funded by a contract of the University of Colorado with the Water and Power Resources Service (WPRS), formerly the Bureau of Reclamation.

The DAP began ^{INJUNCTIVE} operations in June of 1978. Several ^{RECOGNISANCE} surveys were completed before that year (BRETON, FZ + MARTIN 1973; KANE 1974, 1975, 1976) and ^{SEVERAL} historic sites were noted. The section of the Dolores River that the DAP ^{will study 15} is concerned with runs from the town of Dolores to the Bradfield Ranch, located approximately 15 miles downstream from the town. The proposed McPhee Reservoir, which will be formed by an earthen dam across the Dolores River, will inundate 4850 acres. Two townsites, Big Bend (5MT4572) and McPhee (5MT4571), are known to have existed in the area to be flooded (Toll 1975; Bureau of Reclamation 1977; and Kane 1979).

The Historic Research Design (Appendix A) outlines the approach to be used to study ^{the} historic sites recorded. The FY1979 historic studies concentrated on Problem Domain I. The Homestead Era in the Southwest dates after 1862 when the original Homestead Act of that year was passed (U. S. Government Printing Office 1968: 66). However, the first Euro-American settlement of the Dolores Valley

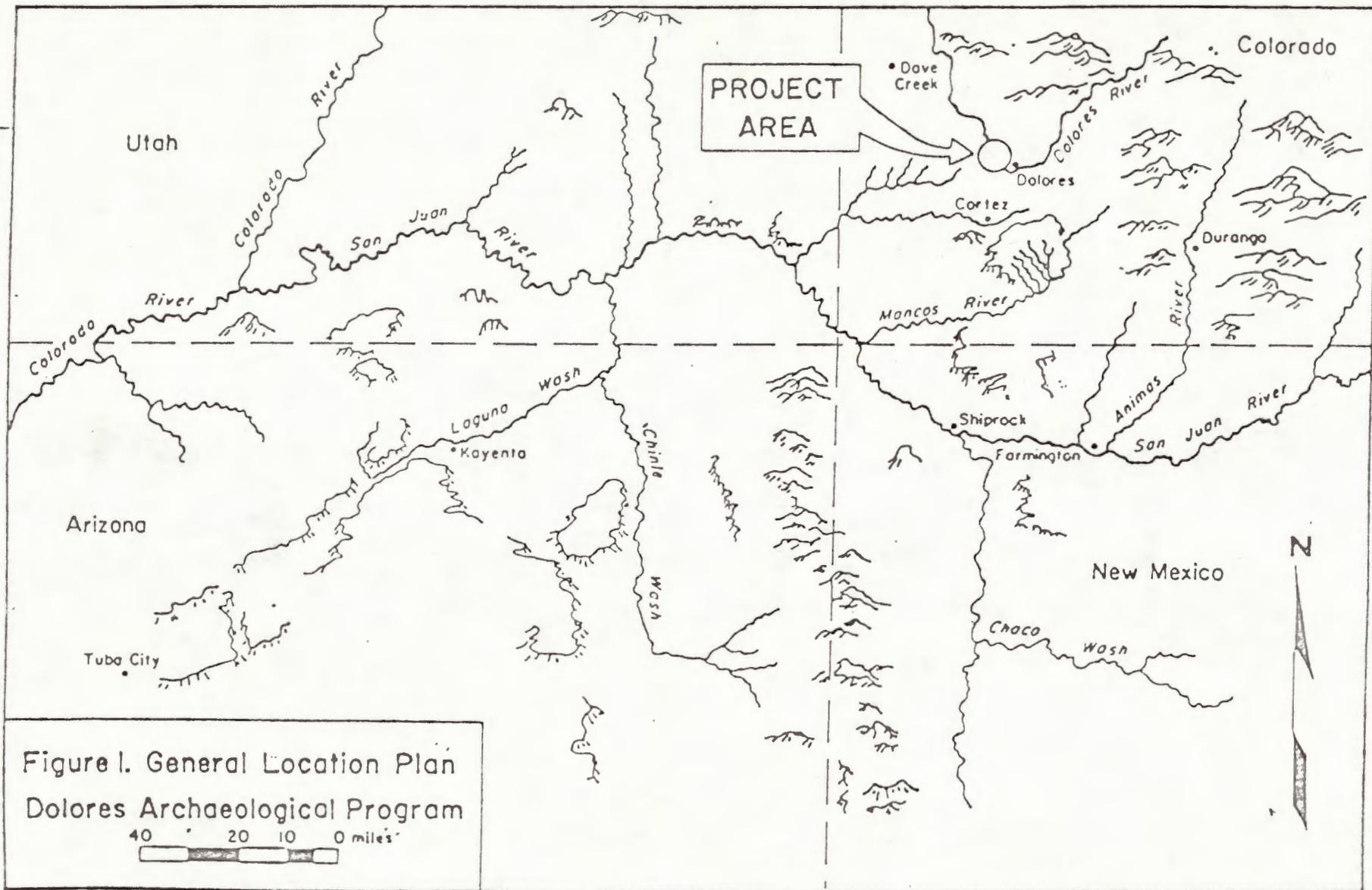


Figure 1. General Location Plan
Dolores Archaeological Program

40 20 10 0 miles



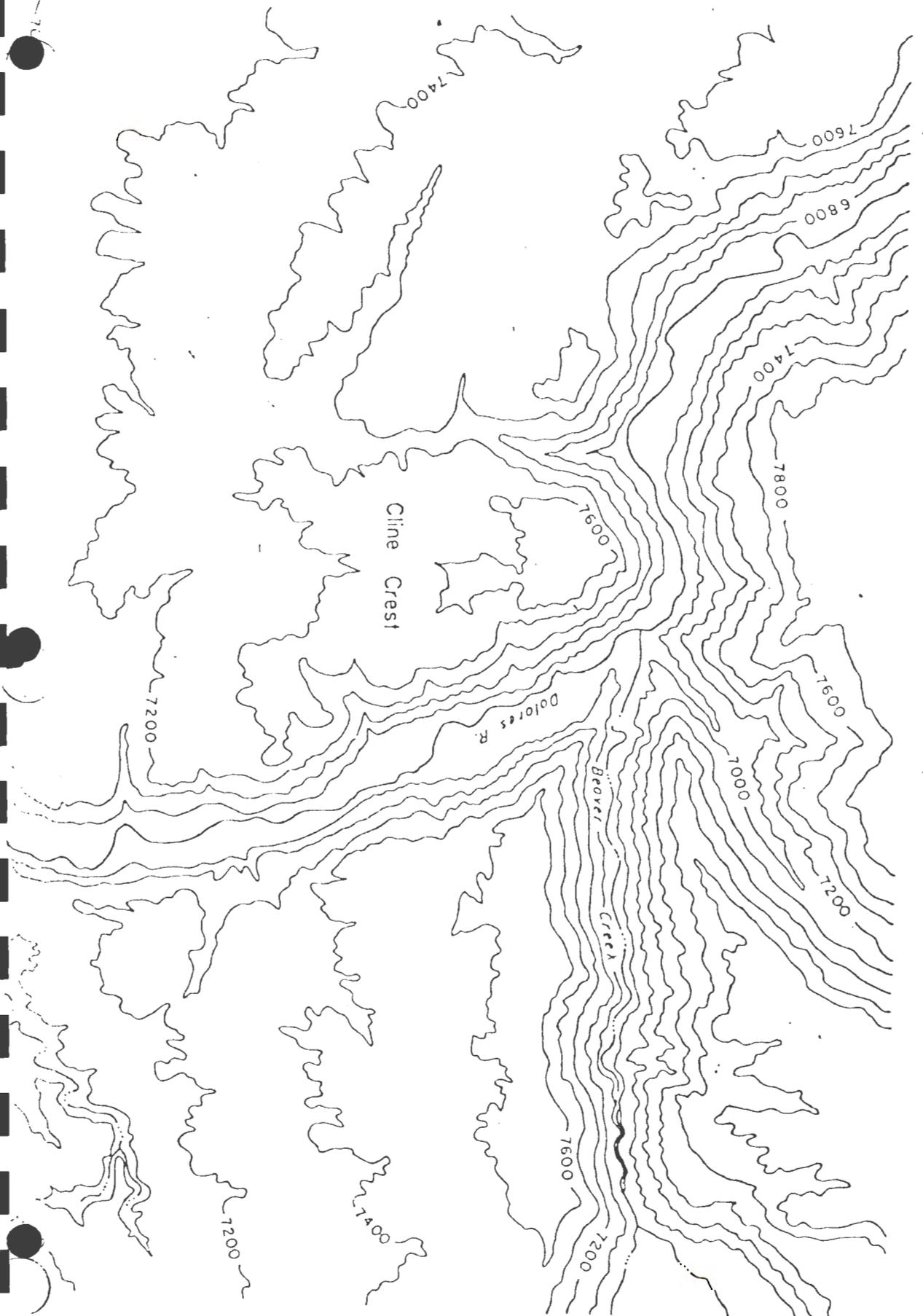
began in the 1870's. Of the 56 sites recorded during FY1979, 36 pertain to Problem Domain I.

The Dolores River is part of the Colorado River drainage system. The Dolores' source is in the San Juan Mountains near Lizard Head Pass. The river flows south and west towards the present town of Dolores. From this point the river makes an abrupt turn to the north (O'Rourke ^{in place} n.d.:6). The town of Big Bend or the first Dolores was located on the west bank of this curve. One mile north, McPhee was situated on the west bank at the mouth of a low rolling flat land called Sagehen Flats (Figure ² 1). West of Sagehen Flats is the San Juan River Basin, which includes Montezuma Valley. Towaoc, at the Eastern foot of the Sleeping Ute Mountain, and Cortez are situated in the lower southern portion of Montezuma Valley. Dove Creek is located at the ~~eastern~~ extreme northern edge. After construction of a pumping station, tunnel and canals, the water from the Dolores River would be diverted into Montezuma Valley. This water would be used to increase existing irrigation systems and for residential uses. (Bureau of Reclamation 1977; Kane 1979).

Northeast of Moab, Utah the Dolores River empties into the Colorado River, approximately 120 Miles (195 kilometers) from its source (Toll 1976). The Dolores River flows from a mountainous zone to a plateau zone of high mesas and deep canyons. ^{Figure (Figure 3)} Variations in elevation ranges from 11,000 feet at its source to 5000 feet near the Colorado River. The project area elevation varies from 6000 to 7500 feet, with the town of Dolores at 6930 feet (O'Rourke n.d.:4-5).

Figure - Overview of Project Area

LOCAL GEOGRAPHY



Toll's (1975:132) 1975 survey report described the project area:

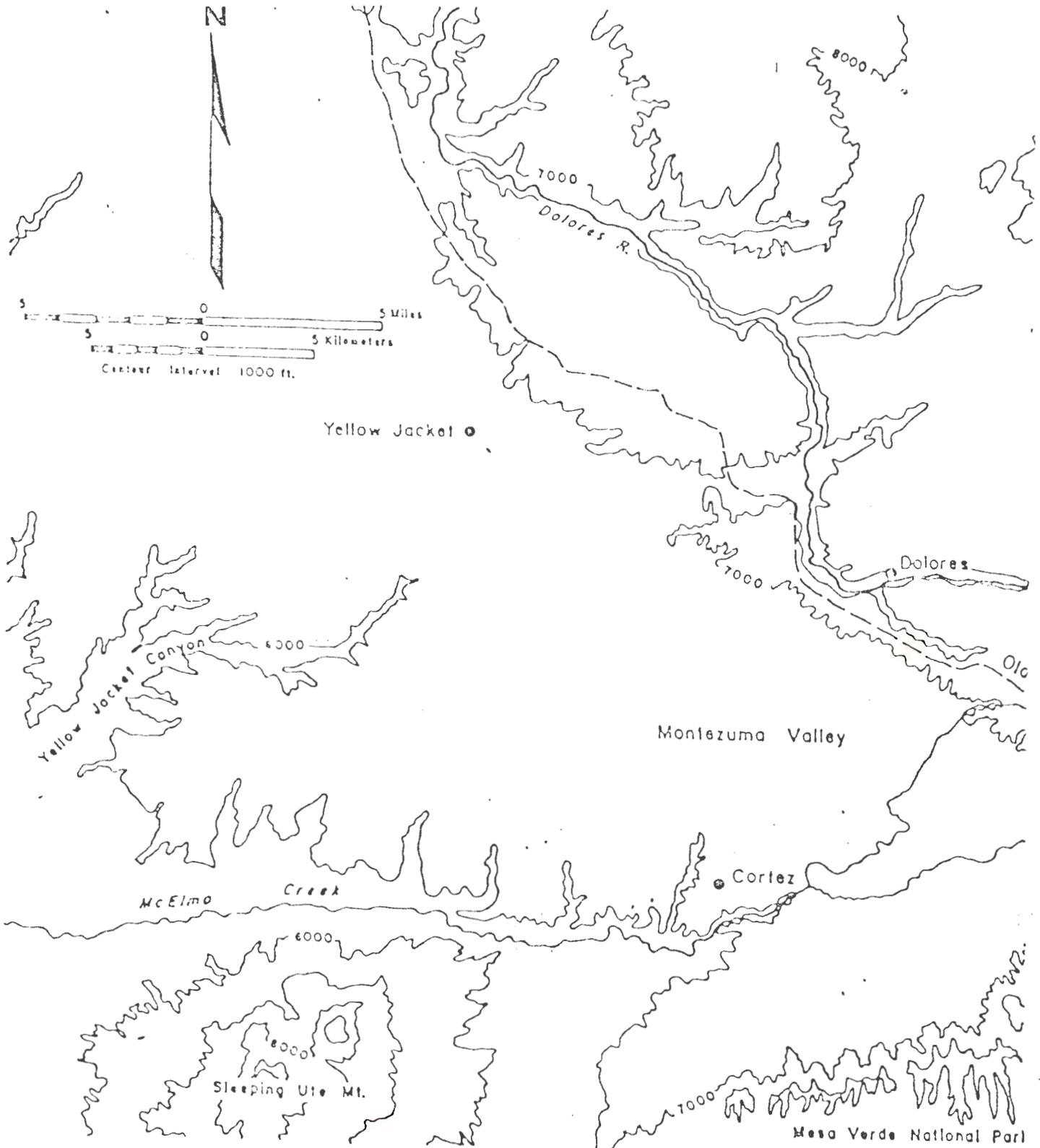
From the town of Dolores to the vicinity of the Dolores River Ranch (the Bradfield Ranch) the canyon is quite wide, having considerable space on the valley floor. The vegetation on southern exposures is pinyon-juniper forest; on northern exposures there is dense Gambel oak and in canyon bottoms and side canyons large cottonwoods, ponderosa pine, and, more restrictedly Douglas fir and aspen are present. The canyon sides are largely talus with some large exposures of white sandstone...which may be Entrada Sandstone.

There are a variety of animal species in the DAP area. Fauna species include cottontail rabbits (Sylvilagus audubonii), porcupines (Erethizon dorsatum), and several species of small rodents. Mule deer (Odocoileus hemionus), and American elk (Cervus canadensis) comprise part of the larger species recorded. Several predators have also been observed in the surrounding area (Kane 1979:18).

With a mean annual precipitation of 12 to 16 inches, the Dolores Valley is in a arid to semi-arid climate. Mean temperatures range from a low of 36° to 40°F in January to a high of 88° to 92°F in July. Actual temperatures vary from below 0°F in winter to over 100°F during the summer. The last frost is usually mid-May and snow can fall as late as June and as early as August at the higher elevations (Kane 1975).

Descriptions of the Dolores Valley have survived in the historic record. In August 1776, Fathers Dominguez and Escalante traveled a route from Durango to Mancos and Dolores, then north into Utah (see Chapter 2). ~~XXXXXXXXXXXX~~ This route became known as the Old Spanish Trail (Figure 3). In their journal the Fathers described the area south of

AREA GEO



GEOGRAPHY



Dolores as possessing patches of leafy trees and pasturage dotted among areas of sagebrush. Camping the night of August 31st in a meadow on the big bend of the Dolores, they noted that this portion of the valley had everything ~~was~~ needed to establish and maintain a settlement including "irrigable lands, pasturage, timber and firewood." However continuing further north up the canyon they encountered many areas of sagebrush which they called "troublesome" (Chavez and Warner 1976:14).

The first cadastral survey establishing township and section lines was conducted in 1877 by William M. May, Deputy Surveyor of the Colorado Survey General's office. On August 27, 1877, May recorded the terrain north of the bend (T38N, T37N, R15W):

Surface is rough and broken excepting the River bottom which is good farming land.
Soil in bottom 1st rate, on hill 3rd rate.
Grass good. (May 1877:400)

The general description of the township (T37N, R15W) which included the towns of Big Bend and Dolores, was recorded on September 4, 1877:

This township is a high Place on elevated Plain-through which a Stream Called Lost Canon Creek runs besides the River Dolores-which is the only stream of Water in the vicinity...~~The expanse of the~~...Many Pinon in the South Part of the Towns. Draining to the South. The rock is of Sand stone. In the ex. E Part of the township is some good Pine Timber suitable for lumber. Other parts of the township is woodlands with Pinon and Cedar. The high table lands are clothed with an abundance of very nutritious grasses Capable of sustaining large herds of stock. . .

→ The Agricultural portion of the Township is confined to the Bottom lands skirting the stream Dolores which is limited to a few locations... The Elevation on river bottom is from 6700 down to 6,400 feet. The soil is rich sandy loam (May 1877:466-467).

May's appreciation for this area was obvious for in March, 1878. he applied for a land patent on 160 acres in the riverbottom. On May 23, 1890 May was granted a patent for this land, part of which contained the town of Big Bend. (Bureau of Land Management n.d.:43)

In 1881, Frank M. Gore of the same survey office resurveyed the 1877 work. On April 16th, Gore recorded the following description of the area due north of Big Bend and Dolores.

This Tp. is admirably situated for stock-raising but contains no land that can be irrigated--save a narrow strip of bottom land along the Dolores river. The soil is rich and produces fine grass. The eastern part of the Tp. is covered with heavy pine timber and the remainder with scattered pinons and cedars and dense oak brush (Gore 1881:797).

The following chapter outlines in greater details the history of the DAP study area.

O'Rourke, Paul M. *Adaptation to the Environment*
In press The History of Southwestern Colorado. Bureau of Land
Management: Denver.

Toll, Henry Wolcott III
1975 Dolores River Archeology: Canyon Adaptations As Seen Through
Survey. Cultural Resources Series No. 4. Bureau of Land
Management: Denver.

United States Government Printing Office
1968 Digest of Public Land Laws. U. S. Government Printing Office;
Washington D.C.

CHAPTER II - HISTORY

The earliest known inhabitants of the DAP investigative area were archaic peoples occupying the region from approximately 7,500 BC to 500 AD. The Anasazi, or "ancient" ones, a farming culture, occupied the area from about 2000 BC to 1300 AD. The Anasazi tradition was divided into a series of ~~four~~ ^{three} phases by Allen E. (Kane ~~in~~ 1979). The first ~~was~~ ^{is} the Great Cut Phase dating from 2000 BC to 500 AD (Basketmaker II-BM III). The next is the Sagehen Phase ranging from 600-825 AD (100 years of BM III to Pueblo I). McPhee Phase follows, dating ^{at} 800-975 AD (P I-P II). The last is the Sundial Phase ranging from 1050-1200 AD (P II-P III). The area was abandoned by the Anasazi by 1300 AD. Possible reasons for their departure are severe drought, depletion of natural resources and war with neighboring tribes (Kane 1979).

The hunter and gatherer Ute Indians of the Uncompahgre Complex occupied the Uncompahgre Plateau of west-central Colorado from about 8000 BC to 1881 AD. Their actual domain, including hunting and gathering grounds, extended throughout the present borders of Colorado into surrounding states. Several consolidated bands of Ute occupied this area: the Grand River, Yampa and Unitah bands of northern Colorado; the Uncompahgre in central Colorado; the Weeminuche in western Colorado and eastern Utah; the Capote in southwest Colorado; and the Mouache in southeast Colorado (O'Rourke 1979:11, 47): "Against their hereditary enemies, the Arapahoes and Cheyennes, the Utes were alert and aggressive....Gladly would the Arapahoes and Cheyennes have exterminated them but the latter always countered successfully against them, demanding and receiving their share of the spoils. The frontiersman sympathy was always on the side of the Utes, for the Plains Indians were deadly enemies to emigration" (Jocknick 1913:23).

There is no written documentation of the first Spanish contact with the Ute Indians, but the earliest date for the introduction of the Utes to horses has been established at 1640. This first contact was probably a peaceful one with the Spanish explorers trading their horses, knives and blankets for furs, buckskins and slaves (O'Rourke 1979:19). Cummins has stated a reason why the earliest interactions with the Utes were not documented: "Evidently, there had been several trips into the San Juan area by the Spanish before the time of Escalante, but no record was kept of them. These trips were illegal since there was a law prohibiting trading with the Yuta (Ute) Indians. If the expeditions should be made known, the traders would take the chance of having their goods appropriated" (Cummins 1951:177).

The historic period began when the seventeenth and eighteenth century Spanish explorers recorded their exploits of gathering geographic information and searching for "economic rewards" (Nickens 1980:108). The earliest known Spanish explorer of Colorado was Diego de Vargas who travelled to the San Luis Valley in search of minerals in 1695. However, no precious minerals were found and the area showed little agricultural promise. As a result, the Spanish lost interest in Colorado for awhile. (Athearn 1977:7).

Between 1761 and 1765 Juan ^{river} de Rivera made three trips into Colorado traveling to the San Juan River, the San Juan Mountains, the Dolores River and then to the confluence of the Uncompahgre and Gunnison Rivers (O'Rourke 1979:19). If this account is accurate, de Rivera is the first documented Spaniard to visit the project area. Again, no gold or silver was discovered by the de Rivera party, and ~~subsequent expeditions~~ were

Such expeditions

abandoned until 1776.

There was a hiatus in

[Handwritten scribble]

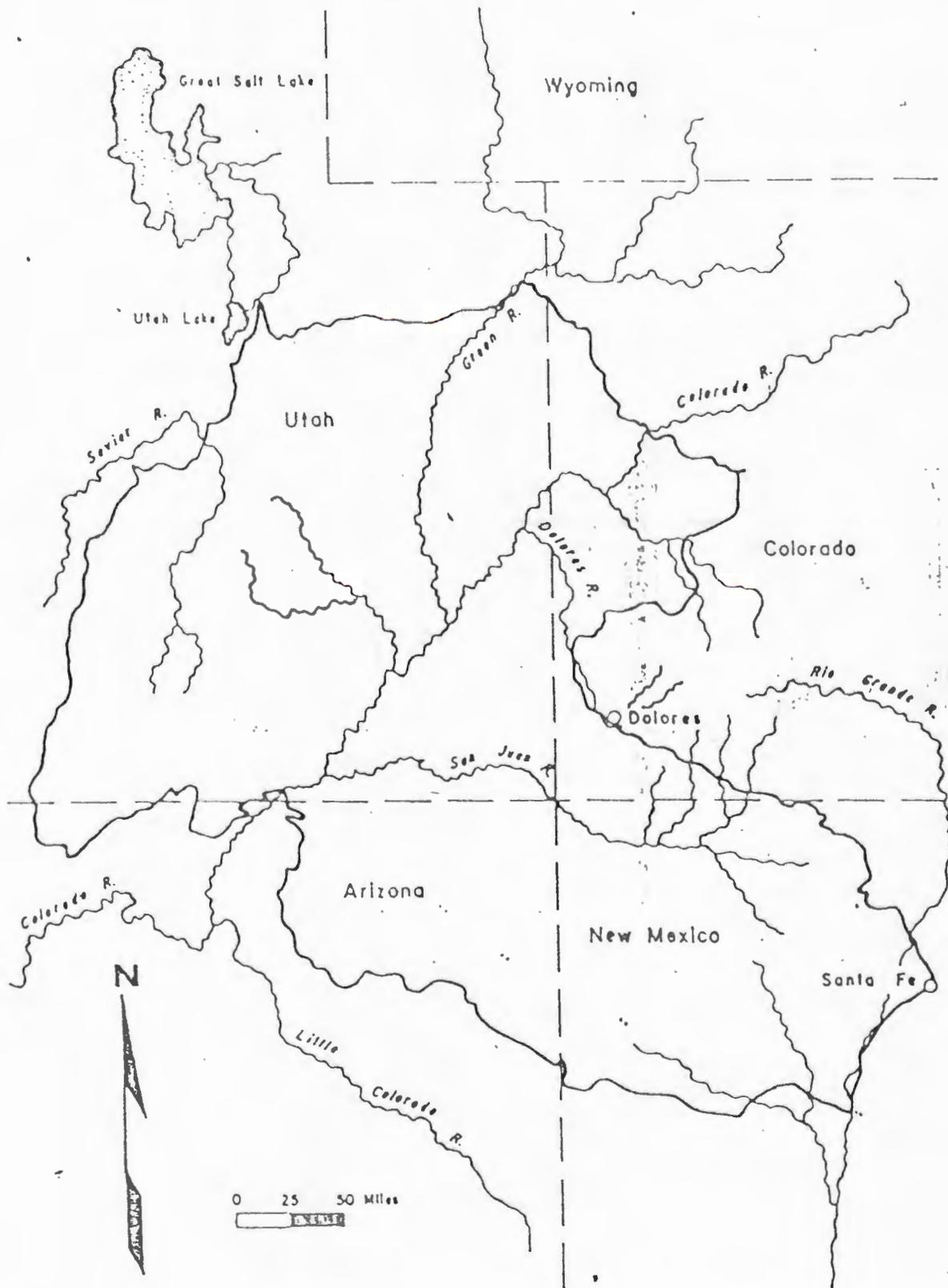
The Dominguez-Escalante Expedition of that year was recorded in the journal kept by Fray Silvestre Velez de Escalante. The expedition was under the leadership of Father Escalante's close friend and religious superior, Fray Francisco Atanasio Dominguez. Father Dominguez had been dispatched from Mexico City as a commissary visitor of the Church's missions in New Mexico. ~~A commissary visitor is~~ (one to whom a special task is assigned). Dominguez was acting for his provincial as a formal inspector of the New Mexico missions (Warner 1976: ix, 3). Father Dominguez "had also been charged to discover a more or less direct route from Santa Fe to the recently established garrison and town of Monterey on the California coast, but not without an option to explore new mission possibilities en route" (Warner 1976: ix).

The most recent and direct translation of Escalante's diary was completed in 1976 by Fray Angelico Chavez of Santa Fe, New Mexico (Warner 1976). ^{Chavez did} As the original diary can not be located, Fray Chavez obtained what appears to be a draft of the diary copied in 1777 by Fray Dominguez's secretary, Fray Jose Palacio. This manuscript is now in the Ayer Collection of the Newbury Library in Chicago (Warner 1976: x).

According to the manuscript, the padres and their eight companions left Santa Fe, New Mexico on July 29, 1776. The expedition members included Andres Muniz and his brother Lucrecio who had traveled to the Gunnison River the previous year.

They were to act as guides and interpreters (Bolton 1950: 11). ~~They~~ ^{padres} chose to travel in a northerly direction ~~as they traveled~~ ^{in order} (Figueroa) to circle around the Gila River Apaches who were hostile to the Spanish (Bolton 1950: 6). Therefore the group journeyed first to

THE DOMINGUEZ-ESCALANTE ROUTE 1776-1777



Abiquiu, New Mexico, ~~Abiquiu~~ was the last outpost of Spanish jurisdiction. ^{Chavez and}
By 1830 Abiquiu was known as the "Gateway to the Old Spanish Trail" (Warner 1976: 5).

On August 5 the expedition crossed into Colorado near Carracas on the San Juan River. They continued westward and crossed the Pine ^{and} Florida Rivers and camped on the Animas River just south of Durango. They then crossed the La Plata River near Hesperus and ^{same p} continued over the pass into the Mancos Valley.

→ Father Dominguez caught a cold at this point in their journey but by the 12th had improved enough to continue the march.

The following excerpts from Fray Angelico Chavez's translation describe their entrance into the Dolores Valley:

On the 12th Padre Francisco Atanasio awoke somewhat improved, and more to change terrain and weather than to gain a day's march, we set out from the site and Rio de Lazaro toward the northwest. We traveled five leagues through leafy treegrowth with good pasturage, took to the west, went two leagues and a half through a sagebrush stretch of little pasturage, and, after a quarter league of travel toward the north, crossed El Rio de Nuestra Senora de Dolores and halted on its northern edge. This river rises from La Sierra Plata's northern flank, runs southwest to this place, and from here makes a turn. It is a bit smaller than El Rio del Norte around this time of year. Today a little more than eight leagues and a half.

August 13--On the 13th we made camp, both to allow the padre to improve some more in order to go ahead, and to take a bearing on the polar elevation of this site and meadow of El Rio de los Dolores, where we found ourselves. The bearing was taken by the sun, and we saw that we were at $38^{\circ}13\frac{1}{2}'$ latitude. Here there is everything that a good settlement needs for its establishment and maintainance as regards irrigable lands, pasturage, timber, and firewood. Upon an elevation on the river's south side, there was in ancient times a small settlement of the same type as those of the Indians of New Mexico, as the ruins which we purposely inspected show. Padre Fray Francisco Atanasio got better, and we decided to continue our journey the following day.

August 14--On the 14th we set out ~~from~~ the meadow and Rio de Dolores toward the north....

The ruins mentioned in the August 13 notation may be the Escalante Ruins, ^{Abiquiu}
^{REED} (Breternitz et al 1979, 1980). The present name of the Dolores River is a shortened version of El Rio de Nuestra Senora de Dolores (River of Our Lady of Sorrows) (Baker and Hafen 1927: 275-277).

INVESTIGATED BY THE UNIVERSITY OF COLORADO 1975

The expedition continued north along the Dolores River for several days then traveled west then north to the area near the present site of Montrose and thence to the Gunnison River. They exited Colorado at the Cibolo River and continued into Utah (Chavez and Warner 1976: 42). ?

It was ⁺after reaching Utah that the padres took full advantage of their option to explore for new missions.. They spent the last half of the year wandering among the various nomadic tribes of the Four Corners area. This option proved disastrous for the expedition. The company was wandering aimlessly through the broken ^ccountry surrounding the Grand Canyon, when winter approached. The expedition returned to New Mexico and, via the Hopi towns, reached Santa Fe on January 3, 1777 (Chavez and Warner 1976: ixx, 118).

why was it disastrous?

the town of ~~Montrose~~
expedition (Warner 1976:14). ^{at Dolores} ~~When leaving Dolores~~ the expedition traveled
west then north to the area of the present site of Montrose and thence the
Gunnison River. ~~They exited Colorado at the Gibolo River where they~~
~~continued their journey into Utah (Warner 1976:42).~~ The entire expedition

travelled 1,700 miles and wandered for 159 days in a great circle from
Santa Fe, New Mexico to Colorado, ^{through eastern} to Utah, south to Arizona, then east back
to Santa Fe. Although the expedition was not successful in finding a
route to the California missions, it was the catalyst for future ex-
plorations by New Mexican fur traders on the Escalante trail, or Old
Spanish Trail, into Colorado.

Early in the nineteenth century there was a great European demand
for furs in the tailoring of coats and hats. By the early 1820's fur
traders had expanded their areas of trapping and trading into the beaver-
rich streams of the Green River Valley. This ^{was} made possible because of the
new diplomatic relations between the United States and New Mexico after
Mexico won their independence from Spain in 1812 (O'Rourke 1979:22).

DOLORES ARCHAEOLOGICAL PROGRAM
FIELD INVENTORY

Site #: 05 MT 05165

Date: 6/12/80

Initials: JPMC

Site	F.S.	MAT/SAMPLE	# of Bags	Site	F.S.	MAT/SAMPLE	# of Bags
	68	HMET	1				
	68	HAMB	1				
	71	HUEG	1				
	71	HMET	1				
	74	HUEG	1				
	74	HMET	1				
	75	HUEG	1				
	76	HMET	1				
	76	HUEG	1				
	76	HUEG	1				
	77	HUEG	1				
	77	HAMB	1				
	78	HMET	1				

Lab use only:

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Ok'd by:

The Old Spanish Trail through southwestern Colorado was the route chosen by at least six parties of trappers by the end of 1824. William Becknell, Kit Carson, William Huddart, Etienne Provost, Antoine Robidoux and William Wolfskill were some of the traders who chose the Old Spanish Trail from Santa Fe to the Green River Valley in Utah (O'Rourke 1979:26). In the 1830's the Old Spanish Trail and other sections of southwestern Colorado were routes travelled to the newly found trapping areas in California. "The Young-Wolfskill party of 1830-1831 is credited with covering the entire distance of the Old Spanish Trail, which became the regular caravan route for the Missouri-Santa Fe-Los Angeles trade" (O'Rourke 1979:26).

By the 1840's the fur trade in Colorado and Utah was in a stage of decline. The primary reason was the dwindling demand for pelts due to fashion changes. Silk hats were becoming increasingly popular at this time. The second reason was the lack of pelts as the beaver population in this area ^{was} depleted by trappers (Athearn 1977:19). The last reason for the decline was the increasingly strained relations between Mexico and the United States.

By the mid 1840's, the Mexican government was reluctant to allow parties to travel the Old Spanish Trail through New Mexico and Colorado because of the proposed annexation of Texas.

After the Mexican War of 1846-1848, the annexation of Texas to the ^{United States} U.S.A. was accomplished. With the Compromise of 1850, Texas no longer claimed eastern Colorado. The Territory of Utah, created on September 9, 1850, was "bounded on the west by the state of California, on the north by the Territory of Oregon, on the east by the summit of the Rocky Mountains, and on the south by the thirty-seventh parallel of north latitude. This meant that the entire western slope of Colorado, including most of the

fourteen counties in the southwestern part, was at one time part of Utah" (Cummins 1951:89).

The advent of American exploration in the west did not begin until after the Louisiana Purchase of 1803. With the purchase of Louisiana Territory millions of acres of unexplored land were added to the United States. President Thomas Jefferson then ordered a series of expeditions and surveys in order to gather "information on the resources, native inhabitants, and flora and fauna of these vast new areas; their suitability for settlement was to be determined" (Athearn 1977:24).

The first survey was the Lewis and Clark expedition of 1804-1806 which, bypassing Colorado, followed the Missouri River into the Columbia Basin. The second survey was the Zebulon M. Pike expedition of 1806 which was dispatched to map the southwestern boundary of Louisiana. This expedition brought Pike into the southeast portion of Colorado called the Raton Basin (Murray 1979:17, 18).

The next American explorations into Colorado were directed by Captain Benjamin L.E. Bonneville, who traveled the Great Basin area in 1826, and Thomas Jefferson Farnham, who, in 1839, explored from the Old Spanish Trail into Middle Park in Colorado (Athearn 1977:25). The first large scale army expedition to the west in 1842-1843 were led by John Charles Frémont. Frémont was commissioned to blaze a trail to Oregon and California in order that the west could be settled. In 1845 Frémont undertook another expedition into Colorado. This campaign was ordered to explore for possible invasion routes into Mexico as war between the two countries appeared imminent (Athearn 1977:26, O'Rourke 1979:32).

After the war with Mexico the United States began its western expansion. In 1853 Captain John Williams Gunnison was commissioned to

gold was discovered along Cherry Creek near Denver (Athearn 1977:28). From 1874 to 1875 Ferdinand V. Hayden and William H. Jackson examined the geological and geographical formations of Colorado. This information is contained in the Hayden atlas, the Geological and Geographical Atlas of Colorado and Portions of Adjacent Territory published in 1877, and was widely used by railroad builders and capitalists interested in the development of the state (Bartlett 1962:103). In 1874 while photographing in the heart of the San Juan Mountains the William Jackson party decided to investigate the cliff dwellings further to the south. Beginning their journey "...they were soon in a beautiful valley with fine groves of cottonwood scattered about. Running through it was the Mancos River....Five to six miles below Merrit's ranch they noticed little grass-covered knolls which Captain Moss (their guide) said were ruins, and such they turned out to be, with broken pieces of pottery about the size of half-dollar scattered in abundance....Some stone ruins were found, so far reduced to rubble as to be worthless for Jackson's purposes" (Bartlett 1962:115). There are also reports by the United States Geologic Survey team of Holmes and Jackson (1875-1876) on the geology, land formation and ruins at the big bend of the Dolores River (Hall 1889:40-48). The Wheeler Survey of 1875 led by Lieutenant William L. Marshall succeeded in opening the Marshall Pass, cutting about 125 miles off the trip from Denver to the San Juan. Marshall Pass "became a transportation cornerstone in the development of mineral and agricultural wealth of west central Colorado" (O'Rourke 1979:66).

With the discovery of gold in 1859 there came hundreds of people to the mountains of Colorado. In 1860 Charles Baker was the leader of one of the earliest prospecting parties to penetrate the San Juan

Mountains. The first area to be mined in the San Juans was the upper Animas River Valley with other mining areas radiating from there. Several camps for placer mining were established around the area of Gunnison. Most of these camps were deserted as early as 1863 because the placer claims were played out, hostile Ute Indians and the lack of permanent settlements in the region. Large scale mining operations would not resume in the area until 1872, when silver was discovered in the Elk Mountains (O'Rourke 1979:61).

In 1869 Adnah French led an expedition of prospectors and miners into southwestern Colorado. Making an agreement with the Indians they proceeded with their journey. "Following up the river (San Juan) they arrived at a stream French recognized as the Rio Mancos....at the foot of the range (La Plata)....From this park they pursued a northerly direction, across a pine covered mesa or tableland, twenty-five miles to the Dolores River" (Hall 1889:201). They were snowed on in October so they returned to Santa Fe. "In April, 1870, they started again for the San Juan region....Part of the company followed the trail made the previous season to the Dolores, where they prospected with great difficulty, made some locations of galena lodes, then returned to Santa Fe" (Hall 1889:203).

After the Brunot Treaty of 1873 was negotiated with the Utes, approximately three million acres of mineral land became available for mining in the San Juan Region (History of Colorado: 1927:455).

As early as 1869 prospectors had moved to the region of the town of Rico (Baker and Smith 1979:35). However, the town was not officially settled until 1879 when silver was found at Nigger Bay Hill. Immediately people from surrounding towns flocked to Rico and the town was in-

incorporated in 1880 on February 25. Soon afterwards the Grand View Smelter began operations. With the development of this locality came the creation of Dolores County in 1881 at which time Rico became the county seat (Hafen 1948:442). "The Rico mines are characterized by their great dissimilarity with each other. Nearly every sort of ore, of both silver and gold, is found in a most heterogeneous way among the lavas. The richest ores are those without lead. There is also in the near neighborhood of Rico, high on the mesa, a magnificent supply of bituminous and free-burning flux, bog and magnetic iron, fireclay and good building stone. Zinc in great quantities has lately been discovered...." (Jocknick 1913:249).

By the 1860's Euro-American settlers had already begun moving into the Ute territory of Colorado. The settlers, "anxious for more land, wanted the Indians to move farther west. Accordingly, Kit Carson, D.C. Oaks and others took a Ute delegation to Washington and there negotiated the Treaty of 1868. It recognized a Ute reservation that was still of ample proportions, embracing most of the western slope...But when gold and silver was found in the San Juan Mountains, prospectors rushed onto the reservation despite promises of the treaty" (Hafen 1948:379). Soon, whites demanded Ute removal from this area as well. With the Brunot Treaty of 1873, or the San Juan Cession, the Utes were relocated to other sections of the reservation (either the White River, Uncompahgre or Southern Ute sections). La Plata County was created a year after the treaty comprising the whole of southwestern Colorado. It was later reduced in size to form other counties in the region (Hafen 1948:415).

However, neither the white settlers nor the Utes were completely satisfied. The settlers broke the treaty by driving cattle through the reservation while the Utes continued to utilize the prime hunting grounds

in the San Juan Mountains. This led to an increasingly strained relationship between the two cultures. The hostility reached its height at the White River Agency in northwestern Colorado in 1879 with the Meeker Massacre. On September 30 a band of Utes killed eleven males and kidnapped five females (Athearn 1977:57, O'Rourke 1979:54). The Meeker Massacre triggered the final removal of the Northern and Uncompahgre Utes to Utah in 1881. The Northern Utes were removed to the Uintah reservation while the Uncompahgre were moved to the Ouray reservation. Since the southern Utes took no part in the uprising at the White River Agency, they were allowed to stay in southwestern Colorado where they remain today.

~~However, the white Ute conflict was not yet settled as late as 1885.~~

Approximately 30 days after the Brunot Treaty of 1873 was signed, every available acre of land in the Animas Valley had been claimed by ranchers or miners (Baker and Haffen 1927: 455). The first settlers into the present Montezuma County were prospectors who traveled through the Mancos Valley in 1874. They were part of an expedition funded by Parrott Brothers^{41,45}, a San Francisco banking and realty firm. The men worked through the summer locating mining claims and laying out the town site of Parrott City, located in La Plata Canyon. The men spent the next winter camped on Starvation Creek in the Mancos Valley. The next spring they began clearing homesites (Freeman 1958: 27-28; Halls 1961: 147).

Cattlemen and ranchers were the first settlers in the Dolores Valley in Montezuma County. The valley had been used as a grazing area several years before the first homes were built. On August 27, 1877 W.M. May, of the Colorado Surveyor General's Office, noted in his field book the existence of R.W. May's log house (BLM 1976). In March 1878 William M. May entered a Homestead Application at the Lake City Land Office for land in the valley. On July 15, 1878 Richard W. May, William H. VanGott and William Rhead filed for adjacent 160 acre parcels (BLM n.d.). William M. May owned the land at the Big Bend of the Dolores River where the river changed course from flowing west to north. A settlement known ~~by this name~~ ^{as Big Bend} was established at this time (5MT4572).

In 1878 or 1880, the United States Government established a post office at the Crumley ranch located approximately 4 miles upstream of Big Bend (Freeman 1958: 53; Baker and Smith 1979: 36; Dolores Star, March 28, 1980; Anonymous 1961: 146). Big Bend was located at the base of a low ridge on the west bank of the Dolores River, approximately $1\frac{3}{4}$ miles from First Street in the present town of Dolores.

During the early 1880s more people settled at the Big Bend. Mr. and Mrs. George W. Morton, from Huerfano County, purchased 40 acres from William May and established a store. The post office, known as Dolores, Colorado, was moved to

Figure 3

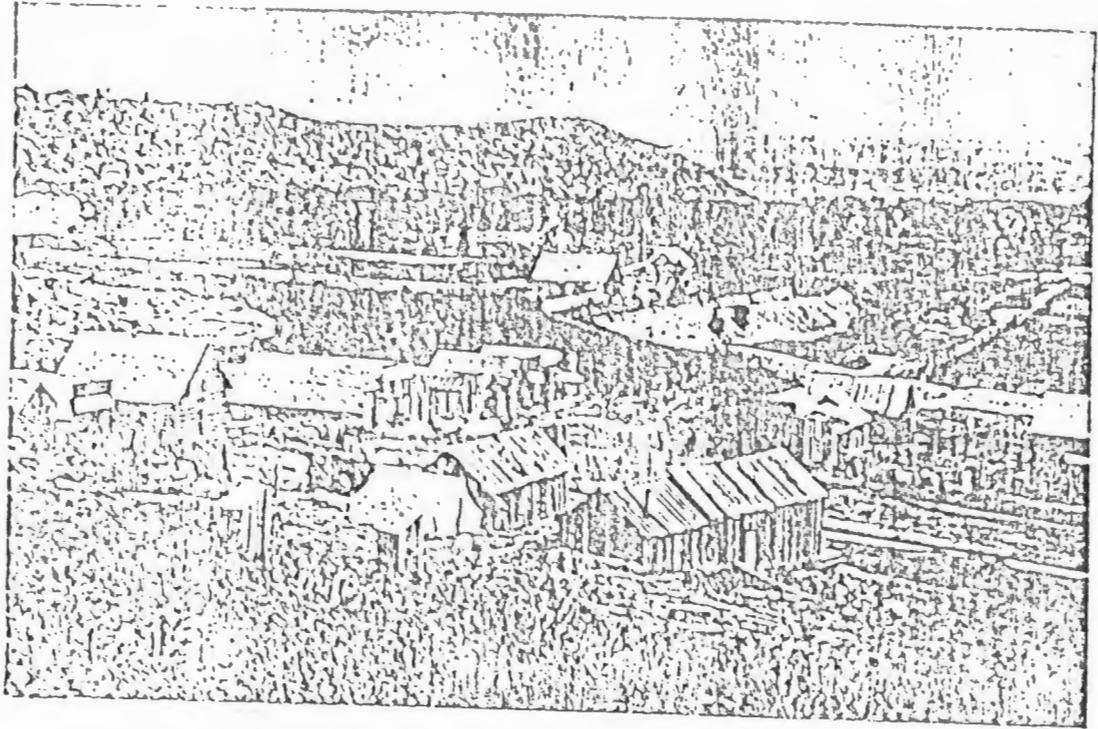


Figure 3

Photo 2. Rio Bend 1881-1891 (SNT 4572). Copy provided by
Thelma Koenig. Original photo appeared in the
ANNALS STAP in 1973.

0398 24

the Morton Store and George Morton became post master (Freeman 1958: 53).

Other new business included a blacksmith shop, hotel and livery stable.

Although the Act of June 15, 1880-Inclusion of Lands of Ute Indians in Colorado Within the Public Domain removed the Utes from ^{more} ~~nine~~ of their land, it could "not be entered or settled under the homestead laws" (US Govt. Printing Office 1968: 150). ^N Until the passing of the Ute Fee Homestead Act-- Act of June 13, 1902, ^{WERE} ~~that~~ the lands in the former Ute Reservation in Colorado were "open under the homestead laws" (USGPO 1968: 242). Consequently the Utes viewed the Euro-American settlers as illegal invaders of their land. The whites ^{and} ~~was~~ this land as open range with little habitaiton. ^{with out} Tension between the two groups had existed ~~after~~ the passing of the Brunot Treaty ⁿ of 1873. ^{This tension} ~~It~~ exploded in Northwest Colorado during 1879 with the Meeker Massacre. In the vicinity of Rico, Dolores and Mancos, depredations were being committed by both sides.

^{Fort} Ft. Lewis was established in the La Plata River Valley near Hesperus in the late 1870's. The fort's presence was to protect the reservations as well as to deter any militant action of one group ^{on} the other (Beckner 1975: 49).

^{and} There were clashes between Utes and Whites within the vicinity of Dolores. On May 1, 1881, unidentified Indians attacked the ranch of John Thurman which was located several miles up House Creek. Thurman, Richard May, and Frank Smith were killed. ~~Mr. Eskridge was wounded and appeared to have escaped the burning cabin~~ ^{May} The Indians escaped with 140 head of horses. A wagon was sent from Big Bend to collect the men. The remains of Thurman and May were brought down House Creek as far as the Dolores Valley. Due to the advance decomposition of the bodies, they were buried on a cliff overlooking the valley '(5MT5072). (Ayers 1931: 90) ^{and} USFS 1923: 276; Freeman 1958: 78-79).

The brother of Richard May, William, is reported to have gone to Fort Lewis for assistance ^{He was} ~~but~~ ^{it} was refused help and finally told that "the troops were there

to protect the Indians" (Ayers 1931:90). The military's attitude did nothing to calm the general feeling of unrest among the settlers.

By 1885, Ft. Lewis was increasingly beleaguered³ by requests for protection after every real or imagined incident. In early June the residents of Durango were clamoring for protection as the Utes were being allowed off the reservation. The meager rations allotted to the Utes forced them to supplement their diet by hunting. Unfortunately, cattle were frequently reported ~~as the animals being~~ killed.

On June 19, 1885, Colonel P. T. Swaine, commander of Fort Lewis sent the following telegram to the Adjutant General at Fort Leavenworth, Kansas:

A band of Ute-about fifty bucks, squaws and children have permission of their agent under stipulation of their treaty to hunt in vicinity of Blue Mountains, Utah, off their reservation. The Ute ration ~~of one-half pounds~~ at the present being only about one pound of beef, and three and one half pounds of flour per week per head. They gave solemn promises of good behavior, ~~under with~~ the residents where they passed ~~and~~ are not apprehensive of trouble for they were very friendly while camped near their ranches. They may appropriate a beef now and then from those immense herds but I do not know of any cause for alarm or of any Utes off the reservation anywhere else. I am at a loss to know the source of the demand for protection there being ~~in~~ Durango, County in the state. Please instruct me further about sending troops to the aid of citizens asking for them. The District Com'dr was placed in possession of all this information several days ago. (US Government 1885: 55).

However, on the same day the telegram was sent, a family of Utes camped in the vicinity of the Dolores Valley were attacked by cowboys. Reports vary as to the exact location of the incident. The silence of the perpetrators, the distrust of the Indians and the general public apathy have contributed to inaccuracies in the historic record, especially accounts written in later years.

The final report as recorded in the Post Returns of Fort Lewis is probably the most accurate account of what happened. Filed on June 28, 1885 by Swaine, the telegram was sent to the Adjutant General for the District of New Mexico: (US Government 1885: 63).

~~The exact location of the Beaver Creek Massacre, as this incident was called,~~

Agent and chiefs returned. The Indians gathering at Ute Mountain on the Reservation was directed by the agent for defence and is not offensively hostile. Major Perry reports the Indians will not depridate further unless further provoked by lawless whites. He saw the Indian dead and corroborates the Indian story. Eleven Indians were in two tepees--three bucks, a child and two squaws were killed and three bucks and two squaws escaped. One of each sex wounded. They were inoffensive. Some very aged, and the massacre at one P.M. the 19th instant was most barberous. The white woman wounded when husband was killed at 11 P.M. the 20th instant was interviewed by Major Perry also. He was but two Indians and could identify neither. Major Perry, acting under my instructions is now en-route to the Blue Mountain Country where however it is reported all is quiet.

... Beaver Creek massacre, in this incident is called,
is not mentioned. Accounts ~~also~~ place the massacre "15 miles south of the settlement of Dolores" (McKitt 1957: 19); "at the head of Beaver Creek, 8 miles from the Fish Fork of the West Dolores" (Dolores News, June 25, 1885); and the mouth of Beaver Creek where it flows into the Dolores River (Baker and Smith 1979: 36).

UNITED STATES FOREST SERVICE
The (USFS) Records have the site of the Beaver Creek Massacre recorded both in the valley near where the town of McPhee was located and "one-half mile southwest of bridge crossing Beaver Creek on road from Dolores to Norwood" (USFS 1979).

This latter location is similar to that reported in the Dolores News quoted above. The Durango Idea for June 27, 1885 also stated that the "scene of this was at the head of Beaver Creek, about 8 miles from the Fish Fork of the west Dolores" (USFS n.d.). The Dolores Star on June 20, 1930 published an article discussing the attack. This account also recorded the incident as taking place on Beaver Creek below where the Dolores-Norwood Road now crosses (USFS n.d.).

Major David Perry of the 6th Cavalry, was sent from Fort Lewis on June 22nd to investigate this incident as well as another which occurred on the Mitchell Ranch, a mile or two south of present day Cortez. (Freeman 1958: 127-128). On June 26th, Major Perry sent a report from his camp on the Big Bend of Dolores River. The report was filed on June 29th and listed in his command troops "B" and "C" of the 6th cavalry (^{Perry}US Govt. 1885: 119).

Mr. Genter was killed and his wife wounded on Sunday, June 20th. This attack was probably in retaliation of the Utes killed the previous day. The five Genter children managed to escape unharmed. The Genter place was located near the Lake View School, north of the present Totten Lake. (~~US Govt. 1883~~ Freeman 1958: 138; Dolores News June 27, 1885; USFS n.d.).

The killing of Mr. ^{Genter}Gentner and the wounding of his wife added fuel to the settler's demand for the removal of the Utes. The Utes were equally agitated, including Chief Ignacio, as the Utes that were killed were his cousins (US Govt. 1883: 62; Dolores News July 4, 1885).

By midsummer, the unrest had settled in the Montezuma Valley area. This was due in large part to the way the military handled the emergency. They tried hard to dispell the rumor that the troops were ^{just} to protect the Indians. The officers were directed to let "the people know that they are there for their protection and interest" (US Govt. 1883: 68).

In mid-July the unrest in Montezuma Valley area receded and attention was focused to the San Juan Basin as trouble between the Navajos and settlers there had erupted.

By the end of the year, the conflict between the settlers and Utes recieved little public attention.

On November 25, 1885 the Montezuma Valley Water Supply Company ^(MVWSC) was formed. By February 1886, work had begun ^{on} of a tunnel ^(5 mi 5 1/2) which would bring water from the Dolores River through the divide that separates the river from the Montezuma Valley. The tunnel is 5,400 feet long, ^{seven} 7 ^{nine} to 9 feet in diameter. ^{6.5 ft} Water carrying capacity was predicted to be sufficient enough to irrigate 200,000 acres of land. Eleven lateral canals were to be constructed to carry water south of the San Juan and Dolores River divide to McElmo Canyon, ^{v/e} southeast of Cortez. (Freeman; Montezuma Journal April 28, 1888). Water was first diverted through the tunnel in 1888, "but it was 1889 before it was completed to carry a full head of water" (Freeman 1958: 96).

James W. Hanna, manager and part owner of the MVWSC and main proponent of the irrigation system, owned the land on which the town of Cortez was plotted in 1886. With construction of the tunnel and canal, work was assured for many people. Workers came, some even filed for homestead around the town. Not only did the workers arrive but merchants who established businesses to cater to his workforce. By 1902, Cortez was incorporated and was complete with a post office, school, courthouse, newspaper, churches as well as restaurants, livery stables and stores. (Hemingway 1961: 149; Freeman 1958: 66).

Although the tunnel had been completed in 1889, work on the canals went slowly. In April, 1887 work had started on Main Canal No. 2 which was constructed by the

Number Two Land and Canal Co. The canal begins at the ^{diversion} dam on the Dolores River which diverts the water to the tunnel. The canal flows through the swampy area of Sagehen Flats and exits the River Valley into the San Juan Basin through "the Great Cut Divide". The canal at this point consisted partly of the Morton Flume (1 mile long, 18 ft. wide and 7 ft. deep) and partly of a trench which was over 4,000 feet long and up to 40 feet deep. Main Canal No. 2 was completed in 1907 (O'Rourke 1979: 159; Hemingway 1961: 149-1980; Freeman 1958: 99).

In 1890 the Montezuma Valley Water Supply Co., ^{had been brought by} ~~successor~~, the Colorado Water Supply Co., merged with the Dolores No. 2 Canal Co. to form the Colorado Consolidated Land and Water Co. By 1907, ^{the C.C.W.Co.} ~~its~~ successor, the Montezuma Water and Land Co., was in ~~the~~ ^{the} ~~company's~~ ^{company's} ~~ownership~~ ^{ownership}. In 1920 the existing Montezuma Valley Irrigation Co. was incorporated to administer the canal system (Freeman 1958: 98, 99, 101).

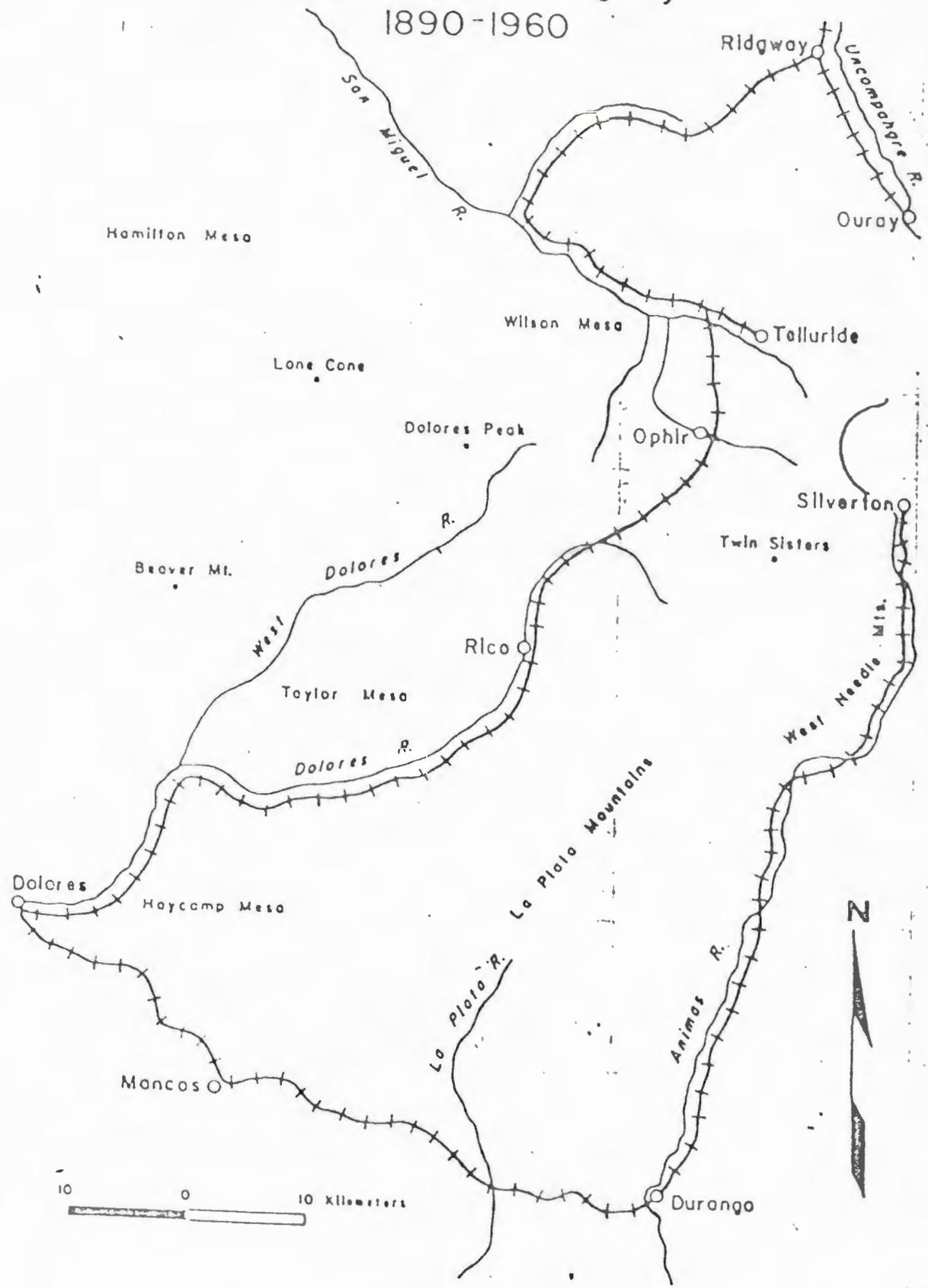
Although the various irrigation companies had difficulty controlling and collecting water shares, the district still attracted many settlers. In 1889 Montezuma County was formed from La Plata County. ~~and~~ Cortez, only 3 years in existence, was designated its county seat.

That same year, Otto Mears incorporated the Rio Grande Southern Railroad and began work on the Silverton to Ironton Railroad. In March 1890, engineering parties began dual phase construction of the Ridgeway-Durango Line.

Years earlier, the Denver and Rio Grande Railroad had conducted several surveys to locate new routes. In 1881 Thomas Wiggleworth surveyed a route for the Denver and Rio Grande "from Rico down the Dolores River to Dolores, through Lost Canyon to Mancos, across Cima ^(E.L.W.) and to Durango" (Crum 1942: 170). This was the route used by the Rio Grande Southern. One work party began at Ridgeway and laid track along Otto Mears' toll road across the Dallas Divide and reached Telluride, on December 1, 1890. The rough terrain between Telluride and the Dolores Valley slowed construction, Rico was not reached until September 31, 1891.

Wigglesworth was construction and survey supervisor for the south portion of the track from Durango to Rico. On Thanksgiving Day, 1891, track was ^{laid} ~~laid~~ across the site

RIO GRANDE SOUTHERN RAILROAD Durango To Ridgway 1890-1960



of Dolores, having entered the valley down Lost Canyon from Mancos. The 162 mile track was completed on December 17, 1891 when the two ^{trains} met eleven miles south of Rico (Crum 1942: 170-71; Searcy 1942: 35).

Shortly after the railroad was completed the town of Dolores was established. John and Andrew Harris, who started the J. J. Harris and Co. bank and store at Big Bend in 1886, and Judge Adair Wilson acquired the Sherman Phelps homestead which was patented in May 7, 1890. "Since Adair Wilson was attorney for the railroad and had shares of stock in the company, there was no opposition to the location of the townsite and no other site was proposed" (Freeman 1958: 59). The townsite was called Dolores. The Harris brothers built a large brick building for their ~~urban site~~ ^{mercantile} business and bank. Soon the rest of Big Bend followed, including the post office, which had always been called Dolores (O'Rourke 1979: 94; Freeman 1958: 59; Anonymous 1961: 145; Dolores Star March 28, 1890).

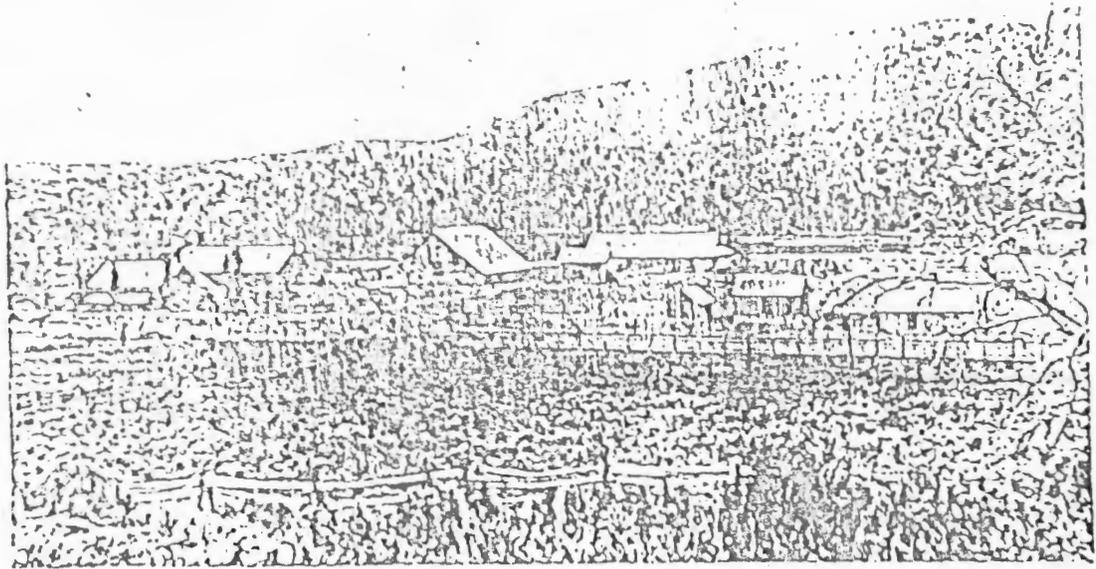


Figure 6
Photo 1.

Johnson Ranch circa 1890. Original photo owned by
Thelma Koenig of Dolores, Colorado.

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Occupation in the valley continued with Dolores as the center of trade rather than Big Bend. With the railroad at Dolores, the cattlemen could now ship direct rather than having to drive them to the old railroad head at Durango, which was established in 1881 (Anonymous 1961:145).

Between 1885 and 1894, 19 patents were issued to settlers who had homesteaded the river bottom, within the DAP project area. ^(see Fitzgald) At least 20 others had applied for patents but these applications were either canceled or relinquished (National Archives). A few of the settlers still have descendants residing in the Dolores area. These settlers include Charles Johnson, Calvin House and the Kuhlman brothers. ~~Charles Johnson was~~ well known as a breeder of race horses. ^{Charles Johnson was} Johnson migrated from the Pine River in 1881 with 2000 head of cattle and some horses. ^{and called} Johnson was known as "Racehorse Johnson" or Grandpa Charley Johnson. ^{He patented 100 acres on the river (Ely)} His most famous race horse was Jim Douglas who was raised in the valley. Jim Douglas, who was never beaten in a race, is rumored to be buried near the Johnson family cemetery (5MT5074) under a large rock on the Old ^{Sugar} Sugar Place, now owned by the Speers (5MT5173) (Freeman 1958: 50-51). ^{Township 38N Range 15W}

Calvin House's claim (5MT5078) was located in Section 30 according to the survey conducted by W.M. May in 1877 (Survey Report, BLM 1976). His granddaughter, Mildred Denby, recalls crossing a ford to reach his log cabin (Conversation of 12 November 79). May's survey report also mentions Ryman's ranch and George May's cabin in Section 31, Township 38N, Range 15W. Neither of these men received a patent on their claims and no visible remains of any buildings have been found. Residents today claim that some of the older houses had been swept away in floods or when the river changed course (Sumner T. Bangs interview of 7 November 1979; Dale Willbanks, no date). This was a frequent occurrence. An old schoolhouse which was located at the junction of County Road 27 and 28 ^{CR} during the 1920's was washed away in a later flood (Homa Louise Cline interview of 18 August 1979).

The Kuhlman brothers were from Hamburg, Germany and had lived for many years in St. Louis, Missouri. Their ranch on the Dolores River (5MT4566) became the show-

(45)

place of the valley. In 1908 August completed construction on a molded concrete brick house. When his daughter Frieda was married, newspaper accounts stated that August Kuhlman was one of the richest ranchers in the area. August and his brother William acquired a total of 240 acres under the regulations of the Homestead Act in 1890. In 1901 August obtained an additional 80 acres on the cliff rim overlooking the ranch house buildings (Federal Archives, ^{U.S.} ~~Debye~~; ^N Ima Cline, interview 11 September 1979). When the Kuhlman's brothers first arrived in the valley around 1882, they had built a log cabin on the east drainage that flows down the cliff across their claim. They could not sleep in the cabin during summers for fear that Indians would burn them out. Every winter the brothers would work the mines at Telluride and Rico and when they returned in the Spring their cabin would have been burnt (Ima Cline, interview of 11 September 1979).

Between 1895 and 1909 only four patents were issued for land within the project area (Federal Archives). ^{U.S.} ~~See~~ ^{See} During this period the more numerous cattlemen began to resent the presence of the sheepmen who had grazed their sheep in the area for years. "Cattlemen pretend to think that the cattle and horse industry was endangered and that sheep ruined the grazing for other animals. Cattle was held to be far more important than sheep" (Freeman 1958: 304).

However the differences between cattlemen and sheepmen were settled between 1910 and 1924. During this ~~time frame~~ ^{time frame} 30 patents ^{See table} were issued for land within the project area. One of these homesteads was owned by Harry Morgan who obtained 640 acres on Cline Crest on the west rim of the valley. Morgan ^{See footnote} had lived in the ~~valley~~ area for several years at 5MT5078, which had previously been owned by Calvin House. ~~Morgan was a~~ sheepman. His son-in-law, Fred A. Cline and grandsons continued to obtain land within Sagehen Flats, on Cline Crest and in the river valley. The Cline family still owned most of this land when purchased by ~~the~~ WPRS in 1979.

Freeman in his History of Montezuma County noted the arrival of a train load of immigrants on February 7, 1910; March 1, 1912 and again on March 13, 1913. "All

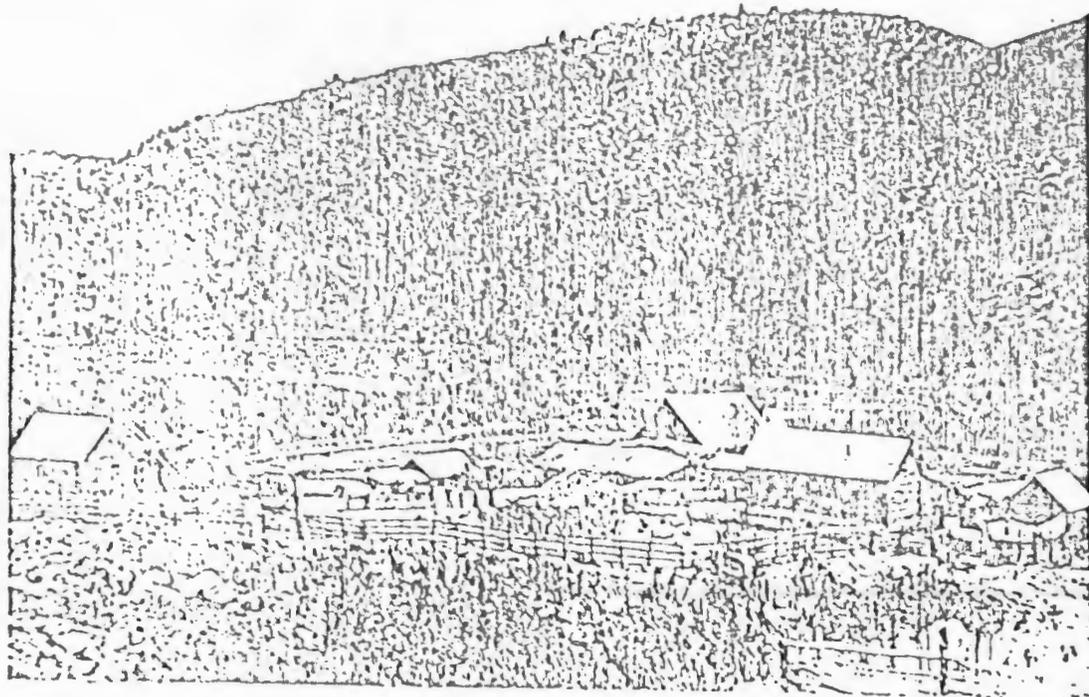


Photo 7. ST4566 Periman Ranch taken between 1890 and 1908.
Original photo owned by Ina Kuhlman Cline of
Dolores, Colorado.

29931

located in some part of Montezuma Valley". (Freeman 1958: 310-11). A rural telephone line went up the river in 1914 (Freeman 1958: 312).

In 1924 the New Mexico Lumber Company obtained the rights to 70,000,000 board feet of timber in the Montezuma National Forest. The stand of Western Yellow Pine was located on 118,391 acres north of Dolores. The parent company, McPhee and McGinnity, located the sawmill approximately four miles downstream from Dolores on land obtained from Charles Johnson. The town which the company built for its employees was called McPhee (5MT4571).

As early as 1901 Edgar Biggs of the New Mexico Lumber Co. began obtaining cutting rights for timber around Dolores. In 1905 Arthur Ridgeway surveyed Biggs' holding and estimated that there was 210 square miles or 134,000 acres of Western yellow pine. After 1907, D.C. McPhee and J.J. McGinnity expanded Biggs' holdings by filing on alternate sections of land north and west of Dolores. This checker-board effect isolated intermediate sections of land making them inaccessible to other lumbering operations (Freeman 1958: 314; O'Rourke 1979: 153; McClellan 1970:1).

A post office for McPhee, Colorado was established in September, 1924 with Charlie Artz as the first postmaster (Delauney n.d.; Charlie Lobato, interview 26 July 1979). The post office was located in the commissary building along with a picture show and pool room (Freeman 1958: 315).

On November 15, 1924 the lumber mill began operations. Within a year McPhee had 25 houses for its salaried employees and 50 smaller rough cut houses for the workers. These smaller three room homes were grouped near the river, and rented for \$2.00 a month. This area became known as "Mexican Town", "Chili Town" or "Chihuahua" as most of the residents had Spanish surnames (McClellan 1970: 33; Bill Hamilton, interview of 11 December 1979; Newell Periman, interview of 18 October 1979; Charlie Lobato, interview of 26 July 1979).

Other buildings in town consisted of Dr. Speck's house and office; a two-story frame house occupied by the superintendent, Thomas J. Orr and his family; and the Johnson house, used as a boarding house (Robert G. Orr letter of 24 July 1979; Freeman 1958: 315).

PHOTO OF MCPHORE

Figure 7

The sawmill consisted of a three-story building which housed the clean-up room which collected sawdust from the mill and finishing rooms above. Within the plant complex there were a power house (which provided electricity for the town), fuel house, shops, warehouse, sheds, loading platform and a ^{three} 3-acre pond to store the logs (Freeman 1958: 315; Bill Hamilton, interview of 11 December 1979; Charlie Lobato, interview of 26 July 1979).

The operations at McPhee peaked in 1927. That year it was known as one of the largest sawmill in the region, employed 500 men and accounted for over half of the state's sixty million foot production for that year (O'Rourke 1979: 154).

The success of the mill failed during the 1930's, the era of the Great Depression. First a fire on September 1, 1934 destroyed part of the mill (Delaney n.d.: 2). On March 19, 1937 McPhee all but closed its operations, forcing a large number of area residents out of work (Freeman 1958: 316).

The 1940's did not improve McPhee's luck. Fires struck again in 1941, destroying the sawmill and the machine shop. The June 30th fire in 1941 was estimated to cause a 25,000 loss for the Montezuma Lumber Company, which had purchased the operations in the late 1930's (Delaney n.d.: 2; Freeman 1958: 317).

In January 1948 fire struck McPhee for the last time. The rebuilt mill and shop building were completely destroyed. In July the post office was discontinued. The town holdings were liquidated and all buildings sold and moved. By this time McPhee included 422 houses, a school, church and cemetery. Most of the houses, were sold for 75 to 200 dollars and moved to Cortez or Dolores (Delaney n.d.: 3; McClellan 1970: 30).

PHOTO OF CCC CAMP

not needed by the CCC boys. However when personal items of the CCC crew began to disappear, this privilege was revoked. Lumber which ~~was~~ wasn't salvaged by the crews was then burnt (Bill Hamilton interview of 11 Dec 79).

Between 1940 and 1954, only three land patents were issued for land on the mesas above the river valley. From 1955 to 1959, there was an upsurge in patents issued. Seven were issued in five years. The last two patents issued under the regulations established by the homestead laws were between 1960 and 1964 (See Table).

When the DAP Historic Survey began in June of 1979, five families were still residing within the boundaries of the proposed McPhee Reservoir. These families were relocated to new homes.

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METHODOLOGY

INTRODUCTION

Several techniques and methodological approaches were utilized by the Historic Survey Crew in their approach to research and fieldwork. The methodological approach includes procedures established in the disciplines of anthropology, archaeology and history. Various techniques used in the above fields were also applied in the data collection. Other techniques used were derived from ethnohistory, ethnology, ethnographic analysis, oral history, ethnoarchaeology, and historical archaeology.

The data collected from research and fieldwork will be applied to the Historic Research Design (Appendix A). The research design was designed to structure the data collected in order that a reconstruction of the historic occupation and settlement of the Dolores River Valley could be postulated.

The archaeological techniques employed during fieldwork are intended to uncover evidence about the material cultures of these settlers. Historical research will generate a concise description of the events that occurred in historic times in the project area. The collection of oral histories of present day inhabitants will lend support to the data collected from other sources.

THEORETICAL APPROACH

The relationship between anthropology and archaeology has been so tightly woven in the United States that the majority of archaeologists in America have their advance degrees from anthropology departments of major universities.

Willey and Phillips (1958) described this parasitic relationship as archaeology being in a dependent relationship to anthropology, especially in so far as theory is concerned. ^{(1958:1).} The past use of ethnographic analogy in archaeology also was a causal factor in this relationship. As this approach has changed in the past few years towards a more ^{ce}proassural, environmental oriented one, the attitude towards anthropology by archaeologists has also altered.

James Deetz has clearly stated this position:

That part of anthropology known as archaeology is concerned with culture in the past--the extinct lifeways of former peoples, how and why they changed and developed, and the significance of this developmental process and to our understanding of culture. In short, archaeology adds a vital time dimension to the study of man. As much as it is to achieve the ends which we claim for it, archaeology must remain as closely and intimately bound up with general ethnology as possible and constantly contribute to understanding of social man (1972:108).

Flannery simplified the above statement: "A dominant characteristic of American archaeology has been its long history of reaction to American ethnology" (1972:102).

The divergence between ethnology and archaeology is not in their approach (descriptive and comparative) but in their definition of problems and methodological techniques. In spite of this difference, theoretically ethnology and archaeology individually utilize cross-cultural comparisons and the study of cultural process (Voget 1973: 1).

In a historical perspective of this relationship, "the anthropology practiced by the evolutionists split into two parts. Prehistory increasingly became the province of archaeologists, who gradually developed a refined methodology for reconstructing the past, while living primitive people became the subject matter of social anthropologists. (Hudson 1973: 114).

Archaeology is the study of the cultural processes of past societies. Archaeology is not only concerned with the material remains of a culture, but how the elements may reflect the articulation of society

expanded to include the expansion and colonization of European Society and the response by native cultures to this invasion.

The methodological approach used by the historic survey crew is based on the above assumptions as well as the processual system approach of the study of cultural process.

This approach combines the data collected in such a way that it may be possible to show the interrelationships between the technology, economy, social system, and material resources available to the culture under study. The historic research design was formulated in such a way that a description of these processes may be written. Culture process has been defined as viewing "human behavior as a point of overlap (or "articulation") between a vast number of systems, each of which encompasses both cultural and non-cultural phenomena" (Flannery 1972:104).

By the use of this systemic approach, archaeologists are able to focus their research on the interrelationships between many variables in the systems. These variables may function independently or in varying combinations within each system. A minor variation in these variables or the system can result in culture change (Flannery 1972:104; Binford 1972:199; Sabloff and Lamberg-Karlovsky 1974:2).

The separate analysis of the technology, economy, social structure, politics and religion of a culture may isolate causal factors which form a relationship between these systems.

The actual operations which will formulate the basis of this study are included in the Historic Research Design (Appendix A). This operation is divided into five steps:

1. survey and intensive recording of historic sites
2. archival search and informant interviews
3. excavations
4. analysis
5. synthesis

These steps will result in the data collection to describe the following systems outlined for study in the research design:

1. environmental constraints
2. settlement patterns
3. Demographic patterns
4. technology
5. economic
6. social patterns

The data collection and analysis of the above systems will be synthesized. This synthesis will adhere to the processual framework and culture change will be a central concern.

The senseless debates of several years ago over semantics in Historic Archaeology between historians and archaeologists have dissolved into a spirit of cooperation and exchange between the two fields. Historic archaeology may still be regarded as a tool by many, but it has progressed to being a recognized discipline in the social sciences (Hume ¹⁹⁶⁹~~1974~~:6 and Rouse 1979a:801).

The present failings of this new field is that there is still some dissension among anthropologists and historians regarding their respective approach to historic archaeology. They still tend to be rather egocentric in their belief that their way is the only right way (Schuyler 1972:119).

For example, in a review of Stanley South's Method and Theory in Historical Archaeology, it is pointed out that "the point is made that the two spheres of historical archaeology and history do not much overlap, that they are two different sets of information. This is partly because South abhors site-specific information, ... He takes historical research for granted" (Chance 1977:128).

On the historic side, Ivor Noel Hume's antipathetic stand on the use of anthropologically trained archaeologists on historic sites is well known (1974⁶⁹:13). However in Historical Archaeology, Hume does go on to state

his view may be in part the historian's fault as:

5 → The professional historical archaeologist had realized from the beginning his need of the historian, but the histori^{an} has been slow to re^ciprocate. His attitude has been that all he needs to know is to be found in his documents and if it is not there, it is irreparably lost. He is only now beginning to realize his mistakes and to see that excavation properly undertaken can fill in details missing from the written record and may even correct previous interpretations of it!" (Hume 19⁶⁹24:18).

5 → Fortunately, Schuyler in Historical Archaeology: A Guide to Substantive and Theoretical Contribution has pulled together these divergent views. It is noted that two of the contributors feel that both the anthropological approach and the historic approach must be used in order to retrieve the most information. (Rouse 1979b:850 in his review of Schuyler 1979)..

Schuyler also "repeats his view that historical archaeology is a subdivision of anthropological and historical evidence, and states the need for it to become more ^{ce}pro^{ce}ssural and more comparative in its handling of the evidence" (Rouse 1979b:850).

Recent work such as Handler and Lange's work on plantation slavery in Barbados "blends archaeological and historical research" (Ferguson 1979:384).

Adams' work at Silcott, Washington has also generated several reports on the ^{US} ~~sue~~ of historical documentation, both written and oral, and standard archaeological techniques (Adams 1977).

In Africa, Schmidt has taken the material culture of the Bahaya in Tabzania and studied these remains using the methods of cultural anthropology (Schmidt 1977).

The techniques being developed in the subfield of ethnoarchaeology are likewise applying a multidisciplinary approach.

The theoretical base of ethnoarchaeology is the comparison of data collected ethnographically to that uncovered during archaeological excavations. One technique employed is termed the "direct historical approach". This approach uses documents or ethnohistorical data to form analogies between past cultures and present ones. Ethnohistorical data is the record of a culture's traditions and history in the words of its participants. (Hudson 1973:112 and Voget 1973:2). This ethnic history includes the writings of early explorers and missionaries as well as the oral traditions that persist today (Hudson 1973:112 and Voget 1973:2).

These analogies are then used to form a postulate between archaeological materials and their "behavioral context in the past" (Binford 1972:33).

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AN ETHIC.
Ethnoarchaeologist has been defined as: "an anthropologist conducting ethnographic research for an archaeological purpose, linking material remains to the human behavior from which they resulted" (Gould 1978:111).

Similarly, the theoretical basis of ethnoarchaeology is: "the use of analogies derived from observations to aid interpretation of past events and processes....The reason... is to provide ourselves with as many and as varied interpretive hypothesis as possible to help us understand (explain and predict) archaeological remains" (Watson 1979:277).

In order to adequately deal with the cultural processes during the historic period of the Dolores area, the multidisciplinary approach will be utilized.

METHODOLOGICAL APPROACH

The methodological approach used on the Dolores Archaeological Program will result in such a synthesis of anthropological, archaeological and historical research.

Historic documentation of the time period under study is not only being sought in the city and county records, but at the regional and national levels as well. For example, most of the original records on homestead entries and ^{PATENTS ISSUED IN} approvals for Colorado are on file at the National Archives in Denver and Washington D.C. On a smaller scale, personal memorabilia and records are also being collected and studied for their potential contribution and material past of this area. ^{↑ TO OUR KNOWLEDGE OF THE CULTURAL}

Whenever possible, original materials are being collected. Published remembrances of the Dolores Region are also being noted as secondary sources.

In conjunction with this research, informant interviews are also being recorded as part of the Dolores Archaeological Program's oral history program. Biographical information, as well as specific data regarding historic sites in the project area are being collected. The procedures used in this program have been detailed elsewhere (Duranceau 1980).

The data assembled through historical research will supplement the information derived through archaeological survey. The methodology employed in the survey and intensive recording of historic sites is detailed in the Historic Field Manual (Appendix ^B). The major emphasis of this field manual is the detailed ^{and} recording of all historic sites and isolated finds within the project area. After a locus of historic activity has been defined, overall photographs and measurements of all features are taken. A site report (Figure) or isolated find sheet (Figure) is filled out in as much detail as possible, from field notes and research evidence. The detailed survey techniques utilized on the Dolores Program are those established in the

fields of archaeology and historical archaeology by Heizer and Graham (1967), Hume (1969), and South (various).

Field operations began June 1, 1979. The research design and goals of fieldwork were defined during several meetings between the DAP principal investigators and the ^hhistoric archaeologist. The philosophy of the field year 1979 crew differed from that of the 1978 historic operations (Baker 1979) in that all physical remains from the historic period were recorded. These loci were designated as site or isolated finds (unassociated activity remains). Several components were disregarded entirely as they were discovered to be reflections of the "end of road" behavior patterns of locals, as well as of the DAP crews.

The designation between a site and an isolated find were judged subjectively. A site is the physical remains of human activity. An isolated find was defined as the independent remains of unassociated activity. For example, one ^{bridge} may be considered a site while another would be considered an isolated find based on the bridge's age and local significance. Local significance in this instance would be whether it is the original bridge at that location, who constructed it, and in what year. Another example would be an isolated dump. Several dumps were designated as isolated finds until it was pointed out in an informant interview that these areas were actually residences at one time. Buildings ^{had} and been razed or removed and any depressions left were subsequently used as dumping areas by local residents.

The definition of a site appears in many journals and ^{INTRODUCTORY} ~~intro~~-dictionary text books. Willey and Phillips in their classic monograph state that "a site is the smallest unit of space dealt with ~~by~~ the archaeologist and the most difficult to define" (1958:18). This difficulty is obvious because the subject has proliferated academic writings for years. In historic

archaeology a site usually has the added component of documentary evidence.

During the field reconnaissance for historic sites within the project area, it could be determined that there were three primary variables involved in how sites were located.

The first variable is that visible remains of sites were found to be readily accessible from existing traffic arteries, ancillary trails or abandoned roads.

The second variable is that auxiliary power or telephone wires could be traced to habitation sites which were not readily accessible or visible from the main roads.

The third locational variable used centered on sites that were abandoned and not easily visible due to post occupational disturbance, either ~~environmental~~ ^(FLOODS) or cultural (vandalism). These sites were located during field survey by two man reconnaissance teams. In fact due to the heavy overgrowth of vegetation, (especially in the flood plain), soil conditions, and recurrent floods, the location of several structures placed by informants could not be determined.

The areas to be surveyed in field year 1979 were established by the mitigation guidelines scheduled by Water and Power Resource Services. In ~~all~~ the acres ~~that~~ were surveyed, 40 habitation sites, 2 towns and 15 miscellaneous sites were recorded.

SUMMARY

By utilizing the techniques of anthropology, archaeology, history and their sub-fields, the data ^{will} ~~can~~ be collected and analyzed. The results of this study will be a concise description of the culture processes involved during the historic settlement of the Dolores Valley.

This multi-disciplinary approach is the most expedient procedure available to elicit the data from various sources.

This multi-disciplinary approach has been used successfully by Binford in his Nunamiut Eskimo study (1980), Deetz and Dethlefsenⁱⁿ their now classic gravestone study in New England (1972), and Adams et. al. at Waverly Ferry, Clay County, Mississippi (1979).

Binford undertook an ethnoarchaeological approach to the discard practices of the Nunamiut. His approach combined ethnographic analogy, archaeology and

Deetz and Dethlefsen combined historic records with an analysis of change in designs on headstones in several New England cemeteries. These stylistic changes were a reaction to the more liberal religious outlook adopted gradually by the staunch Massachusetts people.

At Waverly Ferry, the author's basic strategy, as developed in their research design, was a "conjunctive and synergistic approach combining archaeology with both history and oral history" (Adams^{et al} 1979:18). The settlement patterns, economic systems and social systems of Waverly were investigated by this methodological approach.

The Dolores Archaeological Program Research Design approaches the study of the historic inhabitants in a similar manner. The emphasis is on archaeological survey with historical research and oral history to supplement the data. This methodology combines these distinct, but complementary, approaches in the study of the historic occupation of the Dolores Valley.

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ARTIFACT ANALYSIS & INVENTORY

During FY-1979, non-intensive surface collections were completed on eighteen historic sites. The artifacts collected during FY-1978 from ten additional sites were included in the artifact analysis.

Artifacts were classified in the field on the basis of their material type: glass, ceramic, metal, synthetic, organic, inorganic, bone (human or non-human), and indeterminate. Analysis generated four additional types: leather, plastic, shell and composite.

Initial analysis inventoried the artifacts by site number, field specimen number (FS) and catalogue item number. FS numbers denoting field provenience were assigned during surface collection. Catalogue item numbers were assigned during initial analysis.

Lab processing included standard cleaning procedures for ceramic, glass and metal. Materials receiving special handling were synthetic, leather, shell and bone. All leather artifacts were immediately turned over to the Bureau of Land Management permanent storage facility for preservation and conservation.

The artifacts were defined at to identity, function, material, completeness, color, and the presence or absence of surface decoration. The information was recorded on the Historic Artifact Inventory Form (Figure 10) and input into the computer. The data was manipulated through a SPSS (Statistical Package for the Social Sciences) system. Totals and percentages for each category and site were computed (Norman et al. 1970).
 (CODING SHEET - APPENDIX?)

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Attributes of each artifact were noted when they ^{could} aid in determining the date of manufacture, distribution or registration with the patent office. As these artifacts are the remains of the Euro-American culture, gross identification of an artifact is relatively easy. The information archaeologists obtain from these artifacts is a chronology or precise time span in which these materials were manufactured, distributed and utilized.

Euro-American habitation of Southwestern Colorado did not occur until post-1870, therefore certain categories of artifacts would contain pertinent information. Due to the rapid changes in technology between 1860 and the early 1900's, the analysis of glass artifacts would result in the most precise dates. Glass artifacts represented the second largest material group of artifacts. Of the 588 artifacts collected, 190 or 31.7% were manufactured from glass. Of these, 108 were glass bottles which are excellent time markers in historic archaeology.

Prior to 1800, glass bottles had been free blown. These early bottles are easily identified by their asymmetrical shape, kick-up base, the presence of a large number of air bubbles, uneven wall thickness and a pontil scar (Gillio et al. 1980:17). This scar was made by the holding rod or pontil which was attached to the base with bits of molten glass. The pontil held the bottle while the blow pipe was removed. The lip of the bottle was then finished by hand (Switzer 1974:5; Ward et al. 1977:230).

From 1800 until the introduction of the semi-automatic machine, glass was frequently blown into molds. The three-piece hinged mold was used from 1810 until the 1850's. This mold left a horizontal line on the shoulder, with two vertical mold lines above it. These lines disappeared near the lip which was hand finished (Lorrain 1968:43).

The two-piece mold began replacing the three-piece mold around 1840. The bottles blown into this mold had two vertical lines which vanished at the upper neck due to lip finishing (Lorrain 1968:39,43).

The semi-automatic bottle machine, patented in 1881, produced a bottle that required little hand finishing. The mold mark or seam now ran to within a quarter inch of the top (Gillio et al. 1980:13).

Michael Owens in 1903 patented a fully automatic bottle machine. A continuous mold seam all the way up the sides to the top was the result. By 1920, the entire glass industry had converted to the use of this machine (Lorrain 1968:43).

Color, which is largely determined by mineral additives to the glass, is another datable criteria. The normal range of glass color is from light green to a greenish-brown. Experiments during the later 19th century and early 20th century resulted in varying tints from black and amber, honey and brown to purple and aqua. By the 1930's, colorless or clear glass was produced. Patina or turned glass dated prior to this year. ^{Figure 10 TABLE 1} Table II illustrates the correlation between glass colors and dates (Gillio et al. 1980:18; Ward et al. 1977:240).

Certain metal artifacts can also be dated with relative accuracy. The technological changes in the manufacturing of tin cans and nails are known time markers. Metal artifacts composed the largest group collected: 42.0% or 247 out of 588 artifacts. Of this number, 14.5% or 85 were nails and 10.9% or 64 artifacts were tin cans. These artifacts also represented the second and third largest elements.

Hand wrought nails would probably be the oldest nails found on sites in the Southwest. These were likely made by hundreds of individuals to suit their specific needs, ^{especially} when square cut or wire nails were not available (Gillio et al. 1980:1; Fontana and Greenleaf 1962:54).

Machine cut nails were produced beginning in 1790. By 1830, cut nails were

TABLE

CORRELATION BETWEEN GLASS COLOR AND DATE

Figueroa

TABLE 1

COLOR	DATE
black or dark green	1815-1885
purple	1880-1915
aqua	1880-1920
honey or amber	1917-1930's
brown	1873-present
clear or colorless	1930-present
patina or turned	before 1930's

uniform in size. They are referred to as "square" nails, as they taper to a point on two sides and appear square in cross-section. A smear left from the cutting blades may also be visible. From 1830 to 1890, cut nails represented the majority of nails used in the United States. In 1888 four out of five nails manufactured were cut nails. By 1895, this number had declined to less than one-fourth. Wire nails had replaced square cut nails.

However, as late as 1950, cut nails were being produced for securing wood to cement, concrete or plaster. Cut nails were then replaced by cement coated wire nails. Cut nails are still being produced today for special purposes such as cabinet work.

Wire nails were first manufactured in France in 1855 and were soon being produced in the United States. Wire nails are the common nail still in use today. Wire nails can be distinguished from cut nails by their circular cross-section (Fontana and Greenleaf 1962:44-55; Gillio et al. 1980:1).

Although the use of the tin can as a food container began in the 17th century, the first production of tin cans did not begin until 1810. The "hole-in-top" can was in use until 1920. This tin can was cut from tin plated sheet iron, formed around a cylinder, then soldered. The top and bottom were cut separate, then soldered leaving up to an 1/8-inch ridge. The food was then forced through a hole that had been left in the top. A smaller cap was soldered over this hole. A pin-hole left to allow gases to vent was closed by a drop of solder (Fontana and Greenleaf 1962:68). After 1880 the tops and bottoms were machine soldered which left an even seam (Gillio et al. 1980:7).

In 1885, the Helveta Milk Condensing Company of Highland, Illinois produced an unsweetened evaporated milk. Sold in a "hole-in-top" can, this product became popular during the Spanish-American War of 1898. By 1932, the evaporated or condensed milk can had been standardized (Fontana and Greeleaf 1962:74-75).

The "hole-in-top" can was beginning to be replaced in 1902 by the open-top can. The open-top can is characterized by a hermetic double seam and a crimped top and bottom. By 1922 this can was generally accepted by the industry. In 1936, the United States Bureau of Standards listed ~~and~~ ^{the} size and capacity of the standard varieties of open-top cans (Fontana and Greeleaf 1962:72-75; Gillio et al. 1980:7-11).

Ceramics in the Southwest are less of a time marker than an indicator of status and use. Stonewares and earthenwares may be indicative of utilitarian use, while porcelain denotes a more formal use of heirloom piece.

Ceramics collected represented 17.8% of the artifact population. The majority of ceramics collected, 42.3%, were from the town of Big Bend (5MT4572) which is known to date from 1881 to 1892.

Nineteenth century earthenwares and porcelains are difficult to date as there is little change in manufacturing techniques. Stonewares, such as ironstone, are relatively easier to date as ironstone began to be imported from England in large quantities after 1850.

The most dateable attribute of recent ceramics is the maker's mark. This mark is placed on the base of the ware and identifies the country or place of origin and the potter or company of manufacture. Two ceramic pieces

(Figures ^{10A} and ^{10B}) were found at the Big Bend townsite with pottery marks. The most distinctive was identified as belonging to J. and G. Meakin Limited of Hanley, England. ^{FIG 15} The firm was founded in 1845 by James Meakin who was succeeded by his sons James Jr. and George. The firm specialized in producing ironstone and exported large amounts to the United States (Fontana and Greenleaf 1962:95).

After 1891, imported ceramics were required by the United States to have the country of origin included in the trademark. Therefore all English pottery after this date was marked with the required "England." Any ceramics missing the designation either predates 1891 or were brought into the United States by other means (Fontana and Greenleaf 1962:93).

Godden (1968:10) lists other dateable characteristics of British ceramics marks: printed marks which incorporate the Royal Arms are of 19th or 20th century date; "Made in England" denotes a 20th century date; and "Bone China" or "English Bone China" dates to the 20th century.

Of the ceramics collected, the majority were plates or flatware which probably functioned as tableware. As this tableware is the most durable, it was probably used the most and endured the most breakage (Gaw 1975:171). In addition, most of the pottery collected, 67.0%, was plain utilitarian ware rather than decorated porcelain.

Interpretations of the artifacts' identity were grouped into different functional categories. Santeford (1980:17) has identified four functional categories: (1) Food Preparation/Storage (glass bottles, canning jars/liners and ceramics); (2) Clothing (buttons, safety pins); (3) Shelter Construction (nails, flat glass); and (4) Housewares (lamp chimney). The DAP historic artifact

analysis procedure has identified ten additional categories and assigned ceramic functional and glass tableware to Housewares. ~~Table~~ ^{Figure} ~~outlines~~ ^{TABLE 2} these categories and representative artifacts.

The most numerous artifacts, 208 or 35.4%, were classified as Food Preparation/Storage. The second largest clustered under Housewares, 16.8% or 99 artifacts. This result might have been anticipated as the sites collected represented the domestic occupation of the project area.

The following illustrations represent the glass, metal and ceramic artifacts analyzed. Artifacts of leather, shell and bone were collected, however due to a state of advanced deterioration or lack of source material, these artifacts were unable to be dated.

TABLE

TABLE 2

FIGURE

FUNCTIONAL CLASSES OF ARTIFACTS

1. Food Preparation/Storage

glass bottles (including liquor bottles)
canning jars/lids
baking powder cans
evaporated milk cans
food jars (condiments, etc.)

2. Pharmacy/Medicine

patent medicine bottles
cold cream jars

3. Shelter construction

nails
tacks
screws
window glass
door latch
hinges

4. Clothing/Grooming Devices

buttons
fasteners
comb and brushes
shoes and boots

5. Housewares

tableware (Dishes and Utensils)
lamps
ornamental wares

6. Furniture

finishing nails

7. Animal Tack/Medicine

harness buckles
ID tag
liniment bottles
dye cans

TABLE (con't)

8. Farm Equipment

heavy machinery (tractors, plows, etc.)

9. Recreation

toys
musical instruments (harmonica reeds)

10. Hardware

hand tools
barbed wire
lock and key
files
flashlight

11. Educational

books
magazines

12. Faunal Remains

13. Auto/Truck Parts and Accessories

14. Public Services

telephone lines and parts
utility lines and parts
sewer pipes/septic tanks
water pipes
insulators

FIGURE ~~10~~¹⁰/₂₃

SITE: 5MT4562
FS#: 999995
CATALOGUE #: 1

MATERIAL: glass

COLOR: aqua

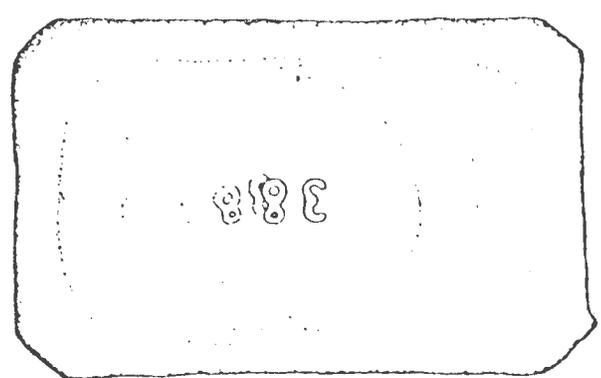
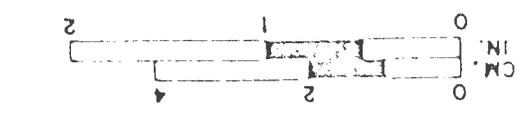
DIMENSIONS: height 8 1/4" (20.8 cm)
width 2 7/8" (7.0 cm)
depth 1 13/16" (4.4 cm)

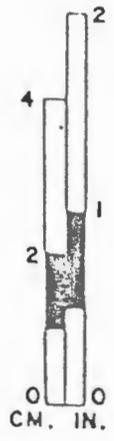
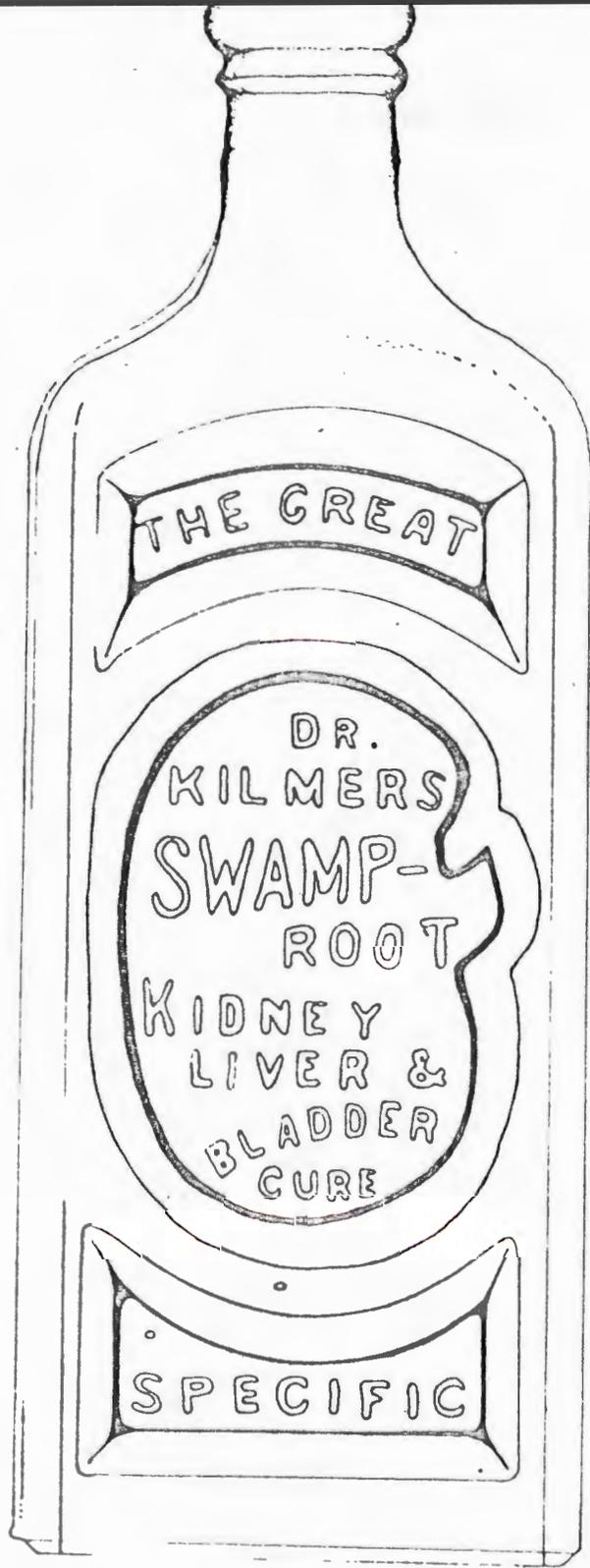
DIAGNOATICS: Patent medicine bottle. Embossed on three front panels: "THE GREAT"; "DR. KILMER'S SWAMP-ROOT KIDNEY LIVER & BLADDER CURE"; and "SPECIFIC". On side panels: "DR. KILMER & CO." and "BINGHAMTON, N.Y.". Seam is obliterated on shoulder, lip is finished by hand.

DATE: 1880 to 1903

SOURCES: Adams et al. 1975:128, 248; Gillio 1980:13; and Ward et al. 1977: 231,240.

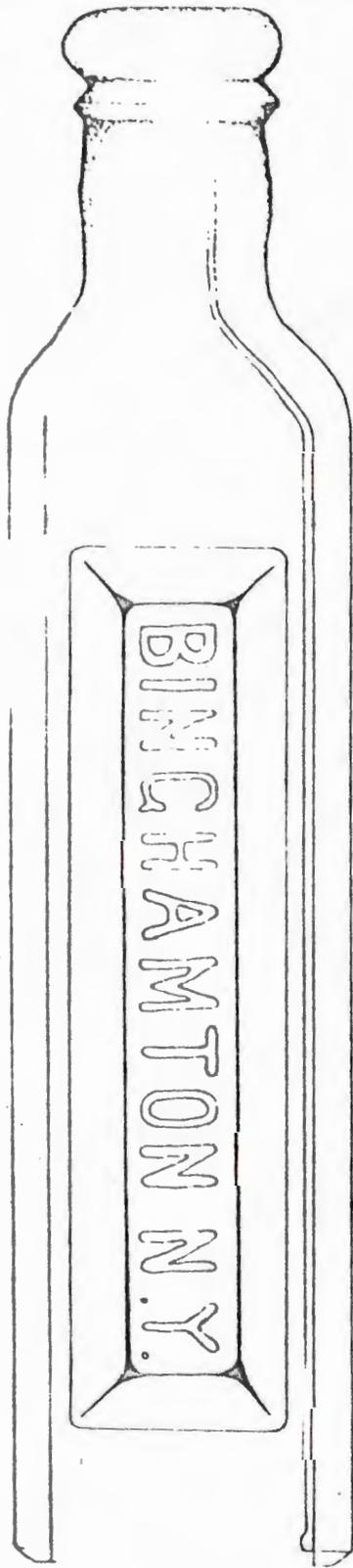
102



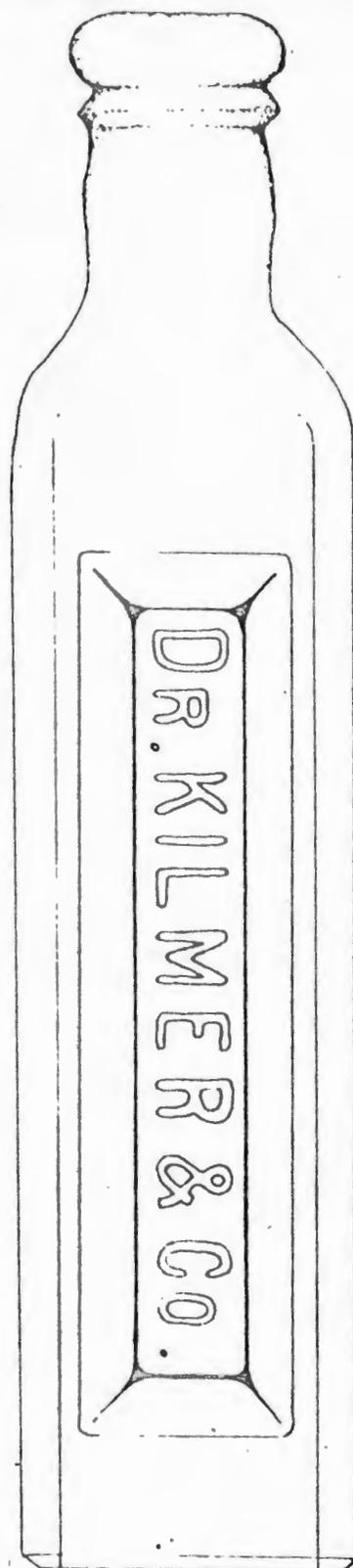


B

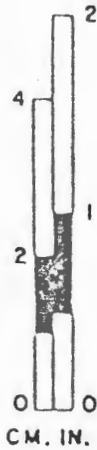
10a

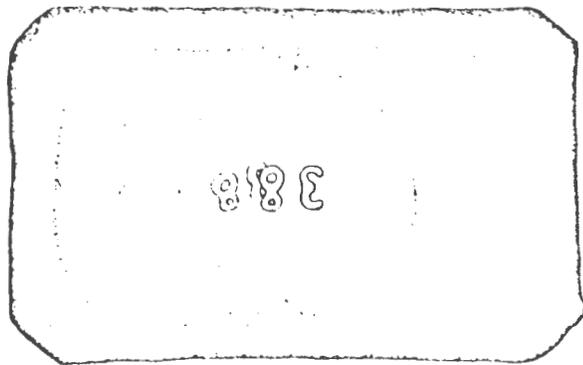
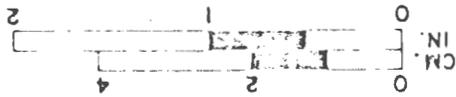


A



B





12
FIGURE 734

SITE: 5MT4564
FS#: 999999
CATALOGUE #: 9a & 9b

MATERIAL: glass

COLOR: clear

DIMENSIONS: height 4 3/4" (11.5 cm)
width 2 3/4" (6.8 cm)
depth 2 5/16" (5.7 cm)

DIAGNOSTICS: Condiment jars. Three flutes on one side, panel for label on front.
Seam to top. Exterior continuous thread top.
Base:

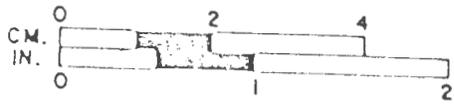
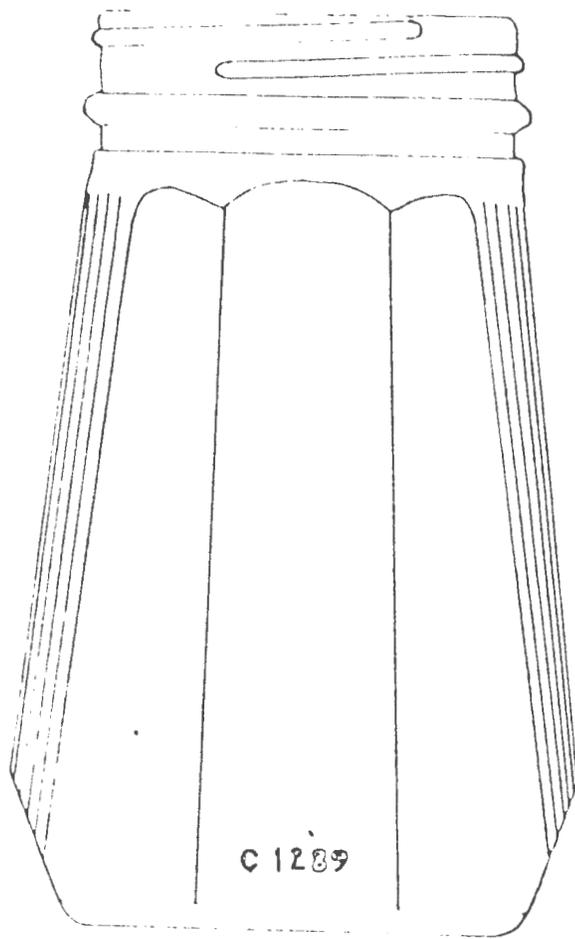


3

DES. PAT. 89885

DATE: 1929 to 1954

SOURCES: Toulouse (1971:395, 403-406) dates the base mark from 1929 to 1954.
Jars were produced by the Owens-Illinois Glass Company's plant
No. 7 at Alton, Illinois which opened in 1929 and was still operating
in 1971.



12a

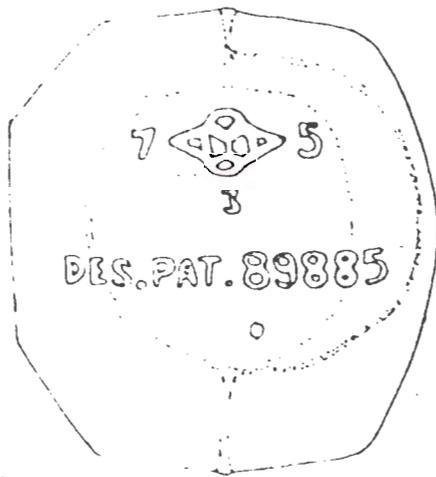
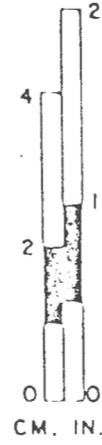
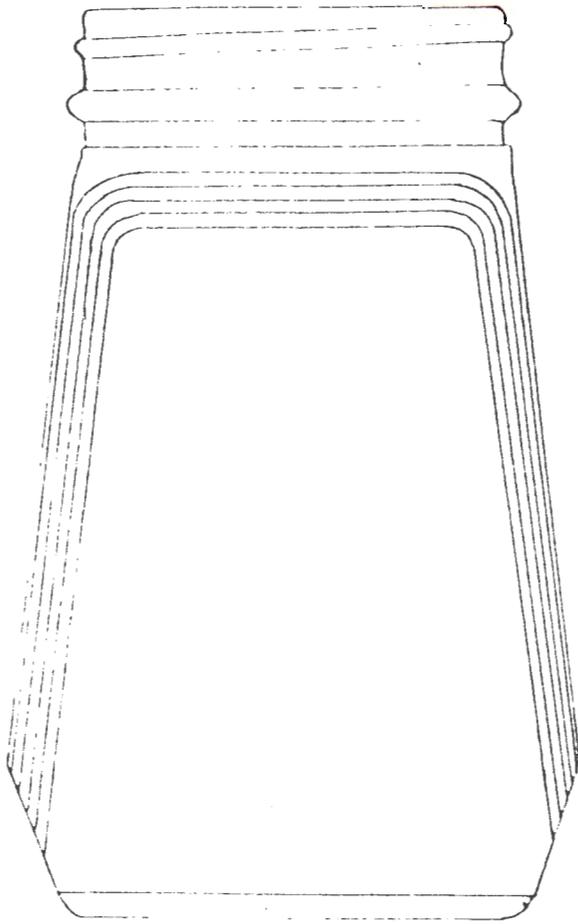


FIGURE ~~125~~ 13

SITE: 5MT4564
FS#: 999999
CATALOGUE #: 10

MATERIAL: glass

COLOR: clear

DIMENSIONS: (base) length 4.0" (10.3 cm)
width 1 5/8" (4.1 cm)

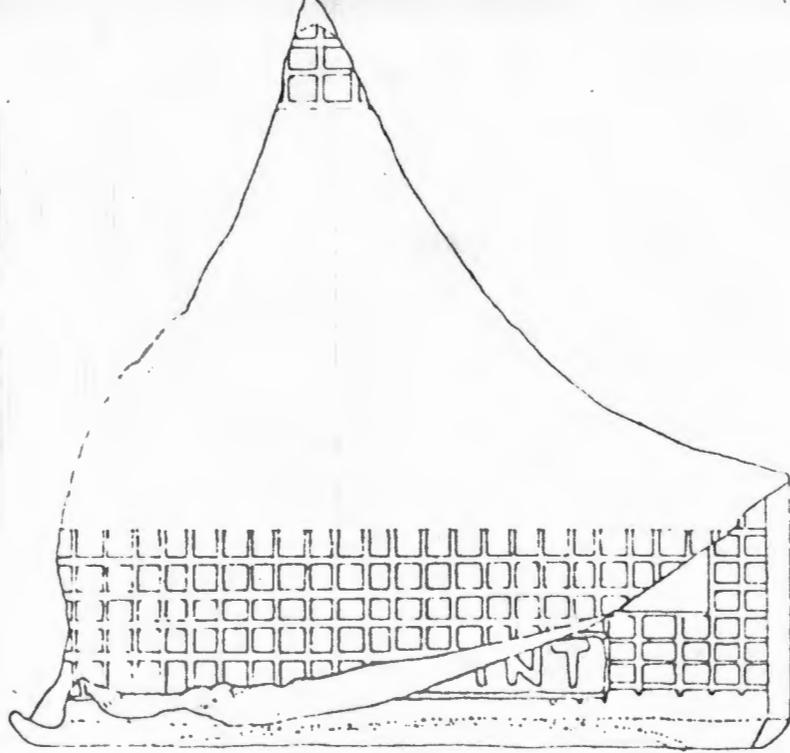
DIAGNOSTICS: Base of wine/liquor bottle. Kidney-shaped. On base:
BOTLD BY A CARBONE & CO NC
BONDED WINERY NO 1-13TH DIST

N WINE 4

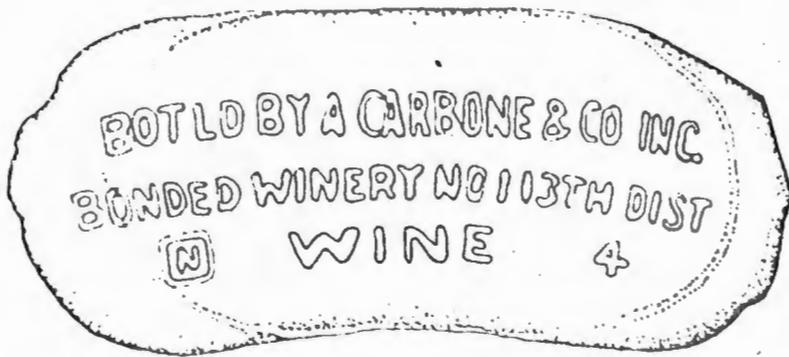
Ring seam on base. Waffle imprint on bottom sides.

DATE: 1915 to Present

SOURCES: Toulouse (1971:374) identifies the bottle manufacturer as
Odear-Nester Glass Company.



a



b

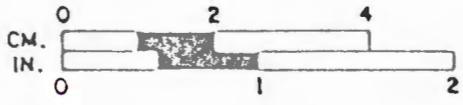


Figure 3

FIGURE *A-26* ¹⁴

SITE: 5MT4564
FS#: 999999
CATALOGUE #: 11

MATERIAL: glass

COLOR: clear

DIMENSIONS: base diameter 3 7/8" (9.5 cm)

DIAGNOSTICS: Canning jar base. Ring Seam. On base:

KERR GLASS MFG CO

PAT
AU *5* 31

SAND SPRINGS OKLA

DATE: 1915 to Present

SOURCES: Toulouse (1971:306-308) dates the Sand Springs, Oklahoma plant of the Alexander H. Kerr Glass Co. from 1912. In 1915, Kerr patented the "self-sealing" lid. Adams (1975:191, 245) cites a similar base found at Silcott, Washington 1900-1930.



Figure 14

FIGURE 821 15

SITE: 5MT4560
FS#: 999999
CATALOGUE#: 2

MATERIAL: glass

COLOR: green

DIMENSIONS: base diameter 2½" (5.6 cm)

DIAGNOSTICS: Coca-Cola bottle base. Above ring seam on hobble:

101B ROOT 28

On base:

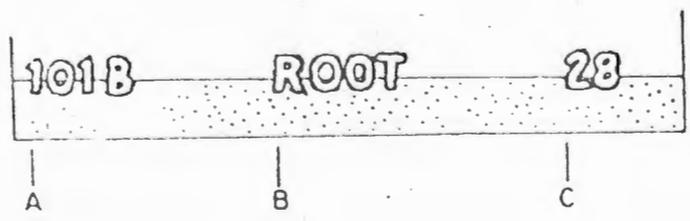
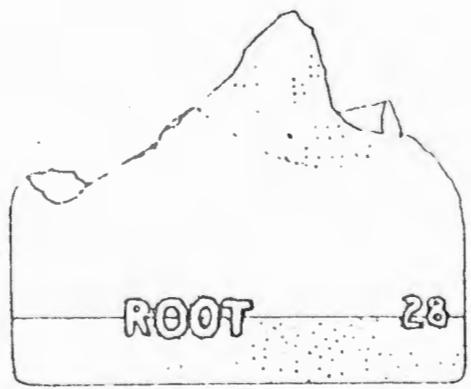
ALAMOSA
COCA-COLA
BOTTLING CO
COLO.

DATE: 1916 to 1960

SOURCES: Gillio (1980:14) lists dates for Coca-Cola bottles.
Toulouse discusses Root Glass Company.



a



b

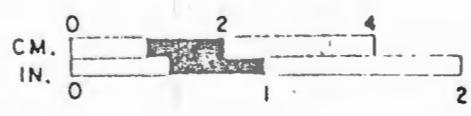


FIGURE ~~82~~ 14

SITE#: 5MT4572
FS#: 999998
CATALOGUE#: 1a, 1b, 1c

MATERIAL: glass

COLOR: brown

DIMENSIONS: 1a & 1b base diameter 2½" (6.3 cm)
1c base diameter 3" (7.6 cm)

DIAGNOSTICS: Bottle base (for beer?). Large amounts of air bubbles.
1a & 1b on base:

B G Co

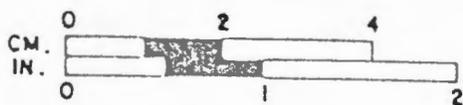
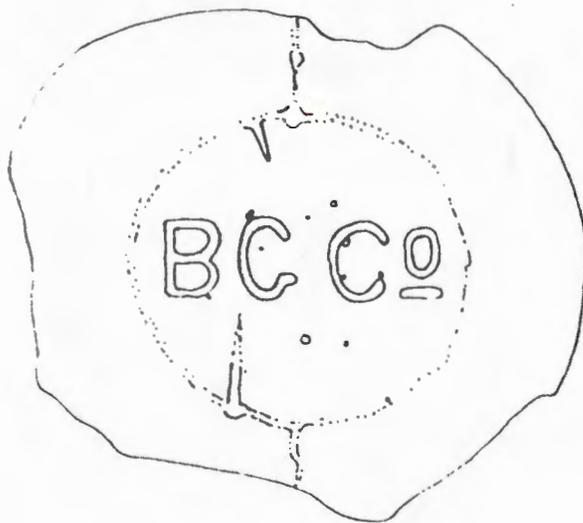
1c on base:

B G Co

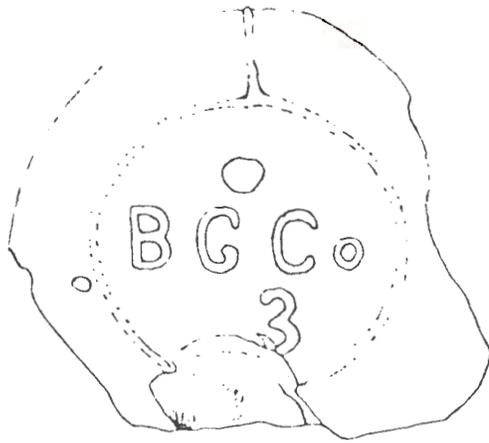
DATE: 1a & 1b 1877 to 1909
1c 1873 to ?

SOURCES: Toulouse (1971:) cites the manufactures of 1a and 1b as
Burlington Glass Company of Hamilton, Ontario, Canada.

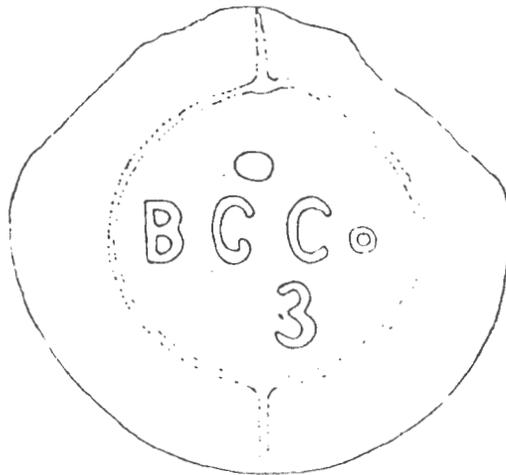
Figure 16



10



a



b

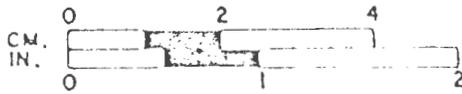


FIGURE ~~139~~ 17

SITE#: 5MT4572
FS#: 999998
CATALOGUE#: 5

MATERIAL: glass

COLOR: greenish-brown

DIMENSIONS: base diameter 3' (7.4 cm)

DIAGNOSTICS: Bottle base (for beer?). On base:

WIS G. CO
29
MILW.

DATE: 1880 to 1885

SOURCES: Toulouse (1971:) labels manufacturer as Wisconsin Glass Company
of Milwaukee, Wisconsin.

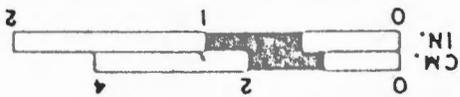


FIGURE 8 30. 18

SITE: 5MT4677
FS#: 999998
CATALOGUE#: 4

MATERIAL: glass

COLOR: clear

DIMENSIONS: base diameter 2" (5.2cm)

DISGNOSTICS: Soda pop bottle. Colored applied label (ACL) in white.(front):

MISSION
TRADEMARK REG.
BEVERAGES
NATURALLY GOOD

In circle around label:

BOTTLED BY QUALITY BOTTLERS EVERYWHERE . UNDER LICENSE OF
MISSION DRY COPORATION

ACL in white on back:

NATURALLY GOOD
MISSION ORANGE BOTTLING CO.
DURANGO, COLORADO . . .

On base:

MISSION DRY CORP.
NET CONTENTS 7 OZS.

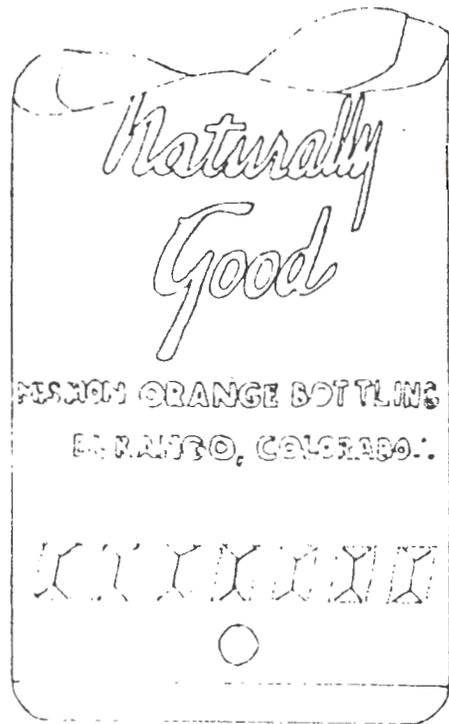
G 287 6
15 I 56
7

DATE: 1956

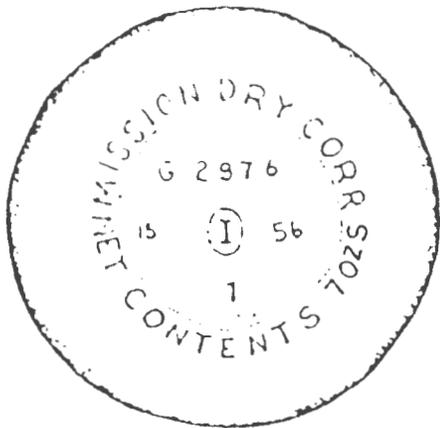
SOURCES: Toulouse (1971:403) identifies the bottle maker as Owens Illinois Glass Co., Toledo, Ohio. The I has been used to denote their bottles since 1954. Leta Sauer, LaPlata County Clerk, remembers drinking orange soda from this type of bottle in the late 1940's and 1950's. David Watkins, General Manager of the Pepsi-Cola Bottling Co., of Durango, Colorado stated that Pepsi bottles this brand from circa 1945 to circa 1960. The Owens Illinois mark may mean the 7th month (July), 15th day of the year 56 (1956).



a)



b)



c)

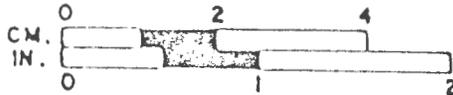


Figure 18

FIGURE 19

SITE#: 5MT5177
FS#: 2
CATALOGUE#: 5

MATERIAL: glass

COLOR: aqua

DIMENSIONS: base diameter 2 7/8" (7.3 cm)

DIAGNOSTICS: Bottle base. Molded on base (circular mold lines):

cC&co

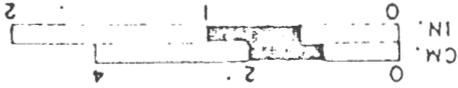
F

Mold lines up side from base; air bubbles.

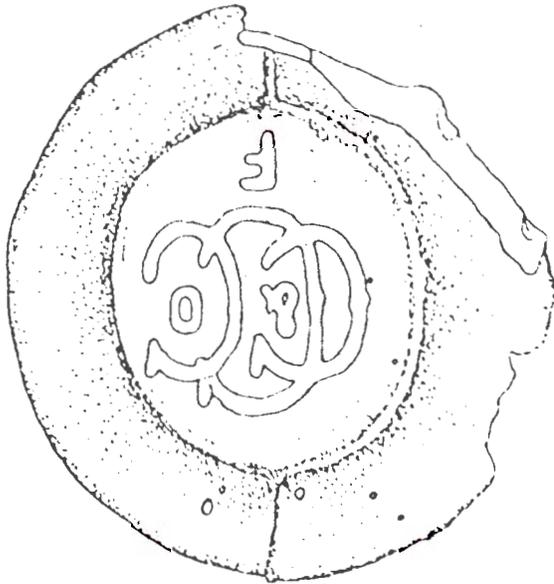
DATE: 1883 to 1903

SOURCES: Toulouse (1971:117-118) cites the base mark as the Carl Conrad and Company of St. Louis, Missouri, originator of "Budweiser" beer. In 1883, the company went bankrupt and the holdings were transferred to Anheuser Busch who continued the "Budweiser" name and also imprinted "as brewed especially for C. Conrad & Co." on several bottles. This artifact resembles another bottle from this same site (FS#4; Catalogue#1)

Figure 19



9



3

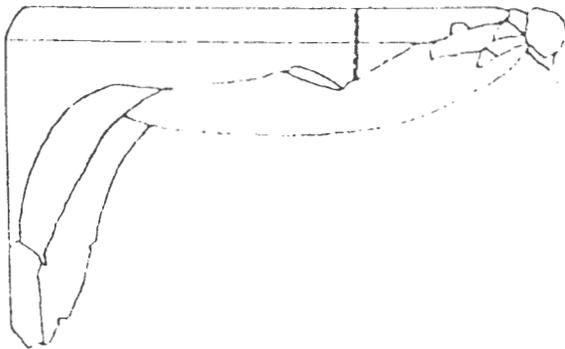


FIGURE ~~1037~~ 20

SITE#: 5MT5177
FS#: 4
CATALOGUE#: 1

MATERIAL: glass

COLOR: aqua

DIMENSIONS: base diameter 2 7/8" (7.3 cm)

DIAGNOSTICS: "Budweiser" bottle (beer bottle). Bottom of bottle and lip neck and shoulder (2 pieces). Mold seams run from bottom of base up sides. Mold seams disappear above shoulder. Air bubbles; unevenly applied lip.

On side: BUD__SER

U. S. PATENT No 6376

On base: cC&co
L

DATE: 1883 to 1903

SOURCE: Toulouse (1971:117-118) cites the bottler as Carl Conrad and Co., St. Louis, MO. "Budweiser" was legally transferred to Anheuser Busch in 1891.

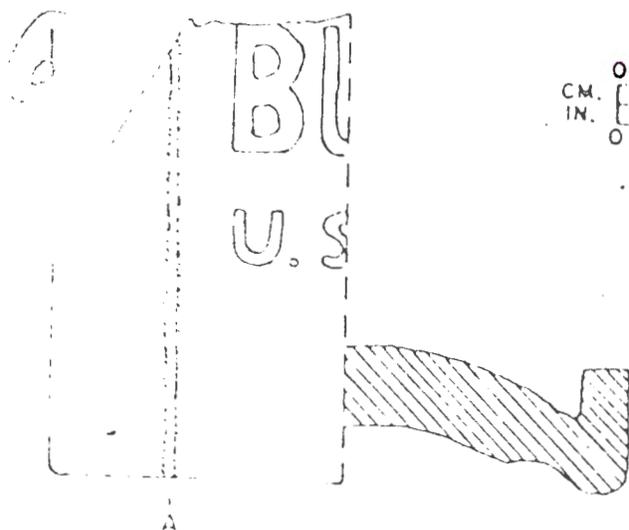
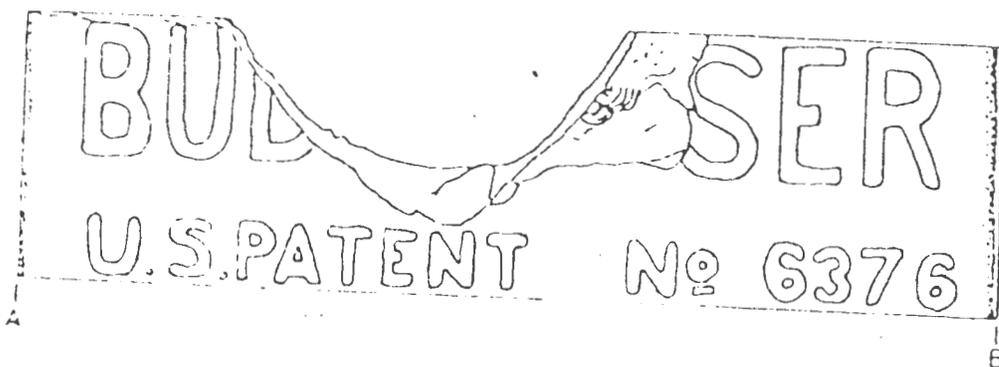
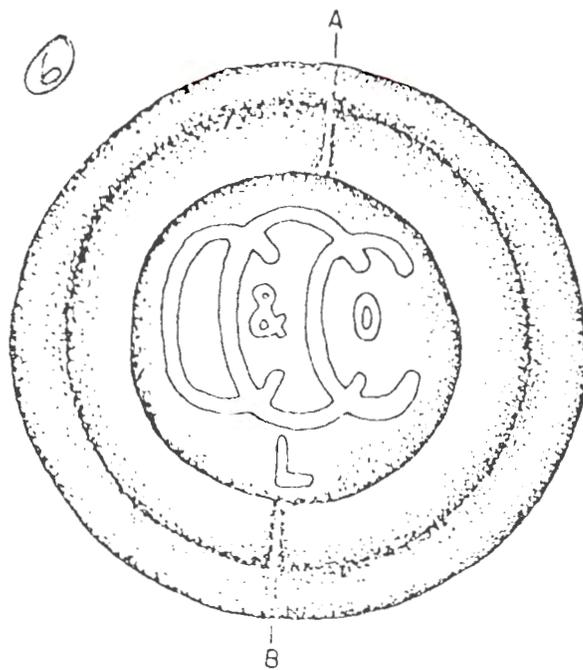
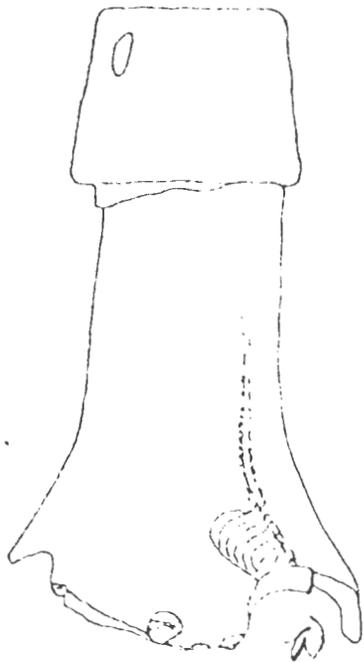


Figure 20

FIGURE 21 33 21

SITE#: 5MT5177
FS#: 5
CATALOGUE#: 3

MATERIAL: glass

COLOR: dark green

DIMENSIONS: base diameter 3 1/8" (7.7 cm)

DIAGNOSTICS: Base of liquor/wine bottle. In depressed base:

BREMEN
H HEYE
HAMBURG

DATE: 1880-1936

SOURCES: Toulouse (1971:177;238-239) identifies Hermann Heye & Co (Mark: H HEYE) of Bremen, Germany as producers of Burke bottles. E. & J. Burke of Dublin, Ireland and Liverpool, England was the best known bottler and exporter of Guinness Stout and Bass Ale in the Western United States. The Hermann Heye Glasfabrik of Bremen, Germany used the mark "HEYE" until 1936. Adams et al. (1975:195,251) lists a similar bottle base from Silcott, Washington.

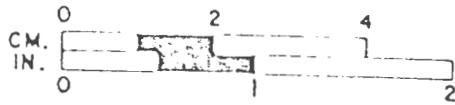


FIGURE 12422

SITE#: 5MT4564
FS#: 999999
CATALOGUE#: 5

MATERIAL: glass

COLOR: milk glass

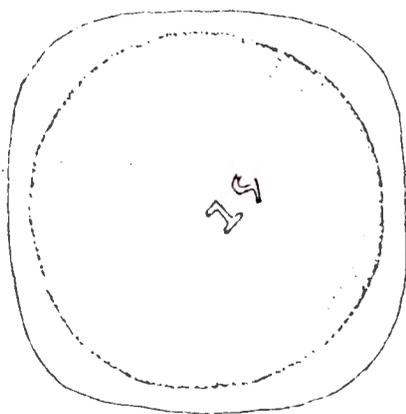
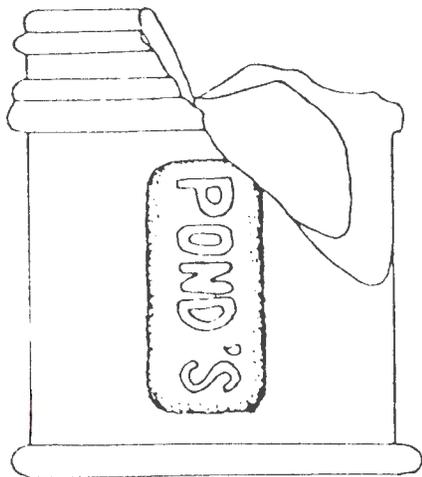
DIMENSIONS: base 2" (5.1 cm)
height 2 3/8" (6 cm)

DIAGNOSTICS: Cold cream jar. Square base with rounded corners. "19" on base.
POND'S on opposite panels.

DATE: 1913 to present

SOURCES: Adams et al. (1975:164,251) dates the founding of the Pond's
Extract Company at 1913.

Figure 22



23
3/22
FIGURE 13

SITE#: 5MT5073
FS#: 7
CATALOGUE#: 3

MATERIAL: glass and metal

COLOR: milk glass body/white metal screw cap

DIMENSIONS: base diameter 2 1/4" (5.6cm)
height 2 11/16 (6.4cm)

DIAGNOSTICS: Jar.
On top of lid: MENTHOLATHUM surrounded by: QUIDK RELIEF FOR
HEAD COLDS/MILD CHEST COLD TIGHTNESS·CHAPPED SKIN

On base: MENTHOLATHUM
REG
5
TRADE
MARK

DATE: 1896 to 1958

SOURCES: Adams et al. (1975:135,251) states that Mentholatum was first produced in 1896. In 1958, this jar was made out of plastic instead of milk glass.