# Appendix 2: Cultural Resources and Native American Consultation Documents

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

March 7, 2013

Planning, Project and Program Management Division
Planning Branch
Environmental Resources Section

Mr. Edward C. Nichols
State Historic Preservation Officer
History Colorado
1200 Broadway
Denver, CO 80203

Dear Mr. Nichols:

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers, Albuquerque District, (Corps) is seeking your concurrence with our determination that the hazardous fuel reduction activities proposed at the Corps' Trinidad Lake Project (Trinidad Lake) will result in "**No Adverse Effect to Historic Properties**". Actions to thin vegetation near the Carpios Ridge Campground to reduce fire hazard have been proposed by Colorado Parks and Wildlife (CPW), who lease the land from the Corps and manage the area as Trinidad Lake State Park. The undertaking is located on Corps fee land. The Corps' Trinidad Lake Project office is located in Las Animas County, along Colorado State Highway 12, approximately three miles west of the city of Trinidad.

CPW is planning to conduct hazardous fuel reduction activities consisting of forest thinning using a combination of mastication and hand-thinning techniques within three blocks located directly to the north and west of the Carpios Ridge Campground (Enclosure 1). The project area is located on the Trinidad West, CO (37104-B5) USGS 7.5' topographic map (1951, photorevised 1979), Township 33S, Range 64W, with the project covering portions of the NW quarter of Section 28 and the NE quarter of Section 29. The purpose of the proposed project is to reduce the risk of catastrophic wildfire in Trinidad Lake State Park. The proposed project area is located directly adjacent to the Carpios Ridge Campground, Colorado State Highway 12 and the CPW office complex and is at high risk for wildfire ignition due to the high level of human use in the area. Given that visitation is concentrated in this area, there is a significant risk to human safety and loss of property from wildfire.

The pinyon and juniper woodland in the project area is currently choked with trees, and canopy spacing is insufficient to stop the spread of crown fires. In addition, the close spacing of the trees inhibits understory growth, and erosion from surface water drainage is a problem. Fuel reduction activities proposed for the project include using a masticator to remove and masticate

trees with a goal of increasing canopy spacing to significantly reduce the risk of crown fires. Mastication will allow CPW personnel to process cut trees on site rather than having to haul them away to another location or pile them within the project area, and will have the ancillary benefit of placing woody material on the ground surface to inhibit erosion. Other techniques that may be utilized will include the use of chainsaws by hand crews to cut vegetation in areas that the masticator cannot access or in sensitive areas such as within archaeological sites. Hand crews will use a "lop and scatter" technique where trees are trimmed into smaller pieces by chainsaw and scattered loosely throughout an area to avoid creating piles that could act as ladder fuels. This scattered vegetation can also be placed strategically to help decrease erosion in the project area.

Pursuant to 36 CFR 800.4, the area of potential effect (APE) for this project includes three blocks identified by CPW on Carpios Ridge (Enclosure 2). These blocks will be demarcated, where possible, using existing roads and fence lines, and using colored flagging tape in those areas without a physical barrier. Access to the project area will be on existing roads, except where the masticator enters the thinning area. Staging for the project will occur within existing roads and parking areas, or within the project area boundaries.

Consistent with the Department of Defense's American Indian and Alaska Native Policy of 1998, and pursuant to 36 CFR 800.2(c)(2)(i), tribal consultation on this project is being conducted with Native American tribes that have indicated they have concerns in southeastern Colorado. This includes the Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Comanche Nation of Oklahoma, Fort Sill Apache Tribe, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Mescalero Apache Tribe, Southern Ute Tribe and Ute Mountain Ute Tribe. Tribal scoping letters were sent concurrently with this letter, and tribal concerns will be addressed as part of project planning. Should any tribal concerns be raised during consultation, your office will be notified. The Corps is not aware of any Traditional Cultural Properties within the project area. In addition to consultation with your office and the above listed tribes, CPW is in the process of preparing an environmental assessment (EA) as mandated by the National Environmental Policy Act. Public scoping as part of developing the EA will provide the general public and other interested stakeholders an opportunity to comment on the project. Your office will be notified should comments concerning cultural resources arise during scoping.

In anticipation of the fuels reduction project, CPW contracted with Cuartelejo HP Associates, Inc. (Cuartelejo) to complete a 100-percent cultural resources inventory of the project area. Cuartelejo identified one new prehistoric archaeological site (5LA13146), rerecorded two previously recorded prehistoric sites (5LA1526 and 5LA8565) and recorded 4 isolated occurrences (5LA13142, 5LA13143, 5LA13144 and 5LA13145). The results of the survey are documented in a report by Richard Carrillo, Roche L. Lindsey and Michelle A. Slaughter titled, "*Final Cultural Resources Report for the Fuels Management Class III Survey, Trinidad Lake State Park, Las Animas County, Colorado*." A copy of the report and associated site and isolate recording forms are enclosed for your review.

All three prehistoric sites located in the project area are lithic scatters containing debitage and tools; the overwhelming majority of which were manufactured of locally-available silicified shales. Site 5LA1526 contains diagnostic projectile points dating the site to the Paleoindian and Archaic periods. According to Cuartelejo, site 5LA8565 dates to the Archaic or Late Prehistoric based on the general characteristics of the artifact assemblage. Site 5LA13146 contained no diagnostic artifacts, and thus, cannot be assigned to any particular time period. Cuartelejo recommended that each of these sites requires further investigation before a determination of eligibility for inclusion in the National Register of Historic Places (NRHP) can be made. **The Corps, however, determines that sites 5LA1526 and 5LA8565 are eligible for listing in the NRHP under criterion "d".** These sites appear to represent Archaic, and at 5LA1526, a possible Paleoindian occupation of the area. These time periods are underrepresented in the archaeological record of the Trinidad Lake area, and thus should be considered significant for their potential to inform on Archaic lifeways in the region. **The Corps considers the NRHP eligibility of site 5LA13146 undetermined at this time** until further recording can be done at the site with a goal of determining dates for the occupation of the site. 5LA13146 will be treated as an eligible historic property for the purposes of project planning.

Isolated occurrences in the project area consist of a shale chopper and flake (5LA13142), two small scatters of aqua glass (5LA13143, 5LA13144) and a single, likely late prehistoric, obsidian projectile point (5LA13145). Each of these isolated occurrences has been recorded in detail, and because their information potential has been exhausted with recording **the Corps determines that these artifacts are not eligible for listing in the NRHP**.

The potential exists for project activities to have an adverse effect on three historic properties in the project area. Conversely, fuel reduction in and around sites in the project area can have beneficial impacts by reducing fire intensity within sites and providing material to help stabilize erosion within the project area. In order to avoid adverse effects to sites 5LA1526, 5LA8565 and 5LA 13146, the Corps makes several recommendations here for site treatment:

- Sites 5LA1526, 5LA8565 and 5LA13146 will be flagged using colored flagging tape and avoided by all thinning using the heavy machinery. The flagged boundary will include a 20-meter buffer to insure that each site is fully avoided by ground disturbance from heavy machinery.
- Hand thinning using chainsaws will be allowed within 5LA1526, 5LA8565 and 5LA 13146 where necessary. Hand crews will lop and scatter thinned trees within sites to avoid creating ladder fuels and fuel "jackpots" that could adversely affect historic properties in the event of a wildfire. Where possible, hand crews will place vegetation in areas that will help to counter active erosion within sites. Hand crews will be instructed not to drag cut vegetation within sites to avoid surface impacts to artifact scatters.
- CPW staff will be on site to direct project activities and to periodically monitor the project area to insure compliance with these recommendations.

Provided that these recommendations are followed, the Corps determines that the project will have **no adverse effect to sites 5LA1526, 5LA8565 and 5LA13146**.

In sum, the Corps determines sites **5LA1526 and 5LA8565 are eligible for listing in the NRHP under criterion "d", and the eligibility status of site 5LA13146 to be undetermined at this time**. In addition, provided that the recommendations for sites 5LA1526, 5LA8565 and 5LA13146 are followed, and provided that project activities are limited to those outlined in this letter, the Corps determines that the proposed fuel reduction project at Trinidad Lake State Park will have **no adverse effect to historic properties**. We seek your concurrence with our determinations of eligibility and effect for the proposed project.

Pursuant to 36 C.F.R. 800.13, should previously unknown artifacts, features or historic properties be encountered during construction, work would cease in the immediate vicinity of the resource. A determination of significance would be made, and further consultation with your office and with any concerned tribes would be conducted to determine the best course of action.

If you need additional information or have questions concerning this project, please call Jeremy Decker, Corps archaeologist, at (505) 342-3671. Thank you very much for your attention to this matter.

Sincerely:

Julie Alcon
Chief, Environmental Resources
Section

_____ I concur _____

Date

Edward C. Nichols
Colorado State Historic Preservation Officer

Enclosures

HISTORY Colorado

rec'd 3/20/13
JTD

March 15, 2013

Julie Alcon
Chief, Environmental Resources Section
Albuquerque District
U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, New Mexico 87109-3435

Re: Proposed Hazardous Fuels Reduction, Trinidad Lake State Park, Las Animas County, Colorado (CHS #63705)

Dear Ms. Alcon:

Thank you for your correspondence dated March 7, 2013 (received by our office on March 11, 2013) regarding the proposed undertaking.

Based on our review of the documentation provided, we concur with your determination that sites 5LA1526 and 5LA8565 are eligible for National Register of Historic Places. We concur with your determination that site 5LA13146 require additional information ("need data") to fully assess its National Register eligibility. We concur with your determination that isolated finds 5LA13142, 5LA13143, 5LA13144, and 5LA13145 are not eligible for the National Register of Historic Places. Finally, we have reviewed and agree to the management recommendations that require, in part, thinning work be completed by hand using chainsaws to fell, remove, or scatter trees within all National Register eligible and "need data" sites. Assuming the management recommendations are implemented as described within the report and consultation letter, we concur that the project will result in no adverse effect [36 CFR 800.5 (b)].

Please remember that the consultation process does involve other consulting parties such as local governments and Tribes, which as stipulated in 36 CFR 800.3 are required to be notified of the undertaking. Additional information provided by the local government, Tribes or other consulting parties may cause our office to re-evaluate our comments and recommendations.

Should unidentified archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4) in consultation with our office.

Thank you for the opportunity to comment. If we may be of further assistance, please contact Mark Tobias, Section 106 Compliance Manager, at (303) 866-4674 or mark.tobias@state.co.us.

Sincerely,

Edward C. Nichols
State Historic Preservation Officer
ECN/MAT

# Final Resources Report for the Fuels Management Class III Cultural Resources Survey, Trinidad Lake State Park, Las Animas County, Colorado

**Prepared for**
**Colorado Parks and Wildlife**
**1313 Sherman Street, Room 618**
**Denver, Colorado 80203**

**Prepared by**
**Cuartelejo HP Associates, Inc.**
**La Junta, Colorado**
**and**
**Avalon Archaeology, LLC**
**Denver, Colorado**

**July 5, 2012**

# Final Cultural Resources Report for the Fuels Management Class III Cultural Resources Survey, Trinidad Lake State Park, Las Animas County, Colorado

**By**
**Richard Carrillo**
**Principal Investigator**
**Cuartelejo HP Associates, Inc.**
**718 W. 2nd Street**
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**PO Box 40331**
**Denver, Co 80204**

## Prepared for

**Colorado Parks and Wildlife**
**1313 Sherman Street, Room 618**
**Denver, Colorado 80203**

**July 5, 2012**

**Information contained in this report has been removed to protect archaeological site location data. Archaeological site location information is confidential and access to this information is restricted by the National Historic Preservation Act of 1966 (as amended), the Archaeological Resources Protection Act of 1979 (as amended), and Colorado Revised Statutes 24-72-203(1) and 24-80-405(2).**

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**APPENDICES**

**Colorado Historical Society - Office of Archaeology and Historic Preservation**
**COLORADO CULTURAL RESOURCE SURVEY**

# Cultural Resource Survey Management Information Form

## I. PROJECT SIZE

| | | | |
|---|---|---|---|
| Total federal acres in project | 78 | Total federal acres surveyed | 78 |
| Total state acres in project | | Total state acres surveyed | |
| Total private acres in project | | Total private acres surveyed | |
| Total other acres in project | | Total other acres surveyed | |

## II. PROJECT LOCATION

County: Las Animas
USGS Quad Map: Trinidad West (#37104-b5)
Principal Meridian: 6th

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Township | 33S | Range | 64W | Section | 2 1 | SE | 1/4 | SE | 1/4 | SW | 1/4 | SW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 1 | SW | 1/4 | SW | 1/4 | SE | 1/4 | SW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | | 1/4 | | 1/4 | NW | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | | 1/4 | NW | 1/4 | NE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | | 1/4 | SW | 1/2 | NE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | SW | 1/4 | NE | 1/4 | NE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | NW | 1/4 | SE | 1/4 | SE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | W | 1/2 | NW | 1/4 | SE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | NE | 1/4 | NW | 1/4 | SE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | W | 1/2 | SW | 1/4 | SE | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | E | 1/2 | NE | 1/4 | SW | 1/4 | NW | 1/4 |
| Township | 33S | Range | 64W | Section | 2 8 | NW | 1/4 | NE | 1/4 | SW | 1/4 | NW | 1/4 |
| Township | 33S | Range | | Section | 8 | N | 1/2 | NW | 1/4 | SW | 1/4 | NW | 1/4 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 64W | | 2 | | | | | | | | | |
| Township | 33S | Range | 64W | Section | 8 | E | 1/2 | NE | 1/4 | NE | 1/4 | NE | 1/4 | |
| Township | 33S | Range | 64W | Section | 9 | SW | 1/4 | NE | 1/4 | NE | 1/4 | NE | 1/4 | |
| Township | 33S | Range | 64W | Section | 9 | NW | 1/4 | SE | 1/4 | NE | 1/4 | NE | 1/4 | |
| Township | 33S | Range | | Section | 9 | E | 1/2 | SE | 1/4 | NE | 1/4 | NE | 1/4 | |

## Cultural Resource Survey Management Information Form (Cont.)

### III. SITES

| Smithsonian Number | Resource Type | | | | Eligibility | | | | Management Recommendations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Prehistoric | Historic | Paleontological | Unknown | Eligible | Not Eligible | Need Data | Contributes to a District | No Further Work | Preserve / Avoid | Monitor | Test | Excavate | Archival Research | Other |
| 5LA.1526 | X | | | | | | X | | | | | X | | | |
| 5LA.8565 | X | | | | | | X | | | | | X | | | |
| 5LA.13146 | X | | | | | | X | | | | | X | | | |

### IV. ISOLATED FINDS

| Smithsonian Number | Resource Type | | | |
|---|---|---|---|---|
| | Prehistoric | Historic | Paleontological | Unknown |
| 5LA.13142 | X | | | |
| 5LA.13143 | | X | | |
| 5LA.13144 | | X | | |
| 5LA.13145 | X | | | |

| Smithsonian Number | Resource Type | | | |
|---|---|---|---|---|
| | Prehistoric | Historic | Paleontological | Unknown |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

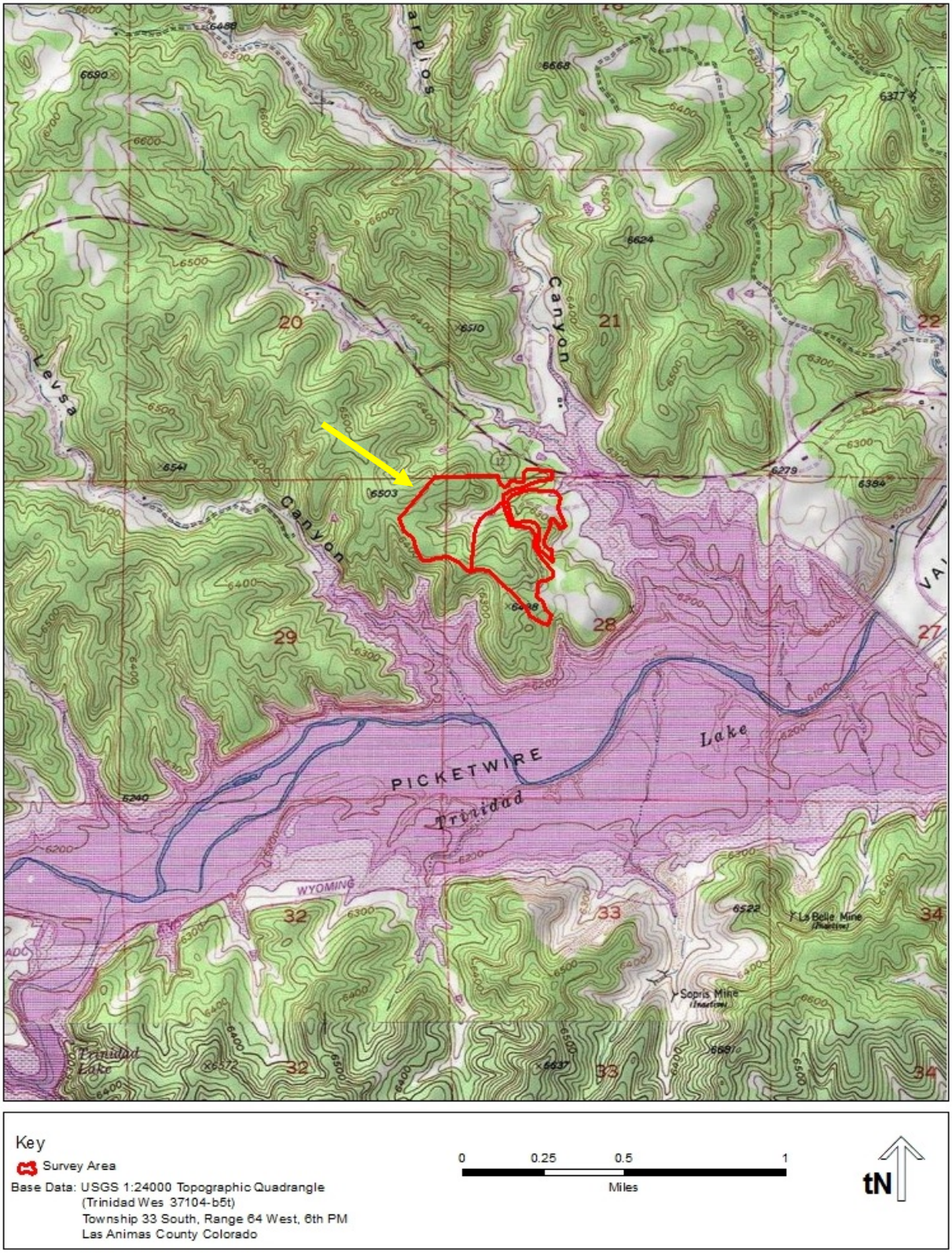
## INTRODUCTION

Cuartelejo HP Associates (Cuartelejo) contracted with Colorado Parks and Wildlife to conduct an archaeological pedestrian survey and cultural resources evaluation at Trinidad Lake State Park (TLSP), located southwest of the town of Trinidad, in Las Animas County (Figure 1). The work was conducted under Cuartelejo's state permit number 2012-54. The survey area was approximately 78 acres. The project area is located in the NW ¼ of Section 28 and a small portion of the SW ¼ of Section 21, and most of the eastern half of the NE ¼ of Section 29, in Township 33S, Range 64W on the USGS 7.5' Trinidad West quadrangle (USGS map # 37104-b5) (Figure 2). Trinidad Lake is a U.S. Army Corps of Engineers (USACE), Civil Works flood control project located on Federal fee land. The USACE leases Trinidad Lake to Colorado Parks and Wildlife which operates the facility as Trinidad Lake State Park. Trinidad Lake State Park has plans to conduct fuels reduction in the forests around the Carpios Ridge Campground and the Park's Visitors' Center, so the current survey was conducted to determine if the proposed forestry project will have any impacts on the archaeological resources within the project area and to suggest areas that should be avoided (if any). The project is referred to as the Fuels Management Class III Cultural Resource Survey.

Two previously recorded prehistoric sites (5LA.1526 and 5LA.8565), were reevaluated, and a five new cultural resources (four isolated finds [IFs] and one prehistoric archaeological site) were identified and documented during the pedestrian survey. Three of the newly recorded resources were prehistoric (IFs 5LA.13142, 5LA. 13145, and site 5LA.13146) and two were historic (IFs 5LA.13143 and 5LA.13144).

**Figure 1**
**Project Location Within the State**

**Figure 2**
**View of the Survey Area (indicated by the arrow)**



## DESCRIPTION OF UNDERTAKING

Tasks conducted for the cultural resources evaluation included a pre-fieldwork file search on the Compass website, the Colorado Office of Archaeology and Historic Preservation (OAHP) archaeological site database. Bob Cronk from the OAHP created a GIS map showing previously recorded sites in, and in the vicinity, of the project area. After the initial research, an intensive pedestrian survey was conducted in order to record and evaluate prehistoric and historic archaeological resources within the project area, and to provide management recommendations including a recommendation of NRHP eligibility for recorded sites.

Richard Carrillo, principal and historical archaeologist at Cuartelejo HP Associates Inc. (Cuartelejo), was Principal Investigator (PI) and project manager and conducted the pedestrian survey with the assistance of Michelle Slaughter, principal and historical archaeologist at Avalon Archaeology (Avalon). Historic IFs were recorded by Carrillo and Slaughter; prehistoric sites and IFs were recorded by Roche Lindsey, Senior Professional Research Associate, Department of Anthropology, University of Colorado at Colorado Springs (UCCS). Eric Weisbender (Voyage GeoSpatial) was the project GIS specialist, and created all of the location maps for the report and for the site forms. The survey and site/IF recording was conducted April 17-19, and May 4, 2012.

## CLASS I RESULTS AND PREVIOUS WORK

The file search conducted on Compass revealed that fourteen sites and IFs had been recorded in Section 28 (Township 33S, Range 64W), the section where most of the project area is located. Forty-six sites and IFs have been recorded in adjacent sections. Two prehistoric sites (5LA.1526 and 5LA.8565) and one prehistoric IF (5LA.6427) were previously recorded within the project area. These two sites were revisited and the site forms updated. Isolated find 5LA.6427 was not relocated during the current project, but it is possible that the IF, which was apparently quite close to 5LA.8565 to the east, was absorbed into site 5LA.8565 during the updated recordation.

Work at Trinidad Lake is an important part of the history of eastern Colorado archaeology. The Sopris phase, prominent at Trinidad Lake, as well as the Apishapa phase to the east, constitutes most Middle Ceramic Period sites in southeastern Colorado. The Sopris Phase was defined by

Herbert Dick (1963) on the basis of ceramics and architecture and he fit Sopris into a larger Upper Purgatoire Complex, "presumably under the expectation that additional temporally contiguous phases would later be defined" (Kalasz, et al. 1999:221). Beginning in 1953, Herbert Dick extensively surveyed the Trinidad Lake coverage area and continued excavations initiated by his predecessor Halden Chase. Initial work by Halden Chase had been funded by Trinidad State Junior College (TSJC) and professor Herbert Dick developed a program that would investigate sites at Trinidad Lake during the next four decades (Kalasz et al. 1999: 222-223). In excavations following Dick's initial survey, Galen Baker (1964) introduced the term St. Thomas phase for early Sopris sites; a term later dismissed as Ireland (1971) demonstrated this construct was not supported by adequate data (Kalasz et al. 1999:222) and the terms Sopris and Upper Purgatoire Complex have become synonymous in the archaeological literature (see Kalasz et al. 1999: 222).

The initial survey by Dick, said to have covered 100% of the area below 6,200 ft. in elevation except within the town of Sopris (Hand et al. 1977:i) and early excavations by the National Park Service with Galen Baker and others were followed by another complete survey by Ireland in 1972 (see Ireland 1974a). Federal funding for archaeology became available with the passing of Public Law 93-291, 93rd Congress, May 14, 1974, and a synthesis of work in the Trinidad Lake area was conducted under contract by Ireland (two of several) (1974a, 1974b). These projects included primary reports of not only Ireland's 1972 investigations, but included reporting of Baker's site investigations where manuscripts had not been accepted by the National Park Service.

In 1977 archaeology at Trinidad Lake was examined comprehensively in a two part study. The first examined the 48 recorded sites with consideration of temporal designation and cultural affiliation (Hand et al. 1977). This project, under the direction of Gerald A. Bair, included re-survey of all areas previously surveyed by Dick and Ireland except where dam construction activities had removed site materials (Hand et al. 1977:ii). The second part of this project, under the direction of Caryl E. Wood, examined data old and new to develop chronological information (one focus of that study). They defined three phases, based primarily on house construction and ceramic seriation, spanning from 1000-1225 A.D. (Wood and Bair 1980:228-232). Christy Turner, a contributor in that report, suggested an Athabascan origin for Sopris peoples based on a high incidence of three rooted molars found in Sopris skeletal remains

(Turner 1980:249; Wood and Bair 1980:238). His comparison sample is Navajo (apparently lacking an Apache sample) and the Sopris sample is small (13 individuals), so caution should be taken in this interpretation. Additional Sopris ancestry proposed by Wood and Bair includes Northern Puebloans, Plains Woodland or ancestry in common

with Central Plains Tradition peoples, and indigenous peoples on the High Plains (Wood and Bair 1980:233-240).

Christopher Dore reported Panhandle Aspect occupations (1993:57). However, Christopher Lintz defines the Panhandle Aspect as Plains Village or Central Plains Tradition (CPT) (more appropriately – see Roper 2007:53) and limits occupations to the extreme northwest corner of Texas, spreading slightly into Taxas and north into the Panhandle of Oklahoma (Lintz 1978:38). Dore defines Panhandle Aspect as divided into two foci "based on location": Apishapa and Antelope Creek. Antelope Creek Phase has a well-established relationship with other Central Plains Tradition groups; most notably Upper Republican (Lintz 1978; Lintz 1984; Lintz and Anderson 1986). While Apishapa and Sopris phase occupations do share some similarities with Central Plains Tradition groups on the western periphery (Upper Republican, Smokey Hills Aspect, and Antelope Creek [see Roper 2007:53, Lindsey 2005:4, Lintz 1978:38]) such as possible similar dwelling construction and, at least in the case of Sopris, an apparent farming economy supplemented by hunting and gathering. While some projectile points in Apishapa sites do fit Washita/Reed/Harrell typologies (see Bell 1958), personal observation during years of work on Piñon Canyon Maneuver Site (PCMS) is that most Apishapa side-notched points lack the consistent distinct deep base of these Central Plains Tradition points. Ceramic similarities have been noted but current thinking seems to be that while there are similarities to Central Plains Tradition wares in general, it is not particularly similar to Antelope Creek Phase wares (Cambell 1969:113-117; Hummer 1989:330-331; Kalasz et al. 1999:209) and Apishapa is not currently classified as "Panhandle Aspect" (Kalasz et al. 1999:198). More direct Central Plains Tradition influence has been observed in Colorado during late Sopris and Apishapa occupations: excavations and surface collections at the Barnes Site (5LA.9187) on the PCMS recovered a sample of over 100 projectile points that almost exclusively demonstrated the deep base side-notched attributes of Central Plains Tradition projectile points (Ahler 2002; Lindsey 2005:70; Lindsey and Krause 2007:98-99), ceramics with Upper Republican attributes but with distinct surface treatments (see Lindsey and Krause 2007:102-103), and a chronological date overlapping both Apishapa and Sopris occupations (Lindsey 2005:13; Kalasz et al. 1999:201-202;223-226). Additional supporting evidence for a Central Plains Tradition affiliation for folks using the Barnes Site includes high frequencies of lithic materials from the Upper Republican occupation region and both Barnes and Upper Republican wares were found together in the Buick Campsite (5EL.1) and 5EP.2762 (at Jimmy Camp) (Lindsey and Krause 2007:102-103;

Lindsey et al. 2008:22-29). The relationship of Barnes peoples and Upper Republican peoples to each other, which was established with multiple lines of evidence, should serve to generate caution in creating relationships between archaeological groups with insufficient evidence. Kalasz et al. state that Central Plains Tradition (at least Washita) point types are rare in Sopris Phase and that Sopris point shapes are highly variable (1999:233), which does not fit CPT patterns. However, alibates is not uncommon in Sopris assemblages and there is obsidian from New Mexico sources (Kalasz 1999:233) showing some interaction, direct or indirect, between Sopris and groups to the southeast and southwest.

Dore also observed a projectile point appearing to fit Eden point typology, one of the projectile point types of the Alberta/Cody Cultural Complex and dating to 8,500-9,000 BP (see Frison 1991:26, 62-65, 388-393) (Dore 1993:57;A-41); this was the first diagnostic predating 1000 BP according to Dore (1993:57). However, in one of the new sites Dore recorded (OCA 8) a "non-diagnostic" side-notched point was found (1993:50; A-39), which clearly fits into dart point neck-width range. The base appears to be broken in the report drawing (A-39), limiting the diagnostic potential of the artifact, but it clearly belongs temporally in the Archaic.

Doleman also recovered an obvious archaic projectile point which would fit typologically into Pelican Lake type assemblages (Doleman 1996:4 and drawing without page number) on the High Plains (Frison 1991:24, 28, 101-103) and Great Plains in general, but neighboring regions have points with similar attributes (see Bell 1958, Bell 1960, Perino 1968, Perino 197:72-73). The projectile point drawing (Doleman 1996) has no scale but he describes the artifacts as "a large, serrated projectile point" (1995:4). Unfortunately he does not mention the material type. Doleman also suggests a PaleoIndian time-frame for an end scraper collected during this small project, but does not give any criteria for this distinction (it does not appear to be spurred) (1995:4).

High water prompted intensive salvage investigations at 5LA.1211, the Neone Bluff Site in 2000 (Doleman 2000a and Doleman 2000b as cited in Everhart 2000:13-14). This long studied site had been part of Mark Mitchell's focus during a series of studies he conducted including his 1997 thesis (Mitchell 1996, 1997a, 1997b). Along with comprising chronological data, among other things, Mitchell's extensive ceramic analysis showed wares were imported from the Northern Rio Grande Pueblos and Sopris sites demonstrating both a local ceramic tradition as well as these imported goods (Mitchell 1997b). In contacting Mark for a copy of his thesis for

this report, he summarized, “Sopris phase represents an indigenous group, with local roots in the Developmental period, which

established regular and mutually influential trade relationships with Valdez phase communities in the Rio Grande valley in the mid-1000s" (Mark Mitchell 2012:personal communication).

In his 1996 report, he also describes imported wares from Panhandle Aspect, but it is unclear if this classification is Apishapa by type, or eastern Central Plains Tradition wares (Mitchell 1996:4). Mitchell also compared rock art of the area and concluded much of the rock art was, or was strongly influenced by, Northern Rio Grande folks (Mitchell 1997a:3), and Mitchell concludes that "it seems clear that the artists who created the upper Purgatoire images did not participate in the social and ideological traditions which were symbolized by Plains Representational and Abstract Tradition rock art" (Mitchell 1997a:4). Again, evidence points away from strong Great Plains affiliations for these peoples. Interestingly, Loendorf and Kuehn suggest a possible Athabascan origin for some upper Purgatoire rock art elements (1991:283 as cited in Mitchell 1997a:6) which would support skeletal analytical interpretations of Turner (1980:248-249).

In a 2010 report on 5LA.1211, Cordero and Hogan, through x-ray fluorescence analysis, challenge Mitchell's results that Northern Rio Grande wares are imported, finding local clays likely used as raw materials (Cordero and Hogan 2010:163). They do caution that no Northern Rio Grande clays were available for this study, but this illustrates the plethora of research questions that need be addressed through advanced avenues of research in this area of Colorado.

## ENVIRONMENT

Las Animas County lies between two geologic zones called the Raton Basin and the Apishapa Uplift (Figure 3) on the south side of the Southern Rocky Mountains on the Raton Portion of the Great Plains (Aber 2002; Everhart 2010:14). Trinidad Lake is on the Park Plateau, an upland mesa with deep canyons (Everhart 2010:14). The project area elevation varies, but is situated generally at around 6,200 feet above sea level with the Sangre de Christo Mountains rising upwards of 13,500 feet to the west, and the town of Trinidad to the northeast at 6,025 feet, with the eastern plains of Las Animas County descending to 4,400 feet above sea level as one travels eastward toward Otero County (Everhart 2010:14; NRCS 2007:18). The ancient basement rocks of southern Colorado were formed during Proterozoic orogenies, mostly in the middle Proterozoic, 1.0 to 1.8 billion years ago. A great variety of granites and metamorphic

rocks make up the Proterozoic crust (Aber 2002). These rocks have been uplifted to form the cores of many ranges of the Rocky Mountains, including the

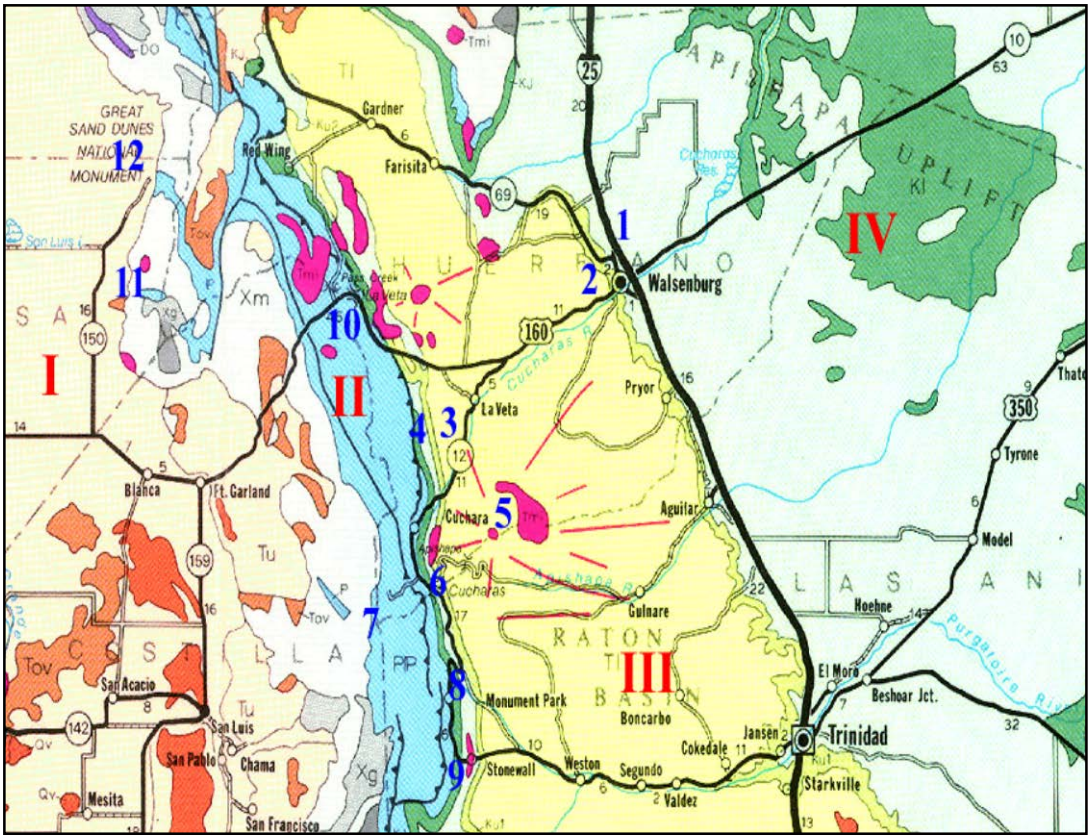



**FIGURE 3** - Map depicting geology and shaded relief of the Rocky Mountain vicinity in south-central Colorado. Four major geologic provinces are included in this region, from west to east: I - San Luis Valley, II - Sangre de Cristo Mountains, III - Raton Basin, and IV Apishapa Uplift (GTR mapping 1998).

Culebra Range of the Sangre de Cristo Mountains. The erosional resistance of these crystalline rocks supports the high peaks.

The period from late Proterozoic through middle Paleozoic was a time of stable continental conditions in which various sedimentary strata were deposited in shallow seas and low-lying land environments. Limestone, dolostone, sandstone, and shale mark this interval. At times the region underwent erosion, so no rock record was preserved. Rocks of this age are not well exposed in the field geology region (Aber 2002).

Beginning in the Pennsylvanian, a significant change took place in Colorado tectonics. A mountain range was uplifted. Known as the Ancestral Rocky Mountains, this uplift took place in the same position as the modern Rocky Mountain Front Range, which includes the Sangre de Cristo Range. Substantial uplift combined with rapid erosion to produce immense quantities of

coarse clastic sediment--sand and gravel, which was deposited in basins adjacent to the mountain front. These sediments are represented today by thick redbed sequences of Pennsylvanian and Permian age, which are exposed in the foothills along the eastern margin of the Culebra Range. By the end of the Permian, the Ancestral Rocky Mountains had been eroded down to low hills and plains. Through the following Triassic and Jurassic, the region remained continental with accumulation of alluvial and aeolian sediments (Aber 2002).

A switch to marine environments took place in the Cretaceous as shallow seas transgressed over the mid-continent region. These marine transgressions resulted from local subsidence of the crust combined with global rises in sea level. In Colorado, marine sandstone, shale, and chalk accumulated to considerable thickness during the Cretaceous. These strata are well exposed within the Apishapa Uplift and around the margins of the Raton Basin, where more resistant strata form escarpments and hogbacks (Aber 2002). The eastern portion of Las Animas County is situated within the Apishapa Uplift (Figure 3).

The Larimide orogeny began in latest Cretaceous time and continued through the early Tertiary. This orogeny formed the fundamental structures of the modern Rocky Mountains. Mountain ranges were uplifted as tilted crustal blocks bounded by thrust and reverse faults. Proterozoic crust was thrust over Paleozoic and younger strata. Major thrust faults mark the eastern edge of the uplifts, as in the Culebra Range of the Sangre de Cristo Mountains. Uplift of the mountain ranges culminated in the Eocene and was accompanied by subsidence of marginal basins--the Raton Basin, which were filled by great thicknesses of clastic sediment. More than a kilometer of Tertiary sediment is preserved in the Raton Basin in vicinity of Spanish Peaks, for example. Larimide structural deformation was essentially complete in the southern Rocky Mountains by the end of the Eocene (Aber 2002). The western portion of Las Animas County lies within this geologic zone.

The mid-Tertiary witnessed a change from crustal compression to crustal extension, as the Rio Grande rift system began to open up west of the Sangre de Cristo Mountains. This rift propagated northward from New Mexico into south-central Colorado during the Oligocene and Miocene. Widespread magma intrusions and volcanic eruptions took place in Colorado, New Mexico, and western Texas in connection with rifting. The Raton Basin was a focus for igneous activity within the field-geology region. Thick Tertiary sediments of the basin were intruded at Spanish Peaks, Goemmer Butte, Mount Maestas, Silver Mountain and White Peaks, and great

dike systems were formed in connection with several of these intrusions. Most of this igneous activity took place between 27 and 21 million years ago in latest Oligocene and early Miocene times.

Tectonic activity gradually diminished during the late Tertiary and Quaternary. A few volcanic centers continued to erupt in New Mexico, and the Rio Grande rift zone became relatively stable. Beginning in the Pliocene, the mid-continent region underwent a dramatic rise. Crustal uplift of the entire southern Rocky Mountains and Colorado Plateau regions exceeded one mile (1.6 km) in vertical movement. Rivers entrenched deep canyons, such as the Royal Gorge of the Arkansas River west of Canon City, and massive erosion of the landscape took place. Soft sedimentary strata were washed away leaving more resistant rocks to form the plateaus, buttes, peaks, and ridges of the modern landscape. The history of erosional downcutting is revealed by prominent terraces and pediments within the Cuchara drainage basin (Abner 2002).

The most recent geological event of note was the "Ice Age" during the Pleistocene Epoch, 1 million to 10,000 years ago. The high peaks of the Sangre de Cristo Mountains supported numerous small glaciers. These glaciers carved a classic assemblage of alpine landforms, including cirques, horns, aretes, and cols. Lower in the glaciated valleys, various kinds of till and stratified sediments accumulated to form moraines. Small kettle lakes occupy lateral and end moraine complexes. Most of the glacial deposits and landforms date from the last glacial phase, known in the Rocky Mountains as the Pinedale Stage. The glaciated terrain is among the most picturesque in the high alpine environment today (Abner 2002).

Stream and river downcutting increased during the middle and late Pleistocene. The Culebra Range and adjacent High Plains experienced stream incision rates of 10-15 cm per 1000 years during the past 600,000 years. This adds up to 6-9 m (20-30 feet) of stream downcutting, which is thought to be a consequence of increased precipitation and runoff from the southern Rocky Mountains rather than a result of crustal uplift (Abner 2002).

## General Topographic Features

The Great Plains represent a vast area of gently rolling to flat terrain lying between the forested Mississippi Valley and the foothills of the Front Range of the Rocky Mountains. The high plains are customarily divided into three subsections: (1) the southern high plains, or Llano Estacado,

located in eastern New Mexico and western Texas; (2) the central plains, comprised of the Platte and Arkansas River drainages of eastern Colorado, and portions of Kansas and Nebraska; and (3) the northern and northwestern plains, encompassing Wyoming, Montana, the Dakotas and the prairie provinces of Canada (Wedel 1978; Eddy, et al. 1982). The central plains area of eastern Colorado is divided into northern and southern halves. The north-central high plains refer to the South Platte River valley, and the south-central high plains, to the Arkansas River valley (Wheat 1972; Eddy, et al. 1982; Carrillo, et al 1997). The project area within Las Animas County lies just west of the south-central high plains in the Purgatoire River Valley of the southern Rocky Mountain foothills (Everhart 2010:15). Waterways that pass through the foothills include the Purgatoire and Apishapa Rivers, and Longs Canyon, Lorencito Canyon, Sarcillo Canyon, and the Wet Canyon drain into the Purgatoire (NRCS 2007:19).

## Natural Resources and Climate

Seventy five percent of Las Animas County is open range or "grazable woodland" (NRCS 2007:18). A very small portion of the county (1%), located well east of the project area, is irrigated farmland; alfalfa is the primary crop. Aside from farming and ranching, coal and natural gas, and sand and gravel are the region's other marketable natural resources.

The primary game animals in Las Animas County are bear, elk, mule deer, turkey, mountain lion and bighorn sheep (NRCS 2007:18). According to Everhart (2010:15) other wildlife in the vicinity of the lake includes (but is not limited to) bats, squirrels, mice, gophers, rats, rabbits, badgers, porcupine, skunks, and a variety of migratory birds. Additionally, Trinidad Lake has an assortment of fish such as rainbow trout, largemouth and smallmouth bass, walleye, saugeye, channel catfish, crappie, bluegill, perch, and tiger muskies. Reptiles and amphibians that might be found at the lake are salamanders, toads and frogs, collared lizards, horned lizards, bull and garter snakes, and prairie rattlesnakes. Small scorpions and tarantulas may also occasionally be seen in the area (USACE 1994a:15-20 and USACE 1974:35-40 in Everhart 2010).

The project area lies within the Juniper-Woodland vegetative unit, with Southwestern Spruce-Fir Forest to the south and west towards the Colorado-New Mexico border, and the Grama-Buffalo grass plant community to the east (Wood and Bair 1980:8).

Climate data for the region is collected in Trinidad, northeast of the Park. In winter, the average temperature is 35.1 degrees Fahrenheit, with 20.5 degrees being the average low (NRCS 2007:22). In the summer the average temperature is 70 degrees, with the average high at 84.7 degrees. The average total precipitation for the county is 16.10 inches, with 64% of that occurring in May-September (NRCS 2007:23). Approximately 21 days a year have at least one inch of snow on the ground. Las Animas is a sunny county, experiencing on average, sunshine 79% of the time in the summer, and 73% of the time in the winter months.

**Figure 4 –** View of the Purgatoire River floodplain and topographic landscape of Trinidad Lake State Park. View to the south-southwest.

# CULTURE HISTORY

The following section is a brief introduction to the prehistory and history of the region. The historic portion was derived and expanded from Carrillo 1990; Carrillo et al. 2003; and Carrillo 2007. The prehistoric portion was written by Roche Lindsey. The prehistoric portion begins at a very broad scope and, through necessity, narrows in focus through time.

## Prehistoric Period

Trinidad Lake is in the boundary area of four major geographical regions and we must consider cultural influences and intrusions from the Southwest, High Plains, the Southern Plains, and the Great Plains inclusive (used here to distinguish the tall grass plains of Kansas and Nebraska, etc. from the short grass High Plains of the western fringes of those states and most of Wyoming, Colorado, etc.), and to a lesser extent, the Great Basin; regional neighbors were certainly influenced by and influenced other groups using the Purgatoire River drainage. The High Plains lie on the north side of the river and to the south, the Raton. Generally, the chronology of the Arkansas River Basin includes the Paleoindian Period, the Archaic Period, and Late Prehistoric Period, with subdivisions within these periods.

The PaleoIndian period generally has been considered to begin with the Clovis Cultural Complex in the Great Plains, High Plains, Southern Plains, and the Great American Southwest. The term "complex" is used here to refer to the idea that these were people covering a huge area of North America and maintained a similar material culture, but likely represent diverse groups with complex dynamics in other regards such as regional economic patterns. It still holds that there is no "archaeological assemblage on the Northwestern Plains that was recovered in context that can unequivocally claim pre-Clovis status" (Frison 1991:38) and the same can be said of the Southwest (Cordell 1984:128) and the Great Plains (Hofman and Graham 1998:92-93); three primary areas affecting Trinidad Lake State Park. However, with the context and antiquity of 12,500 BP (before present) human occupations at Monte Verde in Chile (see Dillehay 2000, Adovasio 2002) the traditional hypothesis of a 12,000-13,000 BP overland migration from Siberia to Alaska, down through an ice-free corridor south of the ice-packed late Pleistocene is seriously questioned (see Dillehay 2000:61-62, Wedel 1961:47-52). With this in consideration, a few sites in the region should be considered.

The Dutton and Shelby sites in far-eastern/central Colorado "have yielded a record suggestive

of human activity before Clovis times" (Hofman and Graham 1998:89 quoted citing Stanford 1979, 1982, 1983). Bones recovered from Peorian Loess date to between about 13,000-17,000 radiocarbon years before present (RCYBP) (Clovis dates to about 11,500 RCYBP) and may represent use and procurement of the represented faunal assemblage, but only seven tiny flakes were recovered in screening from these levels (Albanese 2000:223, Hofman and Graham 1998:89-90). However, as George Frison points out, "no unequivocal lithic artifacts were found in context with the bone items [from which the dates were obtained]. It is difficult to envision pre-Clovis groups with bone tool assemblages and a lack of lithic tools and weaponry" (1991:38).

Sandia Cave and the Lucy site contained an artifact type or "point" reported to date between 17,000 and 35,000 BP, but problems of context and stratigraphic interpretation limit archaeological application (Cordell 1983:128-129). The Sandia artifact type has been interpreted as a regional type of knife belonging in the Clovis Complex (Judge n.d.:13 in Cordell 1983:129). Like the Great Plains, the Southwest pre-Clovis possibilities are plagued with investigative problems (Cordell 1983:127-132).

The first Clovis find was 35 miles north-northeast of Denver near Dent, Colorado in 1932 (Adovasio 2002:104,Wormington 1957:43-44). The Clovis people hunted the large megafauna and other species of the Late Pleistocene/Early Holocene including a variety of Bison (see Frison 1991:268,272), horses, camels, and mammoth on the High Plains and in the Southwest (Hofman and Graham 1998:93-96, Frison 1991:39, Cordell 1983:131,Wedel, 1961:54-61). The Dent site produced three Clovis points and remains of several mammoths, but how the projectile points and the faunal remains are associated remains unclear (Frison 1991:39, Cassells 1983:58-64). The same year, Clovis remains were discovered at Blackwater Draw near Clovis, New Mexico to the south-southeast in far-eastern/central New Mexico, with artifacts in direct association with megafauna (see Adovasio 2002:103-108). Other sites in the general area include Dutton (Hofman and Graham 1998:89-91) and Claypool (Hofman and Graham 1998:112) both in eastern/central Colorado (Cassells 1983:64-65) and Domebo in southwestern Oklahoma (Hester 1972 in Zier 1999:80). More locally, evidence for Clovis is elusive and includes two surface sites and the reasonably frequent finds in private collections (Hofman et al. 2012, Lindsey 2012:11).

Goshen type artifacts were first recognized at the Hell Gap site in southeast Wyoming below the Folsom component and were thought to be a variant of Clovis (Frison 1991:44-45). Goshen projectile points are pressure flaked (like Folsom) as opposed to the percussion flaking of Clovis, but are not fluted. A biface and several blade tools from the Mill Iron site (Wyoming) resemble Clovis technologies. Goshen technologies overlap Clovis and Folsom occupations temporally on either side of 11,000 BP (Holliday 2000:31-33, Frison 1991:44-46,52). Goshen occupations are recognized in northern Colorado at the Twin Mountain and Jimmy Chase sites near Kremling, Colorado (Cassells 1983:69-70, Lindsey 1992-personal observation). While there are no definitive Goshen sites in southeast Colorado, the similar technology of Plainview, probably representing a distinct separate population(s) and technology some 1,000 years later and to the south, presents problems in identification (Holliday 2000:31-32, Hofman and Graham 1998:97, Frison 1991:46). Several "Plainview" projectile points have been recovered in southeast Colorado (Zier 1999:92-93) but caution should be taken in classification until population demographics and temporal and social relationships among these groups are better resolved. Frison states, "It is now apparent that Goshen points have been found regularly on the Northwestern Plains and mountains but were identified as Plainview and given a post-Folsom date" (1991:46). With the general lack of investigated, early stratified sites in the Colorado Arkansas River Basin (Zier 1999:80,85), at the edge of the High Plains, the chronological, temporal, and technological issues with these cultures remain unresolved.

Folsom is considered to chronologically follow Clovis, with some overlap with Clovis, in the adjacent Great Plains and Southwest. These artifacts are no longer associated with the mammoths and some other forms of Pleistocene fauna believed to be extinct by this time (10,900-10,200 BP) (Hofman and Graham 1998:97-99, Frison 1991:47-50, Cordell 1983:136). The southern plains generally recognize Midland as an unfluted contemporary with Folsom (to further confuse the Goshen/Plainview issues) and Plainview overlapping temporally with late Folsom and Midland occupations (Hofman and Graham 1998:97-103, Frison 1991:50-51). Midland is absent from the Southwest chronology (Cordell 1983:136).

In 1908 when George McJunkin, a black cowboy and former buffalo hunter, began collecting bones from an extinct form of bison in Wild Horse Arroyo (the Folsom site) 30 miles east of Raton, New Mexico and about 40 miles southeast of Trinidad Lake, the specialists he wrote to about his finds never replied. McJunkin passed away before the significance of his find was

made know: proof of North American human association with late Pleistocene megafauna was disocovered in 1926 (Thomas 2000:146-148).

In addition to being well represented to the south of Trinidad Lake, Folsom occupations in the region include numerous sites in the San Louis Valley to the west (Cassells 1983:74-77), the famous Lindenmeier campsite in Colorado to the north (found two years before McJunkin's discovery was recognized) (Cassells 1983:70), and numerous sites throughout the High Plains, Great Plains, Southern Plains and Southwest (Hofman and Graham 1998:97-103; Frison1991:47-57; Cordell 1983:146-151).

Zier remarks on the rarity of Clovis and Folsom finds in southeast Colorado (1999:85) with several of the few finds thought to be intrusive due to artifacts carried in by later occupants (Zier 1999:85). This seems to have been the case at the Barnes site on the PCMS where a highly polished Folsom projectile point was recovered within a Late Prehistoric component (see Lindsey and Krause 2007, Lindsey 2005, Ahler 2002). No corresponding terrace of appropriate age could be located with older terrace systems well above and below the site proper; it is not likely the artifact was deposited during PaleoIndian times and was likely geologically redeposited (Lindsey 2005:7; Ahler 2002:103; Kuehn 2002:56-58). While there are no known sites with stratified deposits containing Folsom artifacts in southeast Colorado, local collections show that Folsom artifacts are common in the area, identified both by ultra-thin bifaces and projectile points (Hofman et al. 2012; Lindsey 2011:10-11).

Midland, Plainview, and Folsom material culture variations in the southern Plains are indicators of things to come; cultural diversity within and across the regions discussed here increases dramatically through time (see Wood 1998, Frison 1991, Cordell 1983) and a comprehensive cross-regional discussion is not within the scope of this project. In a recent study of a Bent Country artifact collection, 80-90% of materials and technologies were thought to reflect High Plains groups except during PaleoIndian times where only about 49% of known materials were High Plains and about 49% from the Southern Plains (Lindsey 2011:37-38) showing a not surprisingly high mobility pattern of goods and/or people during that period. During other periods, geographical barriers like the Raton Mesa appear to limit percentages of material goods from other regions. These patterns are reflected in Lintz and Anderson's 1989 assessment of diagnostic artifacts on the PCMS, though no quantitative analysis of this manner was attempted, and the High Plains chronology will be the primary consideration here.

The term Plano is variably applied and will be hesitantly used here. First defined by Jennings to indicate the unfluted lanceolate projectile point users of the Plains (Jennings 1955 in Hofman and Graham 1998:103) the term has been applied more locally to include everything postdating Folsom and ending with the Archaic (Zier 1999:91-99). The term is useful in indicating those highly mobile Plains cultures postdating Folsom, who seemingly emphasized bison hunting in their economy (see Hofman and Graham 1998:103-105). This is a logical economic distinction from the earlier cultures because the nature of bison procurement strategy changes: groups previously had killed a few very large bison at a time, but at the end of the Folsom Cultural Complex period, communal hunts prevailed – it seems bison became less solitary and adapted more herding behavior (see Frison 1991:164), although the Horner site, near Cody, Wyoming, is the only known large scale bison procurement site known from PaleoIndian times (Frison and Todd 1987 in Frison 1991:334). Increasingly warmer conditions leading to the mid-Holocene drought – the Altithermal (Antevs 1955) or Hypsithermal (Deevey and Flint 1957) – correspond with changing economies of High Plains occupants and an increasing dichotomy of plains verses mountain/foothill adapted groups and less mobility (see Black 1986:91-108, Frison 1991:66-79), ending the pattern of Plano occupations as defined here. Plano includes the Agate Basin, Hell Gap, and Alberta/Cody cultural complexes within the High Plains (see Hofman and Graham 1998:103-113, Frison 1991:57-66) with Fredrick, Jimmy Allen, and Lusk typologies in the terminal PaleoIndian plains economic adaptations and Pryor Stemmed and other unnamed point types in the mountain/foothill economic adaptations (Frison 1991:66-79). Kevin Black has suggested a Great Basin affiliation of folks occupying the southern Colorado Mountains initially in the terminal PaleoIndian with a following mountain tradition developing in the high country distinct from plains occupants (Black 1986, 1991 in Zier 1999:91-108).

Plano sites occur in and around southeast Colorado (Zier 1999:92; Cassells 1983:79-86) with Alberta/Cody Cultural Complex seemingly the most frequent complex represented in the Arkansas River Basin (Zier 1999:91-99) and is resented in the archaeological record of Trinidad Lake (Dore 1993:48-51, A-41). A Plainview projectile point and Alberta/Cody Complex projectile points have been identified on the PCMS (Anderson 1989:116,188) and observation of projectile point collections on varying scientific levels (Hofman et al. 2012; Lindsey 2011; Lindsey and Hofman 2001:personal observations in collecting data for said publication) attest that these artifacts are not uncommon. However, the lack of stratified sites in southeast Colorado limits interpretive data pertaining to the

nature of these occupations (Zier 1999:99). Agate Basin and Hell Gap cultural complexes do not appear to be well represented in southeast Colorado.

By 8,000 BP climatic shifts and corresponding shifting human economic strategies show a trend toward more generalized hunting and gathering subsistence (as opposed to specialized big game hunting) (see Hofman and Graham 1998:113-116, Frison 1991:332-333). For the first time in the archaeological record of the High Plains we see ground stone (Frison 1991:332); an artifact type that dominates sites of the Archaic periods as the Altithermal begins by 7,700 BP. Anderson's "P-2" classification on the PCMS may be representative of this time-frame and technologies (1989:15-116).

Bent Stage Station in Las Animas County has a component of obvious terminal PaleoIndian technology, on a terrace above the primary historic components (Lindsey 2001:personal observation; Frison 2001:personal communication). George Frison compared them to an as yet unnamed (and I believe undocumented) component at Antelope Creek (Wyoming – not to be confused with the Antelope Creek phase of Oklahoma/Texas and Late Prehistoric discussions. Frison viewed the artifacts at the SAA conference in Denver the same year they were collected from the PCMS. The site appeared to have recently been exposed, with eroding roasting pits and several terminal PaleoIndian diagnostics were collected (Lindsey 2001:personal observation). It does appear from the data that these point types may last well into the Early Archaic in Colorado (Cassells 1983:118-122,126, Benedict 1979) but may transition into side-notched traditions similar to more northern areas (Frison 1991:66-79, Anderson 1989:434-435).

George Frison explains transition to the Early Archaic projectile point technology to the north as "abrupt and easily detected" (Frison 1991:79). This may not be as true in these southern portions of the High Plains as previously stated (Benedict 1979:6-8), but lithic industries similar to those in Wyoming sites Frison discusses, do appear (Frison 1991:85; Anderson 1989:126, 140, 153, 243, 263, 275; Irwin-Williams and Irwin 1966:71).

The Altithermal drought certainly affected the carrying capacity of the High Plains for both animal populations, particularly bison, and human populations (Zier 1999:104, Frison 1991:79) and an acceleration in decreased size in bison morphology (Frison 1991:272). The once held notion of a cultural hiatus on the Plains during the Altithermal (Wedel 1961:254, Reeves 1973) has long ceased consideration of viability and there appear to be populations entrenched in

mountain/foothill areas beginning in late PaleoIndian times and continuing into the Archaic (Frison 1991:67-83, Black 1991:17-19). Geographically Trinidad Lake is likely included in the southern fringes of these occupations. Diagnostic surface finds on the PCMS and southeast Colorado attest to Early Archaic occupations (Lindsey 2011:14-17, Anderson 1989:434), although this is a bit difficult to quantify as, when addressing projectile point categories,' Anderson remarks that six of the eight point types overlap point attributes of other periods (1989:434).

The discovery of sites with deposition on the Plains during the Altithermal hampers understanding during the period. The drought generally resulted in deflation rather than deposition of sediment on the High Plains (Kay 1998:38) and open sites with stratified deposits are rare.

The Middle Archaic brings both climatic changes and changing human demographics: there is a very notable increase in rainfall and probably a slight drop in mean temperature and an increase in bison herds (Painter et al. 1999:23; Frison 1991:191). Where human activity is scarce in the intermountain basins and plains during the Early Archaic, Middle Archaic occupations are scattered throughout the region. During the Middle Archaic, McKean sites dominate the Great Plains and High Plains (Frison 1991:19; Cassells 1983:122-123; Wedel 1961:250-251) and, in fact, the projectile point types are distributed over much of the western United States (Bell 1958:50). With few exceptions, Middle Archaic projectile points from the PCMS analyzed by Anderson (1989:345-346), fit McKean Complex typologies and there is little reason to doubt that some sites on this project in part represent McKean Complex occupations (McKean, Duncan, Hanna, and Mallory points, see Frison 1991:88-101, Wedel 1961:250-251). Plant food processing represented by the use of ground stone in the terminal PaleoIndian period discussed earlier, increases in frequency through the Middle Archaic period (Frison 1998:157-160,163, Zier 1999:188-119) showing a pattern of generalized hunter/gatherer or foraging, with sites increasing in frequency near water (Zier 1999:119) and continuing into the Late Prehistoric period on the High Plains.

Black (1991:3-4) suggests a mountain origin for the McKean Complex from populations occupying higher elevations beginning during the terminal PaleoIndian period (above). Black also notes that of these high country occupations, projectile point edge serration is present starting with Middle Archaic occupations and extending into later times (1986:137-138 in Zier

1999:118,131). In contrast, serration is rare in plains sites but a serrated projectile point, likely Late Archaic in age,

was recovered in the Trinidad Lake Project area (Doleman 1996:4 and drawing without page number) and high altitude occupants may in part be, or affect, occupants of the Trinidad Lake area.

Zier characterized the technology of the Late Archaic as witnessing "a florescence of projectile points with recurrent morphological themes of stemming and corner notching of haft elements" (1999:130). Pelican Lake is used collectively for corner-notched Late Archaic projectile points on the Northwestern Plains and High Plains (Frison 1991:101-103), but certainly reflects more localized territories of hunters/gatherers as do the stemmed traditions. To a large degree, projectile point morphology representing a shift in tool traditions does seem to be the determiner for transition into the Late Archaic, as environmental factors appear to be reasonably stable with a possible gradual shift toward a warmer and dryer period. Severe drought seemingly caused abandonment of the Colorado Arkansas River Basin in the 1400's (Painter et al. 1999:23-24). While bison hunting is commonly practiced, with evidence for occasional communal hunts, generalized hunter/gatherer patterns continue with wide spectrum subsistence base (Zier 1999:132-136; Frison 1991:101-111).

The replacement of the dart and atlatl with the bow and arrow was a relatively rapid process probably initiated by groups in southern Canada, Montana, and Wyoming. The projectile points exhibit smaller hafting width and less weight, the mechanical attributes needed for this alternate weaponry. The Besant move into the northern High Plains Plains during the terminal Late Archaic, and Avonlea group occupations using the bow and arrow by 2000 BP, seemingly from the north, are thought to represent early Athabascan occupational migrations from northern areas (Frison 1991:111-114,121,211-212; Cassells 1983:238; Wedel 1961:113-117, see Davis 1988, Frison 1973). By 1300 AD Avonlea occupations disappeared, but Dismal River occupations, archaeologically connected to Apache groups appeared (Wedel 1959:466; 1961:113-117). Apachean groups certainly occupied the Trinidad Lake area during the Prehistoric, Protohistoric, and Historic periods (see below). Probably by 500 AD on the High Plains, most groups were using the bow and arrow (Zier 1999:169; Frison 1991:111; Wedel 1961:255-256).

Besant occupations have not been recognized in Colorado, but Colorado Plains Woodland occupations do have connections with those Wyoming groups (Frison 1991:105, 211), however, the origins of these occupations vary from those to the north. Plains Woodland occupations

represent movements of Central Plains folks out of the growing horticultural subsistence groups tending toward more complex society (Wedel 1959:535-536,619-620,625, 1961:92-95, 165-167, Cassells 1983:192) and current research suggests this population influx marks the beginnings of ceramics on the Colorado High Plains (Cassells 1983:192, Zier 1999:147-148).

Like the Middle and Late Archaic periods, the early portion of the Late Prehistoric (Developmental Period 1000-1050 AD) (Zier 1999:160) seems to have relative environmental and cultural stability, with what appears to be a general increase in population until about 1000 AD (Zier 1999:145-147) and ceramic wares appear to be Plains Woodland (indigenous or traded), or wares influenced by Plains Woodland ceramics (Zier 1999:147). Pit houses are found in some early Developmental period sites with circular masonry architecture late in the period (Zier 1999:162); logical preludes to later architecture seen in the Trinidad Lake area. Other sites, like an Early Plains Woodland occupation in Colorado Springs currently under investigation by Lindsey, exhibit much more traditional hunter/gatherer behavior such as using resources of sand dunes for camping and other activities. Plains Woodland occupations are replaced by similar material cultures referred to as the Central Plains Tradition (see Archaeological Overview) in the Diversification period (1050-1450 AD, Zier 1999:189).

Maize in pre-ceramic contexts in the Central U.S. suggest a similar Archaic development of cultigens in the Mississippi and Missouri drainages as in the Southwest (Adair 2006:252) and both these areas, directly or indirectly, certainly affected Diversification period occupants of Trinidad Lake area. However, the quality of maize in most eastern and central Colorado sites suggests it was not a serious economic pursuit for Colorado groups (Adair 2006:252-253); the Sopris phase of Trinidad Lake area may be an exception.

By 1050 AD, or slightly later, Sopris phase folks were practicing maize horticulture as part of their subsistence base with faunal assemblages showing a continued dependence on hunting/gathering (Zier 1999:227, 237). Increased labor in housing, suggesting more sedentary populations (Cordell 1983:231), is apparent in Sopris and neighboring Apishapa phase sites. Sopris structural sites have been classified as either a homestead (the more common small “single, habitation structures and associated features” [Zier 1999:236]), or a hamlet (“multiple archaeologically contemporaneous habitation structures” [Zier 1999:236]), potentially representing nuclear family and extended family units or other varying social forms. Refinement of temporal designation of sites and occupations within sites is not such that

variation over time in these occupation types can be ascertained (Zier 1999:236). Strong ties to Northern Rio Grande Pueblos are apparent in ceramic assemblages (see Mitchell 1997b) and likely are associated with trade, social interactions, and marriage. Although there have been archaeological association with southern Plains Village groups implied by researchers (see Archaeological Overview section), Sopris phase site assemblages lack the scapula hoes and other farming tools prevalent in Central Plains Tradition assemblages (Zier 1999:238). Sub-floor interments are common in the larger structures and there is an apparent emphasis on food storage;, suggesting further commonalities with northern Pueblo groups (Zier 1999:238, Cordell 1983:188).

Sopris phase are best known from U.S. Army Corps of Engineer properties in the Trinidad Lake area, but occupations are also present along tributaries of the upper Purgatoire River, on the mesas above the river and tributaries, and on the east side of the Raton Mesa, and beyond (Zier 1999:234). Sometime before 1200 AD these occupations ceased with some evidence for conflict at the end of the occupations (Zier 1999:227,230). For 100-150 years, relying on gardens and wild resources of the region, Sopris groups subsisted in the Trinidad region in conditions similar to those of today. Advanced avenues of research certainly can address problems of today by studying the successes and failures of our not so distant ancestors.

Neighbors to the east represented by the Apishapa phase shared some similar traits with Sopris including masonry structures. Opinions have varied over the importance of maize agriculture in Apishapa sites (see Zier 1999:217-219) but Christopher Lintz and Christian Zier have both offered notions that maize agriculture offered, at best, a supplementary economy to hunting/gathering (Zier et al. 1988:268; Lintz 1989:268, both in Zier 1999:217). Apishapa material culture suggests a much closer relationship with Central Plains Tradition (Zier 1999:293). Interestingly, Apishapa occupations seem to last into the 15$^{th}$ century (Zier 1999:201-202), temporally well beyond Sopris phase, beyond abandonment of northern Pueblo regions (Cordell1983:317-325), and paralleling the abandonment of Antelope Creek phase sites in the mid 1400's (Lintz 1978:37). With the associations discussed here it is convenient to envision the Sopris folks being absorbed into Pueblo populations and the Apishapa people absorbed into southern Central Plains Tradition groups, but the nature of these abandonments remain unexplained.

During the Protohistoric period for the Arkansas River Basin (1450 to 1725 AD, Zier 1999:250) the dominant occupants appear to be the Jicarilla Apache (Zier 1999:251). Protohistoric manifestations include El Cuartelejo, a Dismal River (Apachean) refuge for Taos occupants which spread from southeast Colorado into Kansas (Carrillo 1999 in Zier 1999:251, Wedel 1959:23-25). Apache groups appear to have been pushed out of the area in the early 1700's by Comanche and Ute allies (both of Uto-Aztecan languages and Great Basin origins) (Carrillo 1999 in Zier 1999:250) and those two groups were likely late Native American occupations in the Trinidad Lake area.

## Historic Period

### Las Animas County: A Summary of the Culture History of the Region

The cultural history of southeastern Colorado most probably dates to ca. 12,000 years ago, as Clovis occupations have been discovered in the Colorado area of the Great Plains (Fagan 1987). From that point until the 1600s the area remained the domain of various groups of Native Americans (see previous section). With the beginning of the Spanish presence to the south, in present-day New Mexico, southeastern Colorado was impacted a few decades later. Sheep were introduced by Hispanic settlers, and eventually cattle were brought in by Anglo Americans. A comparatively rapid evolution of local life ways and significant migrations of people into and out of the area continued into the early 1900s. It was at this time that the final wave of sodbusters poured across the lands hoping to succeed at dryland farming. The climate rebuffed their attempts to plow the lands and the area returned to a grazing region, much as it had been for thousands of years for bison and other native wildlife.

Las Animas County epitomizes a multi-cultural borderland. The Hispanic Cultural Landscape of the Purgatoire/Apishapa served as a conduit for Spanish explorers and a buffer zone for political and military leaders. Ancient transportation corridors along the Arkansas and Purgatoire Rivers, and Timpas Creek to Raton and Sangre de Cristo Pass accommodated Native American traders and nomads, mule and wagon freight, stage lines, and railroad development. Traders of diverse nationalities advanced a global commercial network as they criss-crossed the Santa Fe Trail. To Americans, the region provided the gateway to the Southwest.

## Important Historical Periods of Present Las Animas County

### Native Americans During the Historic Era

For most of the Native Americans of the East, Great Plains, and Rocky Mountains, the 100 years between 1770 and 1870 were marked by tremendous population changes, a cultural florescence, disease, and often displacement and death. The survivors became wards of the federal government. All of these changes were direct or indirect results of Euro-American contact and were intimately tied to two phenomena of Euro-American origin: the fur trade and the introduction of the horse (Weber 1980:16; 1990). Both phenomena are key elements in post-contact Native American culture change, and exemplify the type and extent of changes wrought by the Euro-Americans. New forms of economic exchange that accompanied Anglo American goods resulted in a shift affecting Native American groups and the Hispanic population in the Southwest. These groups went from independent and self-sufficient units, to subordinate members of the international trade community. However, one should not lose sight of the fact that these people reacted in active ways to adapt to or to resist these processes (Weber 1980:16; 1990).

The fur trade began in the Northeast and spread west following the deciduous forest ecozone inhabited by the beaver. The later and somewhat different trade in buffalo hides on the Plains was in many ways an extension of the fur trade. The Native Americans' quest for guns and other trade goods provided incentive for their entrance into the fur trade. However, their involvement in the fur trade was not simply a matter of choice, or a desire for Anglo American goods. It was also a matter of necessity and survival, since groups without access to firearms were at the mercy of those who had them. About the same time that the beaver-pelt-and-gun-trade network moved in from the Northeast, an equally momentous catalyst for cultural change was spreading from the Southwest. With the adoption of the horse, the pedestrian hunting and gathering adaptation to the Plains environment changed profoundly (Weber 1990).

The various tribes became competing and consuming economic groups locked into and increasingly dependent upon an external trade network over which they had no control. These societies, which had been relatively self-sufficient, became both initial producers (hides) and ultimate consumers (guns, other articles) of Euro-American manufactured goods (Weber 1980:18). In short, adoption of Anglo American goods led Native Americans to lose some of

their previous subsistence options, and, while they acted to mediate some of the negative impacts, they ultimately lost sovereignty and became a satellite of the larger market economy (Weber 1990).

The Native Americans and the New Mexican Hispanic *pobladores* developed a system of guarded cooperation over a period of 200 years of coexistence between the seventeenth and nineteenth centuries. Southeastern Colorado was part of Spain's claim on the New World based on Columbus' discovery. Papal decree later divided Spain's claim with Portugal. In 1540, members of the Coronado expedition were the first of Spaniards into the area. This area, generally comprising the present American Southwest, served as Spain's northern frontier and is referred to in the current historical literature as the Spanish Borderlands (Bannon 1974; Bolton 1964; Weber 1982). No successful Spanish attempts to colonize the area that is in present-day Colorado ever occurred. The region was used for hunting and trade with indigenous Native American Plains groups, a tradition acquired from Pueblo Indians who had established a trading network predating the arrival of the Spanish (Kenner 1969; Carrillo 1990).

When France forfeited control of an enormous portion of the midcontinent, the Louisiana Purchase by the United States in 1803, caused a dispute between Spain and the United States over the western boundary. In 1819 the dispute was resolved with the Adams-Onis (Transcontinental) Treaty, which delineated the Spanish-American boundary by a series of rivers and parallels. The boundary commenced with the Sabine River, the western boundary of present-day Louisiana, and extended to the Pacific Ocean at the forty-second parallel, the present boundary of Oregon. In southeastern Colorado, the Arkansas River was established as the Spanish-American boundary. The new boundary brought the United States to within several hundred kilometers of the New Mexican settlements (Anderson 1985:46; Friedman 1985:34; Lamar 1977:4-5; Mehls 1984 and Carter; Stoffle et al. 1984:58; Weber 1982:12; Carrillo 1990).

In 1833, Bent, St. Vrain, and Company began the construction of their famed trading post, Bent's Fort, located just north of the Arkansas and east of La Junta. In addition to the established and regular commerce Bent's Fort enjoyed with the various tribes of the region, it also served as a major communications hub and meeting place. Major parleys between Native American groups and government representatives were held at or near Bent's Fort in 1835, 1840, 1848, and 1850. These attracted Cheyenne, Arapaho, Gros Ventre, Pawnee, Arikara, Kiowa, Comanche, Kiowa-Apache, and, occasionally, members of other visiting tribes (Lavender

1972:170-174).

After a number of skirmishes between settlers and Native Americans and the 1864 Sand Creek Massacre, many of the Anglo residents of Colorado mounted increasing pressure for the removal of all Native Americans from the eastern part of the state. After retaliations and counter-retaliations, representatives of the U. S. signed a treaty of peace with the Cheyenne and Arapaho in Kansas, on the Little Arkansas River, in 1865, and it was ratified in the following year. This treaty effectively removed the Cheyenne and Arapaho from Colorado. The Apache chose to adhere to this treaty by confederation, and they too were removed from Colorado. A parallel treaty with the Comanche and Kiowa, negotiated at the same site in 1865, removed these tribes from Colorado as well (Kappler 1904:887-891; Van Hook 1933:69-71, 76; Weber 1990). Thus, in the approximate life span of Bent's

Fort, these High Plains Native American groups went from dynamic, independent, and autonomous units, to greatly weakened groups whose territories were delimited by an outside political power.

With increased mobility and Anglo contact, epidemic diseases like smallpox and cholera, also spread across the Southern Plains. The horse had allowed the nomadic groups to travel over larger areas in more populous groups, making diseases more devastating in their spread. Anglo American migration westward in the mid-1860s, the subjugation of the Plains Native Americans through the reservation system, disease, and continued extermination of the bison, all contributed to the end of a traditional way of life that had endured for centuries (Kenner 1969:112-114).

## The Hispanic Frontier: 1540-1848

This period was a very important but poorly understood era in Colorado history. Spanish soldiers and colonists who settled near and traveled through Las Animas County were the representatives of an international empire which profoundly affected the political, social, and ethnic makeup of New Mexico and southern Colorado. Long after they were gone from the scene, their activities and explorations influenced the course of Hispanic and American settlement in Las Animas County. The Spanish were the first Europeans to explore and

describe Colorado. They were the agents of far-reaching transformation of people, language, religion, culture, ecology, and the environment.

In their *Colorado Southern Frontier Historic Context*, Mehls and Carter (1984) point out the difficulties associated with identifying cultural resource sites of this period. Intact resource sites are extremely rare due to the transitory nature of the expeditions. Structures and sites include outposts, forts, campsites, houses, trails, battle sites, and caches. Cultural resource or archaeological sites would provide very significant information regarding specific trade and exploration routes, international politics, and substantiation of historical records.

Previous researchers (Friedman 1985; Carrillo 1990) have identified two significant divisions in the region's history using archival and documentary records and archaeological remains. The divisions, primarily chronological, also reflect larger issues of political control and settlement of the region. The Hispanic Frontier, 1540-1848, ends with the beginning of American political control of the region with the signing of the Treaty of Guadalupe Hidalgo in 1848. The American period begins in 1849 and continues to the present. The irony of this political chronological division is that the major Hispanic population movements into southern Colorado occurred during the American period, not that of the Spanish or Mexican Republic.

The period of transition between the Hispanic and American periods, the late 1850s/early 1860s, witnessed the settlement of the Arkansas and upper Purgatoire Valley frontier by two distinctly different cultural groups. Hispanics moved into the area from northern New Mexico while Anglo Americans came from the eastern United States, and immigrants from Europe also sought out these valleys as a place to settle. The Anglo Americans and European immigrants shared many cultural and economic traditions. These traditions often exhibited marked contrasts with those of the Hispanics also settling the area. American frontier farming and ranching during the late nineteenth century relied on a cash-oriented economy, although other systems, such as barter and work exchanges, were used to a lesser degree. The New Mexicans brought with them a lifestyle developed over a period of more than 250 years of Southwestern frontier experience. As a result, "the Hispanic frontier produced a pattern at least as distinctive as that of the Anglo American frontier" (Swadesh 1974:4).

The economic changes in New Mexico that began in the 1820s with the introduction of American trade, continued in the expansion of the areas used for agricultural lands by the

1840s and 1850s. As more and more land was cultivated or grazed, the northern Hispanic frontier moved into what would become Colorado. By the early 1840s, the Mexican government was providing large tracts of lands to settlers who would move northward, including lands in southeastern Colorado. Small settlements known as *plazas* (based upon the Spanish plaza) arose, and these constituted the beginning of agricultural settlement in southeastern Colorado. Homes were built around a central square, and families settled together. Fields were divided in long narrow parcels or *varas*, and operated in a semi-communal manner, becoming known as long lots. Animals grazed on common pasture lands. Responding to the arid conditions, settlers obtained water through *acequias* or irrigation ditches. Some of these constitute the first recorded water rights in Colorado. The extension of irrigation technology to the north was important, because the trend was to continue, allowing the lands of southeastern Colorado to be agriculturally successful (Carlson 1967; Cheetham 1928).

## *Comancheros* and *Ciboleros*

Trade occurred between the *comancheros* (New Mexican traders) and tribes inhabiting what is now southeastern Colorado. Hides and pelts were traded with the Kiowa on the Arkansas River, with the Pawnee along the Platte River, and with the Arapaho, who were located between the South Platte and Arkansas Rivers. Although the Arkansas River Valley served as the center of trade of buffalo hides, New Mexican traders were operating as far east as the Kansas River (in present-day northeastern Kansas). The confluence of the Purgatoire and Arkansas Rivers served as a regular rendezvous area between Plains Native Americans and New Mexican traders. In 1818, Spaniards were trading in the area referred to it as *La Nutria*, the place of the beaver (Stoffle et al. 1984:58; Weber 1971:29-30).

The *ciboleros* (New Mexican buffalo hunters) came to be active in the first quarter of the nineteenth century, as did the *comancheros*, and endured until the middle part of the century. By 1832 approximately 10,000 to 12,000 buffalo were harvested annually. In contrast to the attitude Anglo Americans held toward *comancheros*, *ciboleros* were considered rugged, daring, and picturesque. They impressed several Anglo Americans who visited New Mexico, including Josiah Gregg who initially encountered them in 1831 as his caravan was approaching Santa Fe. His book, *Commerce of the Prairies*, has come to be a classic work on the nineteenth century American Frontier. Two of his observations indicate that at least some New Mexicans had, by the 1830s, adapted to life on the Great Plains by adopting many ways of the plains Native Americans (Gregg 1954).

Increasing commercial and governmental traffic along the Santa Fe Trail had both direct and indirect effects on the Native American populations of the region, and the activities of the *Comancheros* and *Ciboleros* on the Plains. Before the coming of the white traders, Plains Native Americans relied on buffalo as a source of food, clothing, and shelter, and were autonomous and self-reliant. After the end of the trading in beaver pelts and the establishment of trading posts on the Plains, buffalo robes became one of the primary mediums of exchange, which had dramatic implications for the vast buffalo herds. The buffalo shifted from being a resource with a local, modest, and sustainable demand to a resource for which demand was to become national and international, *and* almost unlimited (Weber 1990).

In the spring of 1878, buffalo hide hunters realized there would be no buffalo hunting on the

Southern Plains that year. In six years' time the millions of buffalo that had roamed from northern Kansas into Texas and New Mexico had been wiped out (Andrist 1969:178-181, 203; Lavender 1972:154-157). While two major political changes--the shift from Spanish to Mexican control, and the subsequent shift from Mexican to American control--did not greatly affect the activities of the *comancheros* and *ciboleros*, loss of the buffalo did.

## The American Period: 1849-1900

At the beginning of the Anglo American sovereignty, the first people to establish permanent communities in Colorado were those Hispanic *pobladores* who migrated from northern New Mexico and settled in the San Luis Valley beginning in 1849. Certain *placitas* (small fortified settlements) stand out for their suitability as potential archaeological sites. Of these, most are associated with well-known individuals who can be easily documented. Plaza Barela, at San Francisco Creek, was founded by state senator and businessman, Casimiro Barela. Plaza Vigil produced a number of county and state leaders, including state representative Jose Urbano Vigil, whose memoirs reside at the University of Colorado, Boulder. Another state legislator, Senator Jose Miguel Madrid, grew up at Plaza Madrid, a well-documented *placita* west of Cokedale. Felipe Baca's *placita* was especially significant because of its ties to the founding of Trinidad and pioneer Hispanic settlement (Carrillo 2003).

By the 1850s, agricultural patterns were established in southeastern Colorado. Stores in towns such as Costilla, San Luis, and Conejos grew and provided important trade goods to settlers who were able to sell grains, corn, and other crops. Trade northward was limited, but this would soon change with the discoveries of gold. Within a short time, as many as 100,000 people would head to the lands of Colorado. While there was not a gold rush in southeastern Colorado, gold seekers crossed the region and, more importantly, the gold camps and later coal mining towns became markets for locally produced food. Prior to the discovery of gold, the land contained within the present political boundaries of the state of Colorado was located in four territories. The area west of the Continental Divide was part of Utah, a portion of the southeast belonged to New Mexico, and the remainder of the eastern section belonged to Kansas and Nebraska. The formation of the Colorado Territory coincided with the onset of the Civil War. In February of 1861, President James Buchanan signed the bill. The next month, newly inaugurated President Abraham Lincoln appointed the first Territorial Governor, William Gilpin. Counties were created and local governments established. The people of Colorado,

believing an attempt would be made by the Confederate States to invade the gold fields, remained loyal to the Union. Because of the war, immigration from the east declined, and large numbers of individuals returned east to participate in the fighting (Smith 1989).

## Southeastern Colorado Important Development Themes: 19th and 20th Century

### American Exploration and Military Expeditions (1806-1945)

The 1803 purchase of Louisiana led to increased American interest in the West. Beginning with the 1804-06 Lewis and Clark expedition to the Pacific Northwest, President Thomas Jefferson sent numerous exploration parties into the West to gain information on political influence, economic resources, and geography. Lt. Zebulon M. Pike's 1806 mission to find the headwaters of the Red and Arkansas Rivers passed near Las Animas County. Pike explored the Front Range in the vicinity of the mountain which bears his name before crossing into the Rocky Mountains. After exploring some of the upper Arkansas River and portions of South Park, Pike's expedition was arrested by the Spanish in the San Luis Valley and returned to the United States via Santa Fe and Chihuahua. Pike published the first official American descriptions of Colorado. His picture of the area as a desert suitable only for grazing had a lasting impression on the minds of Americans through much of the nineteenth century. (Thomas J., Noel, Buildings of Colorado, (New York: Oxford University Press, 1997, 374; Carrillo, et al. 2003)

Affairs across the Atlantic Ocean caused American interest in the West to wane through the War of 1812. Following the war, American Secretary of State John Quincy Adams took steps to solidify American territory. The Adams-Onís Treaty of 1819, which fixed the boundary between American Louisiana and New Spain at the Arkansas and Red Rivers marked a revival of American attention to western matters (C. de Baca 1998:xvi).

In 1820, Major Stephen H. Long led the first official expedition into the region in nearly fifteen years. Originally part of a larger military expedition sent to the Yellowstone River in 1819, Long's 30-man scientific party was ordered to chart the boundaries confirmed by the Adams-Onís Treaty. Long was instructed to find the source of the Platte River and return via the Arkansas and Red Rivers. Long's party reached the area from the South Platte River. Along the way, the staff botanist Dr. Edwin James and two soldiers made the first recorded ascent of Pike's Peak. The party advanced to the Arkansas River and split up at the mouth of the

Huerfano. One group descended along the Arkansas. The second, led by Long, crossed the Arkansas near Timpas Creek and traveled southeast to the Purgatoire River. After spending three torturous days (July 25-27, 1820) negotiating Purgatoire Canyon, the party moved to Chacuaco Creek and on by the point of Mesa de Maya. From there, Long followed the Cimarron back to a reunion of his command along the Arkansas. The Long expedition collected extensive information on Native Americans, flora and fauna. Long and James both echoed Pike's pessimistic assessment. On maps, Long labeled southeastern Colorado "The Great American Desert," while James deemed the area suitable only for grazing and Indian reservations. The Powers Elevation historical resource survey of the Piñon Canyon Maneuver Area identifies Long's route in some detail (Carrillo 1990:2; C. de Baca 1998:xvi).

Between 1820 and the 1840s, the American military made only periodic excursions to southeast Colorado to remind Indians of American jurisdiction. Col. Henry Dodge kept a detailed journal as he followed Major Long's route on a patrol in 1835. The 1840s saw increased expeditions as Americans looked to western expansion and Manifest Destiny as their political vision. Lt. John C. Frémont passed through Colorado five times looking for trails and potential railroad routes. His expeditions of 1844 and 1845 followed the Arkansas River. In 1848 and 1853, he skirted the area of present Las Animas County when he crossed Sangre de Cristo Pass into the San Luis Valley. Frémont's published descriptions and romantic tales of western adventure (edited in large part by his wife, Jessie Benton Frémont), sparked the imagination of Americans and promoted western settlement (Campa 1979:132; Turner 1994:1; Weber 1994:73)

The marriage of politics and expansion which led Americans into the Mexican-American War of 1846-48, in turn sparked several government surveys in and around southeast Colorado. In 1845, Lt. James W. Abert of the U. S. Corps of Topographical Engineers made a reconnaissance of the Santa Fe Trail, Raton Pass, and the Cimarron River. The following year, Col. Stephen Watts Kearny led his 1,700-man Army of the West along the Santa Fe Trail and into New Mexico via Raton Pass. The passage to the Purgatoire and over Raton Pass was described by Abert as well as Richard Smith Elliot of Laclede's Rangers, and Susan Shelby Magoffin, the civilian wife of an American trader and agent. Kearny's invasion force captured the province of New Mexico and instituted American rule over the inhabitants (Weber 1994:73-74).

The Mexican-American War and gold strikes in California stoked the desire for a transcontinental railroad. In 1853, Captain John W. Gunnison surveyed a potential route along

the Arkansas River and over Sangre de Cristo Pass to the San Luis Valley. Gunnison's death at the hands of Native Americans in Utah ended the expedition but his surveys of western Colorado were later used to lay the Denver and Rio Grande line from Denver to Salt Lake City (Acuna 1988:6).

In the early 1870s, the government sponsored a final series of surveys conducted under the auspices of the U. S. Geological and Geographical Survey of the Territories by Frederick Vandeveer Hayden. Hayden sent teams of scientists, artists, and surveyors through the Rocky Mountains to record the natural resources and features. The survey's work, published as *The Geological and Geographical Atlas of Colorado and Portions of Adjacent Territory*, brought the existence of extensive and enormously valuable coal and iron deposits in Las Animas County to the attention of developers and promoters (Weber 1994:75).

Acquisition by the United States of the southeastern Colorado as part of the 1848 Treaty of Guadalupe-Hidalgo led to an increased military presence along the Santa Fe Trail. Emergencies brought about by Native American warfare, civil strife, and the Civil War brought larger troop bodies into the region. In 1847, Col. William Gilpin led a force of soldiers along the Santa Fe Trail and over Raton Pass to stop raids by Native Americans. In 1854, in response to the Ute attack on El Pueblo, a contingent of three hundred U. S. Army regulars and five hundred New Mexican volunteers under Col. Ceran St.Vrain marched along the Purgatoire. They attacked a band of Utes in Long's Canyon and pursued the survivors across Raton Pass. In March, 1862, members of the First Colorado Infantry Volunteers assembled at the mouth of Gray's Creek (Rito de San Lorenzo) on the Purgatoire for their expedition against Confederate invaders under General Sibley in New Mexico. Their victory at the Battle of Glorieta Pass (March 26-27, 1862) ended the Confederate threat to the Colorado and California gold fields. Companies from the United States Seventh Cavalry and Fifth Infantry occupied Trinidad from January until May, 1868, in response to the civil and racial unrest known as the Trinidad War (Limerick 1987:28; White 1991; Weber 1992:13)

Supply of regional military posts proved to be the magnet which drew settlers into the Purgatoire Valley. Producers along the Purgatoire supplied corn and vegetables, livestock, wood, and coal to soldiers at nearby Fort Lyon and Fort Union. The military maintained a different presence after the Southern Cheyenne and Arapaho were removed from the High Plains following the Medicine Lodge Treaty of 1867, and the Utes from the central Rocky

Mountains following the Treaty of 1880. In October, 1913, Governor Elias Ammons ordered the Colorado National Guard to maintain control in the Southern Coal Field Strike of 1913-14. Their presence worsened the situation, heightening tension until violence erupted at the Ludlow tent colony on April 20, 1914. Following the Ludlow Massacre and a subsequent outbreak of widespread civil strife, President Woodrow Wilson ordered federal troops to restore order by disarming strikers, mine guards, and militiamen. The Colorado National Guard returned to Trinidad in the wake of anti-Hispanic and anti-indigent hysteria in 1936. For six weeks, the Guard manned Camp Johnson near the summit of Raton Pass in order to impose a border blockade against Mexican and Hispanic migrant beet laborers. In 1943, a prisoner-of-war camp was established at Beshoar Junction east of Trinidad. German and Italian prisoners worked agricultural jobs until the end of the war (Beshoar 1882:58; Limerick 1987:222).

## Fur Trade and the Santa Fe Trail (1805-1880)

American trappers followed immediately on the heels of the Louisiana Purchase (1803) and subsequent government explorations. Beaver and other furs brought high commodities prices in eastern and European cities. As early as 1805, individual trappers such as James Purcell penetrated the streams of the southern Rocky Mountains. Following the War of 1812-15, entrepreneurs organized trapping expeditions into the central Rocky Mountains. Although it was against Spanish and Mexican law for outsiders to trade with settlements on the Hispanic frontier until 1822, entrepreneurs such as James Baird, Robert McKnight, Auguste P. Chouteau, and Julius De Munn risked arrest and confiscation to trade in Taos and Santa Fe. Trappers developed the Taos Trail north through the San Luis Valley to Sangre De Cristo Pass. The Old Cherokee or Trappers Trail passed north along the Front Range (Noel, et al. 1994; Muldoon 1987).

While the beaver trade boomed in the 1820s and 1830s, southeast Colorado bustled with commercial activity Independent trappers and traders based out of Taos, as well as company trappers and traders employed by Bent, St. Vrain & Co. and others prowled the Purgatoire and its tributaries. Christopher "Kit" Carson, Ceran St. Vrain, Richens L. "Uncle Dick" Wootton, James Beckwourth, Mariano Medina, and Thomas Fitzpatrick, among others, trapped in the region. The trappers, mostly wage laborers, represented the diversity of the multi-cultural frontier. The end of the war for Mexican independence in 1821 brought new commercial opportunities. When Mexico eased trading restrictions in 1822, both Hispanic and American

traders rushed to supply new markets. The first to profit from the Santa Fe trade--and one of the first Anglo Americans to pioneer a trade route through southeast Colorado--was William Becknell. To reach Santa Fe in 1824, Becknell crossed the HCLA through Purgatory and Chaquaqua Canyons to Trinchera Pass or Emery Gap (Muldoon 1987:69-71; LeCompte 1987:59). The difficulty of this course and the problems encountered in crossing the undeveloped trail over Raton Pass led later caravans to avoid the northern route. Traders initially preferred the shorter but more dangerous Cimarron route through northeastern New Mexico. Historian Janet Lecompte argues that the trappers and traders who used the northern, or Mountain Branch of the Santa Fe Trail, preferred to cross Sangre de Cristo Pass into the San Luis Valley north of the Spanish Peaks. Others traversed the undeveloped Raton Pass, which crossed the Raton Mountains from the Purgatoire River valley. Those who used Raton Pass complained that it was steep, rocky, and arduous. Raton Pass received more traffic after Gen. Stephen W. Kearney made "extensive" improvements to the route during their invasion of New Mexico in 1846. Not until Richens L. Wootton blasted a toll road over the pass in 1865-66, did Sangre de Cristo Pass fall into disuse. Thereafter, the Santa Fe Trail, which passed through the southeast Colorado, became in the words of Lecompte, "the principal artery between Colorado and New Mexico" until railroad lines reached Santa Fe in 1880 (LeCompte 1987:60, 62).

Despite the misgivings of early traders, a reliable water supply and the construction of major posts such as Bent's Old Fort and El Pueblo made the Santa Fe Trail's Mountain Branch a safer alternative to the shorter southern branch. Bent's Old Fort, located on the Arkansas River twelve miles above the mouth of the Purgatoire was the major trading emporium of the period between 1832 and 1849. Operated by partners William and Charles Bent and Ceran St. Vrain, Bent's Old Fort anchored a commercial triangle which incorporated the regional fur and buffalo robe trade, Native American trading, and Santa Fe trade. Travelers along the Santa Fe Trail found accommodations, supplies, and maintenance facilities at the adobe fort to ease their trip across the plains. Bent's Old Fort functioned as an early outpost of American government, serving as a quartermaster depot and Indian Agency. The fort also channeled the multicultural frontier. Numerous competing posts appeared along the Arkansas, including El Pueblo (1842-1854), Blackwell and Gantt (1832, near the mouth of the Purgatoire, and 1834-35), and El Pueblo de Leche (Milk Fort) (1834-1839) (Lavender 1954:178- 181; Thompson 1979:7-27; Mehls and Carter 1984:10).

Bent's Old Fort supported its trading activities with a network of farms and ranches in northern New Mexico and southern Colorado. Bent-St. Vrain employee John Hatcher established the best documented farm of this period in 1846-47. Situated on the Purgatoire River at the mouth of Gray's Creek, Hatcher's farm tended horses, mules, and cattle for the fort. Hatcher also dug an early *acequia* (irrigation canal) and planted corn before being driven off by Native Americans in 1847. The Mexican-American War and the decline of the buffalo trade ended the trading period of Bent's Old Fort. Because of the construction of military posts along the Arkansas River, the Santa Fe Trail continued to flourish, particularly after the establishment of the Raton Pass toll road in 1866, until the arrival of the railroad in 1880 (Mehls and Carter:8-13).

### The Livestock Industry (1830-1900)

The earliest stock raising took place along the fur trade frontier. Trading post operators hired herders to raise cattle, horses, sheep, goats, and mules near their posts. Bent, St. Vrain, and Company raised horses and 1,500 head of cattle on the Vigil and St. Vrain Grant. In 1847, Dick Wootton raised cattle on the Huerfano to feed the American army in Santa Fe (Mehls and Carter 1962:62; Carrillo, et al. 2003).

Sheep predated cattle in the southeastern Colorado. The Raton Basin of Las Animas and Huerfano Counties became a major center of the sheep industry second in Colorado only to El Paso County. Sheep ranching has deep roots in Hispanic culture. The Spanish introduced sheep to the Americas in 1492. Don Juan de Oñate brought 3,000 fine-wooled churros into New Mexico in 1598. Sheep herding flourished in New Mexico. Introduced to Pueblo and Navajo Indians, herding survived the Pueblo Revolt of 1680-1692. Between 1800 and 1850, wool became the greatest product exported from New Mexico. During the 1850s, New Mexican *carneradas* such as Miguel Otero and Antonio Jose Luna, as well as Anglo-Americans such as Kit Carson and "Uncle Dick" Wootton, drove tens of thousands of sheep to the California gold fields (Sypolt 1975:5-25; Carrillo 1990b:28).

New Mexican *pastores* drove flocks into the upper Rio Grande Valley as early as 1821, penetrating the San Luis Valley by 1842. Driven back by Ute resistance, it was not until the founding of San Luis and Guadalupe in the early 1850s that Hispanic drovers established permanent settlements in Colorado. Herders also visited the upper reaches of the Purgatoire River and San Francisco Creek soon after the Mexican War, grazing their flocks seasonally

before returning to their villages for shearing and lambing (Taylor 1966:87; Sypolt 1975:32-33, 75).

The Pike's Peak Gold Rush of 1859 attracted permanent *pastores* into the Purgatoire River region. The gold camps relied heavily on Hispanic settlements in New Mexico and southern Colorado for supplies. New Mexican shippers supplied a profitable demand for wool and mutton, often driving as many as 30,000 head of sheep to Denver for sale. Juan Gutierrez, Sr. and his son grazed sheep on the future site of Trinidad in the spring of 1860. Felipe Baca and his family built an empire of "millions" of sheep during the 1860s and 1870s. Pioneer Euro-American sheep raisers in southeast Colorado included Alexander Hicklin, Albert Boone, Isaac Van Bremer, and Lafayette Head (Taylor 1966: 87; Sypolt 1975: 79-80, 89).

Hispanos practiced the traditional *partido* system of sheep raising. *Partidaros* raised capital from sponsors in exchange for a share of the profit at shearing time. Attacked for creating a network of dependant peonage, the *partido* system also fit the culture of mutual obligation between patrons and their dependents. The *partido* system provided the opportunity for settlers with little or no capital to become owners in their own right. Citing the advantages of stock raising over agriculture in the arid Raton Basin, publicists parlayed the low overhead and high return of sheep raising into a boom during the 1870s and 1880s. At its height between 1876 and 1878, the Raton Basin exported over 300,000 head per year. Initially, most Colorado ewes were of New Mexican origin, and New Mexican *churros* were plentiful and cheap. They were praised as "a hardy animal, an excellent traveler of great endurance, and an [excellent] mother." Sheepmen increased wool output by cross breeding *churros* with English merinos beginning in 1869. This innovation, along with the removal of Native Americans from the range lands, led to a surge in the sheep industry. In 1868, Las Animas County supported 87,000 sheep. Ten years later, the county boasted 190,000 sheep worth $131,253; 64,543 ewes grazed in the vicinity of Trinidad alone (Sypolt 1975:190-191; Deutsch 1987:22-23; Taylor 1966:88; Beshoar 1882:83).

Sheep growers contended with environmental extremes in protecting their flocks. Blizzards in 1872, 1874, and 1875 buried vital pastures. Spring hail and rain storms in 1876 and 1877 impeded lambing. Drought was a lamb killer in 1879 and 1880. Horrible snows in the winter of 1880 and 1881 killed up to 25 percent of Colorado's ewes. More elastic than longhorn cattle ranching, the sheep industry persisted after the decline of the open range cattle industry in

1887. By 1888, however, a drop in wool prices made shearing less attractive. The removal of wool tariffs in 1894 further depressed wool prices. This, along with increasing capital expenses and the appropriation of pastures by homesteaders and national forest reserves, stalled the sheep industry by the turn of the century (Sypolt 1975:90,102; Deutsch 1987:22; White 1999: 225; Friedman 1985:200).

Cattle, along with sheep, had been introduced by Juan de Oñate in 1598 and bolstered by Diego de Vargas in 1698 during the re-conquest which followed the 1680 Pueblo Revolt. Two hundred fifty years later, Spanish longhorns made up the core of the cattle industry. The Pike's Peak Gold Rush and the Civil War inaugurated a prolonged boom in commercial cattle ranching. Texas ranchers, cut off from northern markets during the Civil War, recognized the Colorado plains as an ideal region to raise their surplus cattle. The spread of the mining frontier created a ready market, while nutritious grass, available in abundance on public lands, allowed ranchers to fatten their steers cheaply on the open range. The arrival of the railroad in Denver in 1870 opened further opportunities for expansion. Between 1870 and 1887, the cattle industry generated significant fortunes for both local entrepreneurs and foreign investors. Commercial ranchers in southern Colorado controlled a range which spread across the southeastern plains (Carrillo 1990b:30; Ubbelohde, Benson, and Smith:166).

Although the first Texas cattle herds arrived in Colorado via the Arkansas River as early as 1859, Las Animas County hosted the first major north-south cattle drives. In 1866 and 1867, partners Oliver Loving and Charles Goodnight trailed herds from Fort Worth, Texas over Dick Wootton's Raton Pass toll road into Colorado. In 1868, Goodnight blazed the Trinchera Pass trail a few miles to the east in order to avoid Wootton's ten-cent per head toll. The Goodnight-Loving Trail to Denver became one of numerous cattle trails through southeast Colorado. By 1868, Las Animas County supported 20,000 cattle and 87,000 sheep. In 1880, the county boasted 45,588 cattle worth $456,524 and 64,543 sheep worth $78,567. By the turn of the century, the county supported 34,851 cattle, and 135,807 sheep (Abbott, Leonard, and McComb 1994:169-170; Taylor 1966:88; Beshoar 1882:83; Hanks 1996:31).

Trinidad's proximity to the cattle trails and range lands, especially after the arrival of the railroad in 1878, made it an ideal location for the headquarters of vast cattle companies. In 1869, Texas brothers James, Steven, and Peyton Jones formed the JJ Ranch in Purgatoire Canyon. The Prairie Land and Cattle Co., Ltd., a Scottish syndicate founded in 1880 and

operated by former Indian trader John Wesley Prowers, acquired the JJ Ranch in 1882. Bolstered by the JJ Ranch holdings and based in Trinidad, the Prairie Cattle Co. became the largest syndicate in southern Colorado. At its peak in the early 1880s, the Prairie Cattle Co. ran 54,000 cattle and 300 horses on 3,500 square miles of land. The Bloom Land and Cattle Co., founded in 1884, represented the second largest company. Headquartered at the Circle Diamond Ranch in Thatcher and operated by Trinidad merchant Frank Bloom, the Bloom Cattle Co. expanded into New Mexico and Montana (Carrillo 1990b:29-30; Noel, Mahoney, and Stevens 1994:24; Taylor 1966:88).

Coal and silver mining bonanzas and the opening of new rail markets accelerated the cattle boom. Returns of 25-45% stimulated investment from capitalists in Europe and on the eastern seaboard. Deep-pocketed "cattle kings" such as John Wesley Prowers, Frank Bloom, James C. Jones, and Casimiro Barela ultimately dominated the industry. Through strategic ownership of water rights along springs and river frontage, Prowers and others controlled massive ranges by restricting access to range land. Cattle barons also protected their interests by forming cooperative groups such as the Colorado Stock Grower's Association in 1867. The CSGA organized communal roundups, registered brands, and lobbied for quarantine restrictions. Trinidad area ranchers provided leadership in cooperative initiatives. In 1879, Trinidad cattlemen Richens L. Wootton, Dr. Michael Beshoar, H. N. Arms, and Albert W. Archibald joined other Colorado ranchers in an unsuccessful attempt to persuade Congress to pass a 3,000-acre Pastoral Homestead Act. Their efforts proved premature. Not until 1916 did Congress pass a 640-acre Stockraising Homestead Act designed for managers of small family herds (Abbott, Leonard, and McComb 1994:171-72; Ubbelohde, Benson, and Smith 1995:170; Athearn 1995:85-86).

At the lower end of the scale, wage-earning cowboys were celebrated as symbols of rugged American individualism. To many, cowboys symbolized the coming Anglo hegemony. Although Anglo, Hispanic, and African-American cowboys worked cattle together, Anglos comprised over 63% of ranch owners by 1880. Moreover, Anglos represented 71% of wage laborers in the Las Animas County cattle industry by 1900. Despite such numbers, prominent Hispanos were among the first to raise cattle in the Raton Basin and continued to prosper as ranchers to the turn of the century. Ramon Vigil introduced stock at his *plaza* as early as 1863. Hispanic pioneer Felipe Baca and Anglo entrepreneur Spruce M. Baird operated a partnership that ran

both sheep and cattle. Initially, Anglo and Hispanic businessmen both profited from the sheep industry as well. Hispanos relied on Anglo shipping points and markets for their prosperity. Over time, Anglos invested in sheep less frequently in southeast Colorado. Hispanic sheep raisers made up 75% of the total in 1880 and 100% by 1900 (Friedman 1985:200; Baca and Baca 1982:26-36).

In part because of this ethnic segregation, conflict and violence infected relations between cattlemen and sheep herders in Colorado. The war focused on competition for water and grass but also incorporated issues of ethnic intolerance. Sheep--and their Spanish-speaking tenders--were perceived as a threat by many Anglo cattlemen. The charges laid at the hooves of sheep bordered on mythical. Cowmen called sheep "hooved locusts," claiming that "sheep did irreparable damage to any area through which they passed." Sheep supposedly left behind a "smell...which no respecting cow would endure" (Sypolt 1975:217, 220; Athearn 1995:88). Cattlemen accused sheep of nipping grass too low and cutting roots with their sharp hooves.

Cattlemen unsuccessfully attempted to drive sheep ranchers as well as homesteaders off the range through litigation while the CSGA lobbied for restrictive legislation. Cowmen illegally fenced flocks out of public domain. Although less frequently than in other regions, cowboys also resorted to violence. In 1873, "night riders" massacred or scattered flocks in Huerfano County. In 1880, English cattlemen murdered Apishapa River herder Juan Pedro Baca, son of Felipe Baca, as he attempted to serve court orders for the return of sheep which had strayed on to their land. In 1882, armed riders from the Prairie Cattle Company attacked employees of herder M. A. Pearie. The riders destroyed 4,000 sheep, provisions, and blankets before burning the homes of Lorenzo Abeyta, Antone Salas, and Juan Cordova--ranchers who boarded Pearie's sheep. Cowboys also admitted they had been paid to murder Lorenzo Abeyta if they got the chance (Ubbelohde, Benson, and Smith 1995:173-174; Sypolt 1975:217, 232). The Bartells brothers, herdsmen along the Apishapa River, complained, "Our herders have to go armed to the teeth...last year we went up on a high mountain with our flocks to get away from the cattlemen, but they soon found us and would not let us rest, fired upon the herders, killed our sheep and destroyed our camp" (Sypolt 1975:32).

Despite the complaints of herders like the Bartells brothers and rewards offered by the Rocky Mountain Wool Growers Association, few of the offenders were punished. Certain factors distinguished Las Animas County from other Western livestock regions. Hispanic *patróns* such

as Casimiro Barela and Felipe Baca were among the first and most prosperous cattle owners--often in partnership with Anglo entrepreneurs. Private land grant ownership encouraged the leasing of well-defined ranches which often were fenced in (sometimes along with tracts of public land) earlier than on open range ranches. Cattle owners introduced high quality Herefords sooner than cattle owners on the ranges to the north. Finally, milder environmental conditions made cattle ranching a less risky prospect. Ranchers in southeastern Colorado escaped the worst of the 1886-1887 blizzards which devastated cattle in northeast Colorado and Wyoming. The harsh droughts and blizzards of 1886 and 1887, combined with overstocking and mismanagement, destroyed the open range system and frightened off investors throughout the industry. Like ranchers in other regions, cattlemen in the Las Animas County adopted scientific management, winter feed, and higher-quality breeding in order to adapt to the new conditions. By the turn of the century, cattlemen turned to consolidated family ranches as a more manageable alternative to the open range (Mehls and Carter 1984:64-65; Abbott, Leonard, and McComb 1994:172; Friedman 1985:222).

### Transportation Development (1821-1900)

Trails throughout southeast Colorado served as a conduit for farmers, herdsmen, merchants, and explorers. Via wagons, mule trains, stage coaches, railway lines, and automobiles, Euro-Americans traveled and freighted goods along migration corridors which predated written history. Southeast Colorado bridged political and economic centers in St. Louis, Santa Fe, and Denver. By the early 1800s, Spanish explorers had established the Taos Trail over Sangre de Cristo Pass and another trail over Raton Pass to the Arkansas River. Beginning in 1824, American and Mexican traders used the Santa Fe Trail between Independence and Santa Fe, with its numerous cutoffs between the Cimarron Route in western Kansas and Raton Pass (Mehls and Carter 1984:73; Carrillo, et al. 2003:51-52). The Pike's Peak Gold Rush increased traffic over these traditional routes, and accelerated migration led to the establishment of military posts. Migration also led to the founding of Trinidad as a farming and mining supply town. Trinidad's role as a regional emporium increased after 1866, when Richens L. Wootton built a toll road over Raton Pass to serve traffic between Colorado, Fort Union, and Santa Fe. Commercial stage traffic between Pueblo and Trinidad began in 1862. In 1866, veteran Santa Fe freighters Bradley Barlow and Jared L. Sanderson acquired the line. The partners transformed Barlow, Sanderson and Co. into the most prominent stage service in Colorado. In

1869, they absorbed the Denver and Santa Fe Stage and Express Co., which provided direct service to Trinidad starting in 1867. Barlow and Sanderson introduced stage stations to refresh weary travelers and replace tired horses. Often little more than ranches, these way stations struggled to provide adequate care for their customers. South from Pueblo, stations included San Carlos, Greenhorn, Cucharas (Walsenburg), Foster's Ranch (Apishapa Station), Gray's Ranch (El Moro), Trinidad, and Wootton (Raton Pass). In 1870, Barlow and Sanderson established a line between the Kansas Pacific rail head in Las Animas and Gray's Ranch. Stations included Bent's Old Fort, La Junta, Timpas, Iron Spring Station, Hole-in-the-Rock (Thatcher), and Hoehne. In response to increased settlement along the Purgatoire, the company shared a line along the north rim of Purgatoire Canyon with the South Overland Mail and Express Company. The route passed through Cold Spring Station at the head of Bent Canyon, up Stage Canyon to the station at Lockwood Canyon, then to the William Burns Ranch, east of Trinidad. Two of these historic resources--the overall stage route and Hole-in-the-Rock stage station--are described in the Powers Elevation Piñon Canyon historical resource survey (Taylor 1966:52-53, 85, 110; Noel, Mahoney, and Stevens 1994:27; Friedman 1975:22).

Steam engines eventually spelled the end of stage lines. Potential routes into New Mexico, coal and iron deposits, and farming and ranching attracted railway lines into southeastern Colorado and Las Animas County in the 1870s. In 1870, the Kansas Pacific reached Las Animas before turning north to Denver. The establishment of the Las Animas railhead spurred a temporary increase in feeder line freight and stage traffic. In 1876, the Denver and Rio Grande Railway Co. slighted Trinidad when it stopped five miles short at the company town of El Moro. The Denver and Rio Grande was thwarted from reaching Santa Fe when engineers from the Atchison, Topeka, and Santa Fe Railway Co. purchased Wootton's Raton Pass toll road in 1878. Arriving along the Purgatoire from La Junta, rail traffic from the Santa Fe line reached Trinidad in September of that year. Thereafter the Denver and Rio Grande turned toward the mountains, crossing La Veta Pass into the San Luis Valley instead (Bryant 1974:37, 45; Athearn 1985:32, 43, 55; Scott 1931:146-154).

Railways introduced radical changes to the built environment. Urban sites such as the company town of El Moro owed their existence to the railroads, while towns bypassed by railway lines stagnated. Railroad lines developed their own infrastructure, including but not limited to high-end way stations such as the AT&SF's Hotel Cardenas in Trinidad. The advent of the railroad

also marked the beginning of massive Anglo immigration. Anglo immigrants brought with them their own architectural traditions. Railway lines brought a cultural and economic invasion which threatened traditional Hispanic culture. Spur lines such as the Colorado and Southern Railroad and the Colorado Fuel and Iron Co.'s Colorado and Wyoming Railroad cut through Hispanic farmlands and *plazas* to reach nearby coal mines and coke ovens. Slag piles and other pollutants decreased the productivity of *plaza* farms. Hispanic farmers also turned to wage work for the railroads in order to supplement their increasingly insufficient agrarian economy. Cheap freight rates allowed entrepreneurs to construct buildings in styles similar to those of the Eastern U.S. The result was a transformation of Trinidad's streetscape from adobe to Victorian. Only one Las Animas County structure listed in the Society of Architectural Historians inventory of landmark Colorado buildings, the adobe Baca House, predates the rail era (Mehls and Carter 1984:79; Taylor 1971:131-132; Burnett and Burnett 1965:236; Deutsch 1987:18; Noel 1997:374-381).

Railroads also stimulated economic expansion of southeastern Colorado and Las Animas County. Steam engines brought in large numbers of international migrant laborers and helped transform the region to an industrial cash economy. Drawn by rich coal deposits, railroads accelerated the development of the coal and coke industry and linked southeast Colorado to the economic hinterland of Pueblo, Denver, and New York City. Reliable and cheap transportation offered by the railroad boosted the agricultural and cattle industries. Railroad companies stimulated agricultural development by offering incentives to settle on company-owned land. Arid conditions, manipulation by cattle companies and the complicated ownership dispute of the Vigil and St. Vrain Grant, initially hindered agricultural development. However, the Colorado & Southern, the Denver, Texas, & Gulf, and the Atchison, Topeka, & Santa Fe Railroads encouraged homesteaders to settle in southeastern Colorado during the middle 1880s (Friedman 1975:97-98).

Homesteaders took advantage of railroad-owned real estate and cheap government land, as well as wetter-than-average summers to flood into Las Animas County. The 1862 Homestead Act allowed farmers to claim 160 acres of western land which, after the payment of a modest fee and providing proof of residence, was transferred outright to the new owners. A homestead boom led to the separation of Baca County from eastern Las Animas County in 1889. Despite the hopes of real estate boosters and farmers, the land rush did not last. Drought in 1889 and depression in 1893, followed the lush years of the mid-1880s. Hopeful farmers learned a painful lesson when the designated unit of 160 acres proved insufficient for the needs of Western agriculture. The Enlarged Homestead Act (1911), which upgraded the homestead unit from 160 to 320 acres, and the Stockraising Homestead Act (1916), which granted 640 acres if grazing took place, spurred a second dryland wheat boom. Dryland boom towns such as Duncan, New Troy, Rule, and Maxey blossomed in 1910, only to wither when drought and depression caught up with farmers in the 1920s and 1930s. Without irrigation, much of southeastern Colorado resisted agricultural development (Friedman 1975:98; White 1991:143; Noel, Mahoney, and Stevens 1994:16; Athearn 1985:146).

With the exception of feeder lines to the coal mines, rail construction virtually stopped following the Panic of 1893. The decline of coal and coke production in the 1920s and 1930s led to the abandonment of feeder lines. On the main trunk, railroads switched to diesel-driven locomotives for passenger service. Luxurious silver streamliners such as the Santa Fe's Super

Chief sped through Trinidad on its journey between Chicago and Los Angeles. Even after the peak of the rail era, Trinidad continued to recognize its importance as a transportation center--a characterization noted by the dozens of automobile showrooms which opened in the city during the 1920s. Trinidad catered to the automobile by removing street car lines, paving many of its dirt streets, and opening a tourist's car camp by 1924. Road building climaxed with the construction of Interstate 25 through the city in the mid-1960s. The sprawling overpass and its accompanying blight of fast food chains signify the next chapter in Trinidad's transportation history (Athearn 1985:162, 177; Hanks 1996:55-56; Mehls and Carter 1984:81-83).

## Coal Mining and Coke Production (1860-1950)

Colorado contains the nation's largest bituminous coal reserve in three geographically distinct fields. The southern field extends from Walsenburg south to Trinidad and from the crest of the Sangre de Cristos to the Rocky Mountain front. The coal formed over the course of 135 million years. Sedimentary carbon beds, deposited in swamps during the Cretaceous and Tertiary Periods, were metamorphosed by the uplift of the Sangre de Cristos and the Spanish Peaks during the Laramide Orogeny. By the end of the nineteenth century, developers found the coal beds well-suited to the needs of Colorado's industrial development. Trinidad-area coal, baked into coke, fueled the foundries which transformed American pig iron into steel. The exploitation of this mineral resource brought the industrial frontier to Las Animas County. Industrialization transformed the agricultural economy and introduced a wave of international immigration, social change, and labor conflict unparalleled in state history. Small-scale coal production began during the 1860s, and in 1861, William Kroenig opened a commercial mine to supply Fort Union, New Mexico. Trinidad entrepreneur Frank Bloom produced coal for local sale. He used his expertise to later guide Colorado Fuel and Iron Company developers to promising sites. Publicized by F. V. Hayden's 1869 geological survey, the surrounding coal seams drew the attention of larger business concerns (McGovern and Guttridge 1996:3; Taylor 1966:88).

Railroad companies were the first to implement large scale coal development. In 1876, the Colorado Coal and Iron Company (CF&I), a subsidiary of the Denver and Rio Grande Railway Company, opened coal mines at Engleville and Starkville and coke ovens at El Moro. In 1878, Albert G. Stark acquired the patent to the lands surrounding the village of San Pedro, south of Trinidad. Stark renamed the settlement Starkville and the following year opened the Starkville Mine. Railroad subsidiaries such as AT&SF's Cañon City and Trinidad Coal and Coking

Company, which purchased the Starkville Mine in 1880, dominated coal production during the late 1870s and early 1880s. In 1882, CC&I completed Pueblo's Bessemer steel manufacturing complex (renamed the Minnequa Works in 1903). Boasting a foundry, blast furnaces and rail mills, the Minnequa foundry and similar steel mills throughout the country acquired a massive hunger for coal in the 1880s. The demand led to startling increases in Colorado coal production. In 1876, Colorado miners extracted 100,000 tons. By 1882, the figure reached 1,000,000 tons and by 1889, 3,000,000 tons. At the turn of the century, Huerfano and Las Animas counties were responsible for sixty percent of Colorado's output (McGovern and Guttridge 1996:6; Abbott, Leonard, and McComb 1994:135; Clyne 1999:6).

In 1892, the Colorado Coal and Iron company merged with John Cleveland Osgood's Colorado Fuel Company to form the Colorado Fuel and Iron Company (CF&I). The Colorado Fuel Company already owned over 2,250 acres of coal land in Las Animas County and its Sopris Mine was Colorado's largest single producer. Ten years later, the expanded CF&I was acquired by Standard Oil founder John D. Rockefeller. Under his ownership, CF&I became one of the most powerful corporations in the state at the turn of the century. The company produced 75% of Colorado's coal output. CF&I's political, economic and social influence in southeast Colorado was supreme (Clyne 1999: 6; McGovern and Guttridge 1996:21-23, 28).

To house their employees as close to the mines as expedient, CF&I and other coal companies constructed private, insulated settlements. By the first decade of the twentieth century over 60,000 people lived in the company towns of El Moro (Engleville, 1877), Morely (1882), Sopris (1888), Hastings (1889), Forbes (1889), Berwind (1900), Primero (1901), Segundo (1901), Tercio (1901), Cuarto, Tabasco (1901), and Delagua (1903), as well as Bowen, and Gray's Creek. The extent over which coal companies dominated the living conditions of their towns--that is, whether towns were considered "open," "semi-open," or "closed"--was determined by the settlement's proximity to pre-existing "open" towns such as Trinidad, Aguilar, and Walsenburg. In most remote and therefore "closed" towns such as Primero, Segundo, and Tercio, coal companies were usually the only business willing to risk opening stores or providing services to their employees (McGovern and Guttridge 1996:21-23, 28; Clyne 1999:7, 16, 23).

Trusting in paternalism to govern a healthy employee-management relationship, coal companies oversaw nearly every aspect of their employees' daily lives. Employees and their families lived in frame or concrete block company homes, drank at company saloons, shopped at company

stores, danced at company halls, and read company magazines (such as CF&I's *Camp and Plant*) or other company approved literature. Institutionalized corporate paternalism dated from the establishment the CF&I Sociological Department in 1901. Motivated by a curious mix, in the words of coal town historian Rick Clyne, of "guiding benevolence and calculated control," the Sociological Department attempted to "redress social problems that contributed to discontent and labor unrest (Clyne 1999:20-21). CF&I sociologists improved sanitation and established consistent living conditions throughout the CF&I camps. The Sociological Department "took charge of employee housing and established public schools, reading and night schools, and kindergartens, while launching...cooking classes, traveling libraries, lecture series, and boys' and girls' clubs" (Clyne 1999:20-21).

Under Rockefeller's manager, Lamont M. Bowers, the CF&I weakened or terminated many of the programs intended to improve social conditions. Nevertheless, CF&I continued to use the Sociological Department to maintain strict social control of their workforce. Historians such as McGovern and Clyne (1999), and others, point to Bower's preservation of the social status quo while allowing settlement living conditions to deteriorate as one of the provocations of the Great Strike of 1913-14 (McGovern and Guttridge 1996:22-27; Abbott, Leonard, and McComb 1994: 136-137; Clyne 1999:21).

The American Smelting and Refining Company's (ASARCO) camp at Cokedale, which operated between 1909 and 1947, typified camp conditions. Built at the mouth of Reilly Canyon, Cokedale produced coal and coke to fuel ASARCO's far-flung smelters. Denver architect James Murdoch arranged the settlement in three rows. The company built eighty-six three- to eight-room houses out of cinderblock made from waste coke dust--a utilitarian building material that blended expediency with economy of scale. ASARCO also constructed eighteen frame cottages with shed porches and covered rear patios. As a result, the camp was larger than most--Segundo contained only seventy-five residences and Tabasco forty--but not as large the greatest CF&I camps (such as Primero's 200 residences). Single employees resided at a frame boarding house and ate at one of two barracks-style restaurants (Clyne 1999: 25; Barton 1976: 9).

Town services reflected the company's dual motivations of paternalism and profit orientation. Only one residential block enjoyed indoor plumbing. Other residents used outhouses and shared water service from community hydrants. In this and in the availability of electrical

hookups, Cokedale was typical of early twentieth century camps. The company deducted an electrical fee of $.35 per month per hookup and restricted electrical service to evening hours. ASARCO, not as restrictive as CF&I (ASARCO did not, for example, pay employees in company scrip), nevertheless exercised tight control of everyday life. Company painters determined house colors. Company officers controlled the school board. The company paid the salaries of doctors and law enforcement officials. In addition to managing two mines, 350 coke ovens, and a processing plant, ASARCO oversaw the hotel, shops, houses, store, school, saloon, laundry, boarding house, and bath house. Responding to employee complaints, the company belatedly built a church (Barton 1976:9, 31).

Cokedale enjoyed the reputation of one of the cleanest and best maintained coal camps in the region. The settlement also broke tradition with other company towns when ASARCO abandoned mining operations in 1947. Residents were allowed to purchase their homes for $50 plus $100 per room. Unlike Primero, Segundo, and other towns which were razed, leveled, cleared, and reclaimed when their operator no longer found them profitable, Cokedale survives as an example of a moderately intact turn-of-the-century industrial community. Coal exploitation and the resulting population increase led to other major social changes. The intense social pressure placed a heavy burden on traditional Hispanic communities. Many local Hispanos left farming, at least seasonally, to take up mining wage labor. They were joined by over 11,000 New Mexican Hispanos between 1900 and 1910. Coal companies also recruited heavily in Eastern and Southern Europe. The interethnic frontier mushroomed as southeast Colorado accommodated Italian, Greek, Polish, Serbian, Croatian, Austrian, Irish, Swede, Japanese, and African-American wage laborers. Drawing strength from their native cultures, each new ethnic group resisted corporate paternalism. Fraternizing largely within their own enclaves, immigrants preserved their language, customs, and religion (Barton 1976:23; Noel 1997:380; Mehls and Carter 1984:88; McGovern and Guttridge 1996:51; Deutsch 1987:89-90).

For companies attempting to establish corporate cultural hegemonies, existing Hispanic communities presented another problem. Unlike displaced European immigrants, Hispanos relied on established settlements for their network of social support. Although marginalized by industrialization, the plazas offered produce, supplies, and escape from company supervision for coal miners. Where possible, coal companies combated this threat to their dominance by replacing traditional village life with their own version of socialization. Coal companies ignored

claims of prior occupation to displace older Hispanic settlements from private lands. The companies demolished adobe structures, laid out grid street patterns, and constructed cinder-block homes for their foreign-born employees. On at least one occasion, Hispanos resisted violently. In 1888 settlers at Stonewall fought a three-day battle with Colorado Fuel Company guards before the National Guard intervened. The settlers litigated, only to lose their claim in the Supreme Court in 1895 (Deutsch 1987:17).

The demand for timber to support mine tunnels, lay track, and operate coke ovens created a subsidiary industry for up to 3,000 Hispanos. Although low paying, the income earned by *los properos* helped subsidize the village economy. Mountain timber camps became an important, if exploitative aspect of local culture. Independent Hispanic contractors out competed company firms such as the Rocky Mountain Timber Company (Mason 1994).

Hispanos and immigrant groups alike overcame cultural differences to unite as the industrial frontier introduced labor conflict in Las Animas County. Miners in the southern coal field joined the United Mine Workers of America to secure union recognition, safety regulation and enforcement, wage increases, cash payment, and control of the working environment. The conflict led to walkouts in 1903-1904 and 1913-1914 (McGovern and Guttridge 1996:42, 102; Abbott, Leonard, and McComb 1994:150-151).

More than 10,0000 coal workers walked out during the UMWA strike of 1913-1914. The strike featured evictions, unlawful detention, deportations, and harassment of strikers by mine guards and the Colorado National Guard. Led by John Lawson, Louis Tikas, and Mary Harris "Mother" Jones, strikers responded with parades and demonstrations. Strikers also contributed to the tension by intimidating strikebreakers and destroying mine property. Evicted from company housing in the mountains, the strikers erected tent colonies on the plains. The colonies served as headquarters for strike organizers. Key to their success were the wives and daughters of striking miners. Women organized demonstrations, provided leadership, and preserved community cohesion in the face of massive social dislocation (McGovern and Guttridge 1996:104-105; 124-127, 138-140, 150, 173; Abbott, Leonard, and McComb 1994:212).

The strike climaxed on April 20, 1914 when strikers and members the Colorado National Guard exchanged fire at the tent colony near Ludlow Station, north of Trinidad. Five strikers, a boy, and one militiaman died from gunshot wounds in the day-long battle. Two women and eleven

children asphyxiated when a blaze, later blamed on the militia, swept through the colony. Violence inaugurated by the Ludlow Massacre sparked the bloodiest period of civil strife in Colorado history. Over the next ten days, over two hundred mine guards, managers, strikebreakers, and soldiers were killed as strikers retaliated for Ludlow. Strikers overthrew the authorities in Trinidad and established a provisional government. Only the intervention of U. S. troops sent by Woodrow Wilson to disarm both sides restored order (McGovern and Guttridge 1996:215-231, 232-249, 267; Abbott, Leonard, and McComb 1994:153, 287, 380; Athearn 1985:154).

The UMWA won a limited victory when John D. Rockefeller replaced the closed shop with a "company union." While this proved a rather weak bargaining institution for labor, the improvement of mining safety laws and the introduction of mechanization increased in the collective bargaining strength of labor unions. The separation of tonnage from deadwork (work that did not directly produce ore) created safer workplaces for miners. Strikes led by the Industrial Workers of the World in 1927 led to violence which reprised many of the troubles of the 1910s. Social reformer Josephine Roche increased labor's influence when she inherited the Rocky Mountain Fuel Co. and invited the UMWA to organize her company. CF&I belatedly recognized the UMWA at the end of the coal boom in 1933 (McGovern and Guttridge 1996:335-336; Abbot, Leonard, and McComb 1994:287, 380; Athearn 1985:154).

The increased demand for petroleum and natural gas forced the closure of major mines beginning with the Gray's Creek mine in 1921. Tabasco followed in 1925, as did Primero and Berwind in 1927, and Forbes in 1929. Out of work miners fled the county during the dislocations of the Great Depression. Although the Second World War temporarily revived coal production, coal companies closed mines and abandoned railway lines through the 1930s and 1940s. While a few mines and a larger number of natural gas wells still operate, much of the coal region lies dormant today (Mehls and Carter 1984:89; Hanks 1996:55).

## The Sopris Coke Ovens

The Sopris coke ovens represent one of the last vestiges of intense, albeit brief, industrial activity along Purgatoire River whose heyday lasted from about 1886 until 1940 (although some mining activity continued in the area until the mid-1970s) (Figure 5). Between 1888 and 1929, there were ten coke plants operating in Las Animas County, six of them owned by the Colorado

Fuel and Iron Company (CF&I), and producing coke for the CF&I steel mill located in Pueblo, Colorado, some 80 miles north of Trinidad.

**Figure 5 –** View of remains of one of the Sopris Coke Ovens. View to the east.

In 1886 the Denver Fuel Company (later the Colorado Fuel Company) bought the Sopris mines and an adjacent 320 acres from a Trinidad businessman, Elbridge B. Sopris. The company then opened the Nos. 1 and 2 coal mines for production, on the hills flanking the south side of the Purgatoire River. In its first few years of existence, the associated mining camp was little more than a collection of miner's tents and wooden shacks concentrated "up canyon" near the mines and lower down the slope next to the Colorado & Wyoming Railroad line. In 1889 the company laid out blocks, streets, and alleys and named the town "Sopris." Realizing that the coal that was being mined was a premium grade suitable for coke production, the Denver Fuel Company built a bank of 100 coke ovens near the valley floor in 1888 and began producing over 30,000 tons of coke per year.

In the summer of 1900, 50 more ovens were constructed. These ovens were of a design known as a Hills-Lauther Stack Oven, which forced gases through flues underneath the ovens prior to their being released into the atmosphere. This greatly increased the ovens' heating capabilities. By 1902, there were a total of 222 beehive ovens and 50 stack ovens at Sopris. In an unusual arrangement, the two banks of ovens were cut by a natural drainage coming out of the

foothills, which was enhanced & modified by the local residents to carry camp wastewater and sewage to the river from a housing area northeast of the No. 1 mine. This ditch cut perpendicularly through the two rows of ovens, several hundred feet east of their western terminus.

The historic Sopris Mine and its Coke Ovens as well as several other mines and associated coke oven operations in the Purgatoire River Valley and vicinity, played a significant part in the history of Trinidad and Colorado. Colorado Fuel and Iron Co. which later became CF&I Steel and owner of the Sopris Mine facility, is recognized as one of the earliest, largest industrial powers in the nation, and had a significant influence in the development of the West. The Sopris Coke Ovens were used for coke production by CF&I for almost 30 years, from September of 1889 until September of 1918. CF&I continued mining at the Sopris Mine until 1928, and then leased the mine to Mr. John DelDosso who operated it until 1940. The Sopris Mine and its coking operation was one of several of the most significant coke facilities in the Purgatoire River Valley; the Sopris coal, in the Trinidad Field was known for its excellent coking coal; and was recognized in the industry as some of the best coke available anywhere.

In preparation for constructing Trinidad Dam and the filling of the reservoir, the communities of Sopris Plaza, St. Thomas, Upper St. Thomas, Jerryville, Piedmont, Viola, and Main Sopris were purchased and removed by the Corps in the early 1970s. Today, the remains of the ovens (Figure 6) are located along the south shore of the Corps of Engineers' Trinidad Dam and Lake Project. The location is within the area that is leased to the Colorado Division of Parks and Recreation. Virtually all remnants of the community of Sopris and its mining activity were erased from the landscape by the early 1970s as the dam was completed. A planned camping ground located east of the coke ovens may impact the resource over time. Consideration should be provided for the potential effects of recreation-related activities. This situation also may provide an opportunity to create and education environment by sharing information with the visiting public about the importance of historic preservation, archaeology, etc., with a trail system, and planned wayside exhibits between the camp ground and the coke oven site. This would allow the site visitor to both participate and share with others, in the spirit of historic preservation.

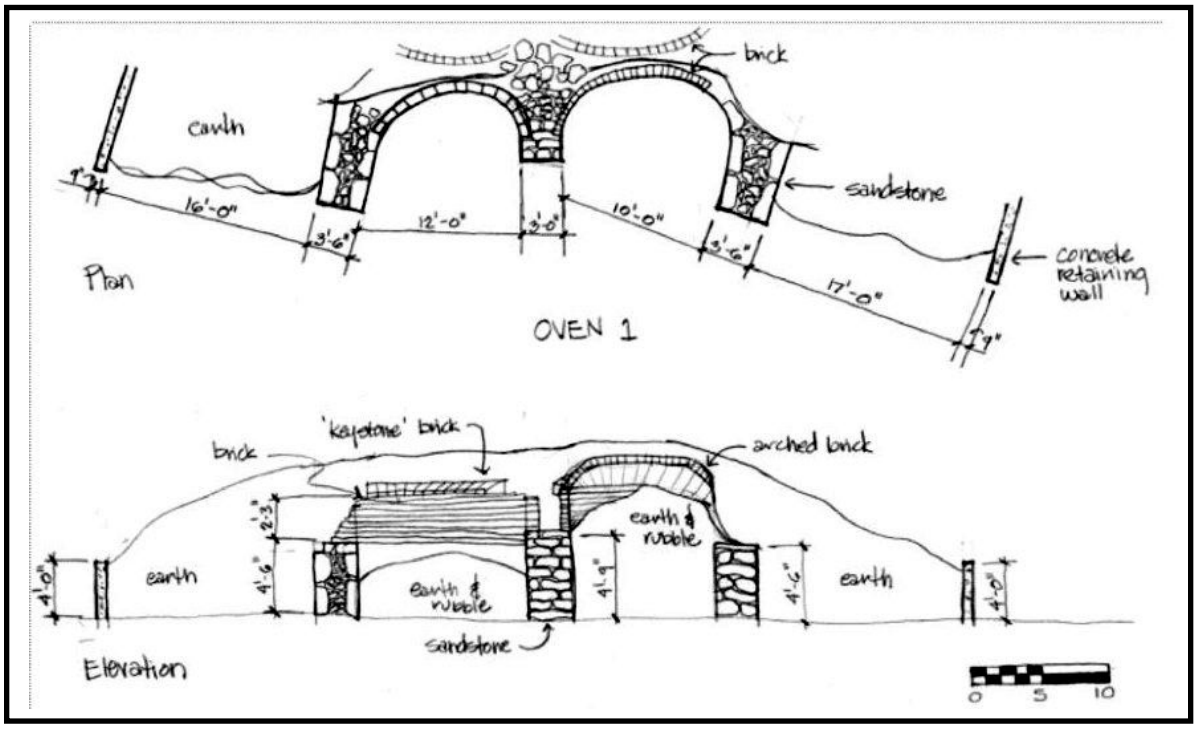



**Figure 6** - Sketch of Sopris Coke Oven 1 remains. Adapted from Dodge (2009).

## Las Animas County Since the 1920s

After the First World War, life in Colorado slowed down considerably. Economic stagnation and the lure of urban jobs drew many away from southeast Colorado. Las Animas County's population peaked in 1920 at 38,975. Much of the wartime population boom came from Hispanic and Mexican migrant workers who, joined by Hispanos of Las Animas County, turned to seasonal jobs in the sugar beet fields to supplement family income. Concentrated along the South Platte and Arkansas Rivers during thinning and harvest season, many of the Spanish-speaking beet workers returned to Las Animas for community support during the winter (Schultze 1976:1920-1923; Deutsch 1987:128).

Following the First World War and labor troubles in 1919-1920, Coloradans took a conservative turn. Organizations such as the Ku Klux Klan transformed American xenophobia into a powerful social movement. By directing "100 Percent Americanism" rhetoric against Catholics, Jews, African Americans, and immigrants, the Klan temporarily prospered in Colorado and throughout the country. Klan recruiters achieved moderate success in industrial towns such as Cokedale, Trinidad, and Aguilar. Historian Louise LeBarre Hanks claims the Klan burned crosses at

Simpson's Rest and inducted 700 Trinidad residents in a single night. Nonetheless, the opposition of Hispanic and Italian communities limited the Klan's effectiveness. The honeycomb of canyons in southeast Colorado also became a center of resistance to national Prohibition. Bootleggers, often with the complicity of local officials, kept spirits flowing from hidden stills (Hanks 1996:64; Athearn 185:157).

The economic downturn in the 1920s and 1930s continued to undermine traditional culture as it severely depressed Las Animas County's industrial production. Coal companies laid off thousands of workers or struggled to adopt innovative strategies designed to ride out the slump in the coal market. The Colorado Fuel and Iron Company, long the enemy of traditional Hispanic culture, attempted to reintroduce its version of traditional folk crafts by retraining many laid-off workers as textile weavers. Residents continued to rely on seasonal wage labor. Other residents reverted to pre-existing farming and pastoral occupations, growing pinto beans and other subsistence crops (Gardner 1998: 137-138; Leonard 1993:50-52).

Adverse environmental conditions in the 1930s made subsistence farming difficult and commercial farming next to impossible. Soil exhaustion and coal mining pollution decreased productivity in the upper Purgatoire Valley by 83% from the 1880s. The cash and credit crunch forced many Hispanos to sell out. In this way, land fell into the hands of a relatively few social and economic patrons. Drought and dust storms hampered farmers and devastated dryland wheat farms in southeast Colorado as they did across the western plains. Those most adversely affected by the economic downturn and the adverse climate turned to relief organizations such as the Red Cross. Still others applied for federal relief (Leonard 1993:50-53).

During the Great Depression, federal relief agencies such as the Federal Emergency Relief Administration (FERA), the Civil Works Administration, and the Civilian Conservation Corps (CCC) provided aid and employment for thousands. During the New Deal, Trinidad received one of the highest federal work allocations in Colorado. The Works Projects Administration (WPA) employed 1,253 local men and 155 women in 1937. The high federal allocation attracted many area residents to Trinidad. While Las Animas County's population declined from 38,975 to 32,369 between 1920 and 1940, Trinidad's population increased from 10,906 to a peak of 13,223. Unemployed workers from the Trinidad area set the stage for destination tourism by damming and stocking the Monument Lake fish refuge. Local WPA workers adorned

the lake with a Pueblo-revival style lodge and tourist cabins. At nearby Stonewall, the CCC constructed a training camp to house workers learning forestry, firefighting, conservation, and trail building skills (Schulze 1976:1940-1947; Leonard 1993:74, 98-99; Hanks 1996:68).

The WPA and other New Deal work programs offered mixed results for local Hispanos. Agencies such as FERA invited criticism from state authorities for providing relief checks to migrant laborers and their families. Hispanos, who made up 40% of Colorado's CCC by 1938, were often segregated from other units. The WPA was accused of dropping Hispanic and Mexican employees from their rolls during the sugar beet harvest season. Complaints from Hispanic workers, an attempt to unionize Colorado's beet labor, and a general anti-Hispanic hysteria brought about by the straitened conditions of the depression led Governor Edwin C. "Big Ed" Johnson to close Colorado's southern border for six weeks in 1936. Units from the Colorado National Guard set up "Camp Johnson," and from this Raton Pass encampment, the guard turned back northbound travelers based on the color of their skin (Leonard 1993:61, 74, 70-80).

### The Counter-Culture Movement of the 1960s

The return of prosperity did not reverse the dual trends of population decline and urbanization. Forced out by the closure of the last working coal mines or drawn away by military service and better-paying urban jobs during and after the Second World War, local residents continued to flee. Others concentrated in Trinidad, which increased in proportional population compared to rural Las Animas County even as overall numbers dwindled. In 1960, Trinidad residents outnumbered rural residents for the first time in census history. By 1970, Trinidad contained 63% of the county's residents even though its population had dropped to less than 10,000 (Schulze 1976:1960-1910, 1970-1979).

By the 1960s, Trinidad, the leading city in Las Animas County, "sort of went dormant," in the words of one historian (Secrest 1998:14-21). But southeast Colorado had room for at least one innovative communal project. In 1965, artists affiliated with the hippie counterculture quietly formed the Drop City art commune northeast of Trinidad near the defunct railroad town of El Moro. Inspired by the work of architect Buckminster Fuller, colonists built eleven geodesic and quasi-geodesic domes out of materials scrounged from garbage dumps and defunct lumber mills, laid out on a triangular grid and decorated with junkyard sculptures. By 1966, Droppers

who adopted pseudonyms such as "Peter Rabbit" (Peter Douthit), "Miss Oleo Margerine" (Peggy Kagel), and "Larry Lard" (Richard Kallweit), supplemented by an additional transient population, attracted attention for their creative architecture, countercultural philosophy, and well-publicized run-ins with county, state, and federal welfare authorities. Owned by residents and dedicated to an artistic vision, the commune survived eight years--longer than most similar settlements. By 1970, all of the original inhabitants had moved on and Drop City went into decline. Abandoned in 1973 and sold soon after, nothing remains to mark one of Colorado's most original communities (Secrest 1998:14-21).

Drop City belongs to the context of the national 1960s-1970s counterculture movement--a movement of social and political protest accelerated, in the words of University of Maryland professor James A. Henretta, by "antiwar sentiment" and "the erosion of confidence in established American institutions and values" among young college students (1999:844-848). In their rejection of mainstream culture as well as modern urban and suburban values, the founders of Drop City drew on the tradition of the 1840s era utopian movement which created Brook Farm, New Harmony, and Onieda, New York, and Nauvoo, Illinois. Members of the counterculture founded similar contemporary settlements in Santa Cruz, San Francisco, and rural Vermont. Drop City's affiliation with influential communes in Boulder and Nederland and anti-war demonstrations at Colorado universities underscores Colorado's role in the turbulent period of social protest which defined the Vietnam War era. Drop City can provide clues to the origins of the counterculture movement, its organization, its evolution, the reasons for its ultimate decline, and its continuing impact on contemporary national culture, including the New Left movement which spawned increasing activism among American Indians, Chicanos, and women. Drop City also represents contemporary artistic and architectural accomplishments in the HCLA. It was foremost a planned artists' community. Its designers intended to create a work of art that people could live in. The award-winning geodesic domes, praised by Buckminster Fuller as "poetically economic architecture" and by Virginia and Lee McAlester for their "structural simplicity," were the best and perhaps the only example of modern Contemporary Folk architecture in Las Animas County (Henretta, et al. 1999:844-848; Secrest 1998:19; McAlester and McAlester 1994:497).

Describing Drop City, Colorado Heritage editor Clark Secrest observed that, "Trinidad, Colorado, is not the sort of place near which one would expect to find geodesic domes" (1998:14-21).

The juxtaposition of modern architecture on a traditional western community illustrates Drop City's contribution to changing economic and social realities in southeast Colorado. In terms of local social impact, countercultural experiments like Drop City revived pioneer lifeways and communal cooperation while, in the words of local historian Diane Mason, "reawakening mainstream interest in more primitive ways such as folk art, natural health remedies, organic gardening, natural fibers, etc." (Secrest 1998:19). Graduates of Drop City moved to surrounding communities where they instituted reforms to the social services of county governments. Drop City also reflected the darker side of drug use and abuse which marred the counterculture movement. While no more or less important to southeast Colorado than older communities like Placita de Los Madrides, Cokedale, or El Moro, Drop City represents the contemporary theme that "the economic and social changes that followed World War II seemed to make the American West a less distinctive region within the United States" (Secrest 1998:19). During the twentieth century, highway construction, an increased federal presence, corporate capitalism, national mass media, and expanded communications systems have eroded the uniqueness of local cultures and economics (White 1994:574).

In part, the residents of Drop City represented the pioneers of an inescapable economic and social transition that now threatens to engulf the traditional rural economy, society, and scenery of southeastern Colorado and Las Animas County. Just how deeply this transition altered the modern autonomous regional Hispanic community is the subject of an interpretive debate. During the 1960s and 1970s, Las Animas County residents made community preservation a major issue. At the beginning of the 1960s, residents commemorated the past by establishing the Trinidad Historical Society and Bloom/Baca House Museum. Trinidad's downtown commercial district, rechristened "Corazon de Trinidad," was placed on the National Register of Historic Places in 1973. Preservationists unsuccessfully opposed the creation of Trinidad Lake, west of town. The reservoir, completed in 1977, inundated the coal towns of Sopris, St. Thomas, Piedmont, and Jerryville, as well as Carpios, La Veses, and Los Suasos plazas (Hanks 1996:99, 111).

## METHODOLOGY

Michelle Slaughter conducted a files search prior to the fieldwork, and conducted the subsequent Class III intensive pedestrian survey of the project area with Richard Carrillo of

Cuartelejo. The survey area was 78 acres. The archaeologists spaced approximately 15 meters apart, surveyed the majority of the area in east-west transects, and a small portion of the northeastern survey area (east of the Park's access road) was surveyed using north-south transects. The survey methodology was approved by Park staff prior to the initiating the project survey.

All sites considered in this study were lithic scatters of flaked stone and/or ground stone. These sites reflect certain and determinable activities; isolated finds lack potential for discerning a definite activity or lacked sign of habitation, instead being the locale of a one-time, isolated activity. One new Prehistoric site was recorded on this project (5LA.13146). In this case, a fence corner post, set in concrete and part of a modern cistern enclosure, will far outlast any site datum we would have placed at the site and the corner post was applied as the site datum. This was the only datum set on a prehistoric site on this project and it did not seem reasonable to introduce additional materials for a datum.

Sites were mapped from datum with a pocket transit and tripod and a GPS was used to check proximity. Pin flags were used as probing devices to help determine depositional potential. Diagnostic artifacts were photographed and/or sketched and a reasonable sample was recorded of lithic assemblages or all lithics basically recorded if the site consisted of less than 200 artifacts. Collected artifacts will be curated at the Louden-Henritze Archaeology Museum, Trinidad State Junior College, Trinidad, CO. The Louden-Henritze Archaeology Museum maintains the collections of the USACE. The future intent is that arrangements will be made between the USACE and Trinidad Lake State Park, Colorado Parks and Wildlife, to display the artifacts at the Park headquarters/Visitors' Center.

The locations of sites were recorded using a Trimble Juno 3B global positioning system (GPS) which is accurate to <3m after post-processing, and all GPS data was differentially corrected for increased accuracy. UTM coordinates, the form of measurement used to indicate site locations, were based on the 1983 (Conus) North American Datum.

All resources were documented using OAHP forms. Color digital photographs were taken of each site and of notable artifacts. Three digital cameras were used: a Fuji Film Fine Pix S2940 14MP, a Panasonic Lumix FZ18:F8 1/150, and a Canon PowerShot SD850 IS, all set to high photo resolution.

## SITE EVALUATION CRITERIA

Sites investigated during this inventory were evaluated for eligibility to the NRHP. Those eligibility significance criteria are codified in the Code of Federal Regulations at 36 CFR 60.4 and are specified below:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

**a)** that are associated with events that have made a significant contribution to the broad patterns of our history; or

**b)** that are associated with the lives of persons significant in the past; or

**c)** that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possess high artistic value, or that represent a significant or distinguishable entity whose components may lack individual distinction; or

**d)** that have yielded, or are likely to yield, information important in prehistory or history.

Ordinarily, cemeteries, birthplaces, or graves of historical figures; property owned by religious institutions or used for religious purposes; structures that have been removed from their original location; reconstructed historic buildings; properties that are primarily commemorative in nature; and properties that have achieved significance within the last 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria, or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b) a building or structure removed from its original location but which is significant primarily for its architecture, or which is the surviving structure most importantly associated with an historic person or event; or

c) a birthplace or grave of an historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life; or

d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from

association with historic events; or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan and when no building or structure with the same association has survived; or

f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or

g) a property achieving significance within the past 50 years if it is of exceptional importance.

Cultural resources were evaluated based on the criteria listed above. Eligible sites are those that display one or more of the criterion for eligibility. Sites evaluated as needing data are those sites that may conform to the eligibility criteria, but require further work to determine NRHP status. In most cases, these sites are prehistoric or historic sites with suspected buried materials or historic sites where additional research is necessary to determine historical importance. Sites that are evaluated as not eligible do not meet any of the eligibility criteria and/or have lost all physical integrity.

## RESULTS

In addition to the two previously recorded prehistoric sites (5LA.1526 and 5LA.8565), which were reevaluated, a total of five new cultural resources (four IFs: 5LA.13142, 5LA.13143, 5LA.13144, 5LA.13145, and one site 5LA.13146) were identified and documented during the pedestrian survey (Table 1). Three of the newly recorded resources were prehistoric (IFs 5LA.13142, 5LA. 13145, and site 5LA.13146) and two were historic (IFs 5LA.13143 and 5LA13144). One isolate of note was a Late Prehistoric preform, or unfinished point (5LA.13145). Diagnostic artifacts were collected (a large atlatl point and a small obsidian projectile point). No prehistoric or historic features were found during this project. A description of the sites and IFs follow Table 1. The resource forms are included as a confidential appendix to this report (Appendix A).

The Trinidad Lake State Park planned fuels reduction program has the potential to impact archaeological sites that were located either as previously recorded or new sites within the 78 acre surveyed location. The recommendations utilized for the sites located or re-located address the recommendations outlined in the TLSP's 2006 Fuels Management Program (Carpios Ridge Project) (Colorado Forest Management 2006:1-12). Two of the sites (5LA.1526 and 5LA.8565)

are located within the North Treatment Block. One of the sites is located in the South Treatment Block (5LA.13146). The recommendations concerning these sites are listed below.

**Table 1. Summary of inventory results.**

| Smithsonian Number | Avalon Temporary Site / IF Number | Historic Site | Historic IF | Pre-historic Site | Pre-historic IF | Site / IF type | NRHP Evaluation | Recommen-dation |
|---|---|---|---|---|---|---|---|---|
| 5LA.1526 (w/Paleo point) | N/A | | | X | | Previously recorded lithic scatter | Field not eligible in 1991. Needs data. | Needs Data |
| 5LA.8565 (Potential Archaic) | N/A | | | X | | Previously recorded lithic scatter | Field not eligible in 1999. Needs data. | Needs Data |
| 5LA.13146 (Potential Archaic) | 12-TL-03 | | | X | | Newly recorded lithic scatter | Needs data. | Needs Data |
| 5LA.13142 | 12-TL-IF-01 | | | | X | Prehistoric stone chopper & flake | Not eligible | No further work |
| 5LA.13143 | 12-TL-IF-02 | | X | | | Historic glass scatter | Not eligible | No further work |
| 5LA.13144 | 12-TL-IF-03 | | X | | | Historic glass scatter | Not eligible | No further work |
| 5LA.13145 | 12-TL-IF-04 | | | | X | Obsidian projectile point | Not eligible | No further work |

## Site 5LA.1526

Since the previous recording of site 5LA.1526 in 1991, surface visibility has increased and is likely due to erosional processes initiated by power pole construction on the ridge immediately above this site. This site enlargement is not as dramatic as that of site 5LA.8565, although it is over four times larger than the 1991 recording. Site 5LA.1526 is located along a prominent ridge and point, although forest obscures much of the exposure from view. The site vegetation consists of piñon, juniper, and Gamble oak, with sparse associated grasses. Activities at the site likely included, but are not limited to, plant food procurement and processing, lithic raw material procurement and processing, short term habitation, and other domestic activities, and one diagnostic artifact was found: what appears to be a Late Archaic point recorded by Dore (1993:57;A-41) was collected in 1977 during a survey, and a PaleoIndian artifact was collected on this survey (Figure 7).

Though no doubt PaleoIndian, the point we recovered is a bit diagnostically difficult because it is unfinished. The base is sharp and lacks grinding after formal shaping that helps stabilize attachment to a shaft so the shaft does not split during impact, thus limiting penetration.

However, the broad faced percussion based point is suggestive of some points in the Alberta/Cody typologies and likely dates a component of the site to about 9,000 BP. More specifically, the point probably best fits the Alberta typology and is not like an Eden point as that reported by Dore (1993). Different point types in the Alberta/Cody Cultural Complex occur separate and together in sites (i.e. Eden, Scottsbluff, Cody) and the relationships between these peoples and their technologies is not well understood (see Frison 1991, Frison and Todd 1987).

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Site 5LA.1526 is recommended as needing data before an NRHP eligibility determination can be made. Pin flag probing suggests limited deposition at this location, but foraging activities and the periods represented by the diagnostic artifacts are little known in this area. Further testing to determine depth, content, and depositional integrity of cultural remains is recommended in the nature of a series of test units across the site area (1:100). The duff surrounding the groups of trees and patches of Gambles oak is usually very dry and extremely flammable. A fuel buffer of 50 meters is recommended with mitigation of combustible materials restricted to the other side of the ridge to the north of the site to prevent erosional episodes. If significant archaeological artifacts or features are observed within the site during fuels mitigation, work should cease in the area, and USACE archaeologists should be contacted immediately in order to determine the proper disposition of the find. In case of exposed human remains, the area should be secured and the Las Animas Sheriff's Department should be contacted, followed by USACE archaeologists.


**Figure 7 –** The PaleoIndian, the point (left) found at 5LA.1526. The obsidian Late Prehistoric preform or unfinished point on the right is from IF 5LA.13145

## Site 5LA.8565

Site 5LA.8565, the Lost and Found Site, is located just below a rock outcrop on the top of the ridge and the site runs parallel with this ridge. The site vegetation consists of piñon, juniper, and Gamble oak, with sparse associated grasses. The assemblage at the site suggests a multi-activity site with multiple occupations (based on ground stone use-wear). Activities likely included, but are not limited to: plant food procurement and processing, lithic raw material procurement and processing, short term habitation, and other domestic activities. No diagnostic materials such as projectile points or ceramics were recovered, but activities again logically reflect primarily Archaic and early Late Prehistoric activities.

Site 5LA.8565 was first recorded in 1999 by Cuartelejo HP Associates for a proposed power line project which has since been constructed. The complete re-recording of this site is due to erosion probably initiated by that construction. Even minor clearing seemingly first removes the piñon and juniper chaff and other debris, allowing water and wind erosion of underlying delicate soils. The artifact context in these sites, particularly 5LA.1526 with diagnostic materials, suggests that geomorphically this may have happened a series of times during the occupation periods discussed here, leaving little deposition on these ridges, and no seperation between

archaeological components. As a result of these activities, the visible surface area of the site increased 250 fold since the 1999 recording! The site will not likely be lost again unless it completely washes down the hill.

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Site 5LA.8565 is recommended as needing data before an NRHP eligibility determination can be made. Pin flag probing suggests limited deposition at this location, but foraging activities and the periods represented by diagnostic artifacts at nearby sites (5LA.1526) are little known in this area. Further testing to determine depth, content, and depositional integrity of cultural remains is recommended in the nature of a series of test units across the site area (1:100). The duff surrounding the groups of trees and patches of Gambles oak is usually very dry and extremely flammable. A fuel buffer of 50 meters is recommended with mitigation of combustible materials restricted to the other side of the ridge to the north of the site to prevent erosional episodes. If significant archaeological artifacts or features are observed within the site during fuels mitigation, work should cease in the area, and USACE archaeologists should be contacted immediately in order to determine the proper disposition of the find. In case of exposed human remains, the area should be secured and the Las Animas Sheriff's Department should be contacted, followed by USACE archaeologists.

## Site 5LA.13146

Site 5LA13146 is a small lithic scatter consisting of three utilized flakes and 42 pieces of debitage. The source for the raw material is obviously local but the debitage would suggest it is quarried off-site as tertiary flakes disproportionally outnumber decertification flakes for most quarry situations. Where natural slabs of shale (discussion to follow) with cortex can be observed on-site and surrounding the site, it appears knapping activities here are tool production and refinement from pieces fashioned into useable cores at other locations. This seems to be the case for the three sites we recorded on this ridge. The chopper tools, also likely cores, potentially reflect wood collecting activities possibly for a plethora of uses (weapons, tent poles, firewood, etc.). The utilized flake also probably reflects daily hunting/gathering activities and the assemblage is typical of Archaic and Late Prehistoric sites. Because occupations of semi-sedentary folks during Middle Ceramic times (Sopris) would have limited available resources, if occupations at sites like 5LA13146 are in part Late Prehistoric, they are likely either non-agricultural activities of Sopris folks or represent hunting/gathering

activities during the early portion of the Late Prehistoric, or both.

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Site 5LA.13146 is recommended as needing data before an NRHP eligibility determination can be made. Pin flag probing suggests limited deposition at this location, but foraging activities and the periods represented by diagnostic artifacts at nearby sites (5LA.1526) are little known in this area. Further testing to determine depth, content, and depositional integrity of cultural remains is recommended in the nature of a series of test units across the site area (1:100). The duff surrounding the groups of trees and patches of Gambles oak is usually very dry and extremely flammable. A fuel buffer of 50 meters is recommended. If significant archaeological artifacts or features are observed within the site during fuels mitigation, work should cease in the area, and USACE archaeologists should be contacted immediately in order to determine the proper disposition of the find. In case of exposed human remains, the area should be secured and the Las Animas Sheriff's Department should be contacted, followed by USACE archaeologists.

**Isolated find 5LA.13142**

Isolated find 5LA.13142 is a chopper and a flake and both are made of local shales. There is limited deposition and these artifacts appear to be isolated from other activities. Vegetation in the area around the IF consists of piñon/juniper breaks with associated grasses and Gamble oak. The Purgatoire River is the nearest permanent water source located about 700 meters to the southeast.

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Isolated find 5LA.13142 is recommended as not eligible to the NRHP. There is limited deposition and these artifacts appear to be isolated from other activities. Fuels Reduction tasks should have little impact on the IF. No further work is recommended.

**Isolated find 5LA.13143**

Isolated find 5LA.13143 is comprised of approximately 24 glass fragments from one aqua bottle. The IF is located along a NE/SW slope (20-30 degrees) overlaying an unnamed drainage, in an open area with heavy vegetation surrounding the IF on the north and west, opening to the southeast. The vegetation includes piñon, prickly pear, and cholla. The scatter

is within a 4m square area.

Of the 24 fragments sampled, six have been modified, possibly by sheepherders (Figure 8). They have been modified either through use or intentionally. It appears that a selection process was followed based on the size of the utilized glass. Cultural affiliation is unknown based on the very

**Table 2 : Dimensions of worked glass from IF 5LA.13143**

| Artifact No. | Length | Width | Thickness | Diameter |
|---|---|---|---|---|
| 1 | 3.6 cm | 3 cm | .8 cm | N/A |
| 2 | 6.3 cm | 3.9 cm | .9 cm | N/A |
| 3 | 5.0 cm | 3 cm | .5 cm | N/A |
| 4 | 4.5 cm | 1.9 cm | .5 cm | N/A |
| 5 | 4.3 cm | 2.8 cm | .5 cm | N/A |
| 6 | 4.1 cm | 1.8 cm | .5 cm | N/A |

**Figure 8 –** Three fragments of modified glass found at IF 5LA.13143.

limited cultural remains, but may be Native American or Hispanic. Modified glass is common on sheep herder associated sites throughout southeastern Colorado (Carrillo 2007:177-256).

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Isolated 5LA.13143 is recommended as not eligible to the NRHP. There were no signs of habitation at 5LA.13143, and it appears that this was the location of a one-time, isolated activity. There is nothing more that can be learned from the limited cultural remains, and Fuels Reduction tasks should have little impact on the IF since the area is relatively clear of timber. No further work is recommended.

## Isolated find 5LA.13144

Isolated find 5LA.13144 consists 12 broken fragments of aqua bottle glass, all from the same bottle. As with the previous IF, there are six fragments that have been worked/modified (Figure 9) including a base with "AB" trademark from the American Bottle Company. The American Bottle Company existed from 1905-1929. Based on the characteristics of the bottle, it was manufactured at a bottling plant in Streator, IL; Newark, OH; Belleville, IL; Massillon, OH, or Wooster, OH., between

1905 and 1916 (Lockhart, et al. 2007, *www.sha.org/bottle/pdffiles/American_BLockhart.pdf*; Whitten n.d., http://www.myinsulators.com/glass-factories/bottlemarks.Html).

Isolated find 5LA.13144 is located on the south slope above an unnamed drainage, is oriented generally E/W and approximately 245 feet (75 m) to the south of similar IF, 5LA.13143, described previously. The locale of IF 5LA.13144 is protected by piñons in a relatively flat area, approximately 15 feet (5m) south of the drainage edge. Vegetation consists of piñon and prickly pear. Topography is similar to that of the north slope where IF 5LA.13143 is located.

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Isolated 5LA.13144 is recommended as not eligible to the NRHP. There were no signs of habitation at 5LA.13144, and it appears that this was the location of a one-time, isolated activity. There is nothing more that can be learned from the limited cultural remains, and Fuels Reduction tasks should have little impact on the IF. No further work is recommended.

**Table 3: Dimensions of worked glass from IF 5LA.13144**

| Artifact No. | Length | Width | Thickness | Diameter |
|---|---|---|---|---|
| 1 (base fragment) | N/A | N/A | .5 cm | 6.2 cm (original dia. was 7.5 cm) |
| 2 | 4.7 cm | 5 cm | 6 cm | N/A |
| 3 | 4.7 cm | 3 cm | .4 cm | N/A |
| 4 | .6 cm | 2.2 cm | .3 cm | N/A |
| 5 | 3.0 cm | 2.1 cm | .5 cm | N/A |
| 6 | 3.3 cm | 1.4 cm | .5 cm | N/A |

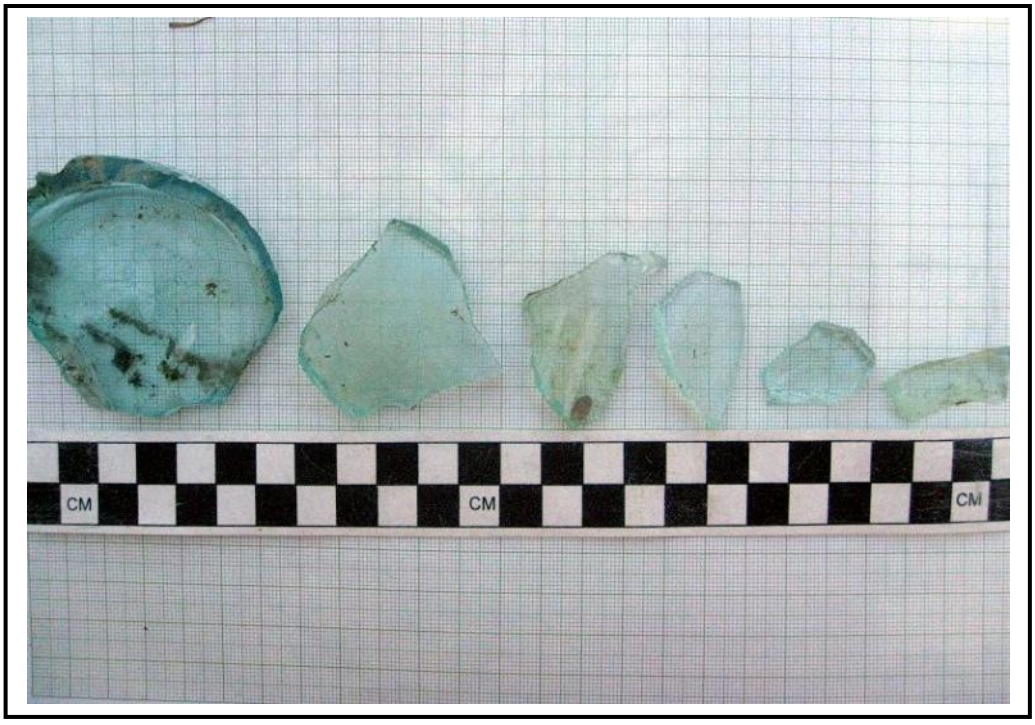



**Figure 9 –** The modified glass from at IF 5LA.13144.

**Isolated find 5LA.13145**

This is a small obsidian Late Prehistoric preform or unfinished point (Figure 10). The point measures 2 x 1.5 x 5cm, and is un-notched with no basal grinding or hafting. No other artifacts were observed and proximity to the park access road might suggest displacement of the artifact. The IF is located in piñon/juniper breaks with associated grasses and Gamble oak. Vegetation is relatively heavy. The Purgatoire River is the nearest permanent water source located about 700 meters to the southeast.

**Fuels Reduction Effects, NRHP Evaluation, and Management Recommendations:** Isolated find 5LA.13145 is recommended as not eligible to the NRHP. The current recording has exhausted the research potential, and Fuels Reduction tasks should have little impact on the IF. No further work is recommended.


**Figure 10 –** The obsidian Late Prehistoric preform or unfinished point from IF 5LA.13145.

## CONCLUSION AND RECOMMENDATIONS

Perhaps the most pertinent information the prehistoric portion of this small project may provide is documentation of the local lithic raw materials and how this information fits into the broader context of southeast Colorado archaeology. The local raw materials have been referred to as basalt, argillite, and shale (also, appropriately, silicified shale). Project archaeologist, Roche Lindsey, states, "in my years of association with the late Stan Ahler, certainly one of the most versed in Plains and Rocky Mountain region material types, I asked him the difference between the argillite of the southeastern Colorado Hog Back and the baked shales of the Powder River Basin, Wyoming. At least archaeologically, his explanation was formation process: the Powder River Basin shales are baked and silicified by prehistoric coal seam fires (these are archaeologically traditionally inappropriately referred to as porcelainite, but lack chert fragments that define porcelainite in the "clay" matrix). Alternatively, the argillites of southeast Colorado are heated and silicified by volcanic heat; not in direct lava flow, but the shales are in close

proximity to allow extreme heat."

Obviously the local shales are likely to have been processed into useable lithic raw materials by coal fired heating rather than volcanic heating. It has long been believed that baked shales in southeast Colorado were from the Hogback, but materials found in the Park suggest the baked shales in the Upper Purgatoire drainage are far more prolific and widespread than those of the Hog Back.

The current study has demonstrated that the occurrence of PaleoIndian occupations was not an isolated incident. In this context it should be pointed out that part of a mammoth tusk was recovered in the park during 1972 investigations (Ireland 1974:57), and is a good indication that Late Pleistocene terraces may be intact and buried PaleoIndian components a possibility.

The prehistoric sites on the ridge lack ceramics and aside from the documented PaleoIndian occupations, the presence of ground stone and the general broad based subsistence appearance of site artifact assemblages support Dore's (1993:57) mention of Archaic occupations to the north. Provenience of the Sopris homesteads and hamlets attest that some activities in this project area were these more sedentary corn supplementing hunter/gatherers, but these camps, centered for access to a plethora of ecological zones or micro-ecological zones, likely belong to more broad subsistence hunter/gatherers of the Archaic.

The research potential and scientific value of this area is tremendous. With contrast comes information and here, within a few hundred meters, lie sites from the highly mobile, specialized big game hunters of the PaleoIndian times, the broad subsistence, more gathering oriented folks of the High Plains Archaic, to the more sedentary groups who started to depend more on domestics of the Late Prehistoric. These differences likely include differing trade and travel networks, differing social structures and traditions, and contrasting world views and religion to mention a few.

The prehistoric sites recorded on this project need data to determine NRHP eligibility. At sites 5LA1526 and 5LA.8565, a fuel buffer of 50 meters is recommended with mitigation of combustible materials restricted to the other side of the ridge to the north of the site to prevent erosional episodes. For site 5LA.13146, a fuel buffer of 50 meters is recommended. In the future, if significant archaeological artifacts or features are observed within the sites, work

should cease in the area, and USACE archaeologists should be contacted immediately in order to determine the proper disposition of the find. In case of exposed human remains, the area should be secured and the Las Animus County Sherriff's Department should be contacted, followed by the USACE archaeologists.

Finally, and probably of most urgent concern for Park officials of the data collected in this portion of the project, is the apparent rate of erosion initiated by ground breaking activities within the park (in this case, the power line). The area of site visibility at sites 5LA.1526 and 5LA.8565, in the few years since initial recording, has dramatically increased suggesting an extreme rate of erosion. This not only threatens the archaeology of the area, but many of the natural resources.

Concerning the historical archaeology at TLSP, although only two historic isolated finds (IFs) were recorded in the course of undertaking the Class III survey, the information provided valuable confirmation to the archaeological resources that have been found throughout Las Animas County and other parts of southeastern Colorado. The historical record denotes that utilization of the project area over several centuries and there is a high probability that corresponding and contemporary archaeological resources may be located within the boundaries of Trinidad Lake State Park. Secondly, the Sopris Coke Ovens, located on the south shore of Trinidad Lake, can be an impetus to provide potential for an educational interpretive program that can provide visitors with a shared sense of the value of historic preservation.

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# APPENDIX A - Resource Forms

(Under separate cover)

**FOR OFFICIAL USE ONLY: Public Disclosure of Archaeological site locations prohibited (16USC47Ohh [36CFR296.18])**

# APPENDIX B
# Interpretive materials for the public

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

March 11, 2013

Planning, Project and Program Management Division
Planning Branch
Environmental Resources Section

Honorable Leroy Spang
President, Northern Cheyenne Tribe
Post Office Box 128
Lame Deer, Montana 59043

Dear President Spang:

The U.S. Army Corps of Engineers, Albuquerque District, (Corps) would like to inform you of actions proposed by Colorado Parks and Wildlife (CPW) to thin vegetation near the Carpios Ridge Campground to reduce fire hazard. The undertaking is located on Corps fee land, which CPW leases from the Corps and manages as Trinidad Lake State Park. The Corps' Trinidad Lake Project office is located in Las Animas County, along Colorado State Highway 12, approximately three miles west of the city of Trinidad.

CPW is planning to conduct hazardous fuel reduction activities consisting of forest thinning using a combination of mastication and hand-thinning techniques within three blocks located directly to the north and west of the Carpios Ridge Campground (Enclosure 1). The project area is located on the Trinidad West, CO (37104-B5) USGS 7.5' topographic map (1951, photorevised 1979), Township 33S, Range 64W, with the project covering portions of the NW quarter of Section 28 and the NE quarter of Section 29. The purpose of the proposed project is to reduce the risk of catastrophic wildfire in Trinidad Lake State Park. The proposed project area is located directly adjacent to the Carpios Ridge Campground, Colorado State Highway 12 and the CPW office complex and is at high risk for wildfire ignition due to the high level of human use in the area. Given that visitation is concentrated in this area, there is a significant risk to human safety and loss of property from wildfire.

The pinyon and juniper woodland in the project area is currently choked with trees, and canopy spacing is insufficient to stop the spread of crown fires. In addition, the close spacing of the trees inhibits understory growth, and erosion from surface water drainage is a problem. Fuel reduction activities proposed for the project include using a masticator to remove and masticate trees with a goal of increasing canopy spacing to significantly reduce the risk of crown fires. Mastication will allow CPW personnel to process cut trees on site rather than having to haul them away to another location or pile them within the project area, and will have the ancillary benefit of placing woody material on the ground surface to inhibit erosion. Other techniques that

may be utilized will include the use of chainsaws by hand crews to cut vegetation in areas that the masticator cannot access or in sensitive areas such as within archaeological sites. Hand crews will use a "lop and scatter" technique where trees are trimmed into smaller pieces by chainsaw and scattered loosely throughout an area to avoid creating piles that could act as ladder fuels. This scattered vegetation can also be placed strategically to help decrease erosion in the project area.

Fuel reduction activities are proposed in three blocks identified by CPW on Carpios Ridge (Enclosure 2). These blocks will be demarcated, where possible, using existing roads and fence lines, and using colored flagging tape in those areas without a physical barrier. Access to the project area will be on existing roads, except where the masticator enters the thinning area. Staging for the project will occur within existing roads and parking areas, or within the project area boundaries.

In anticipation of the fuel reduction project, CPW contracted with Cuartelejo HP Associates, Inc. (Cuartelejo) to complete a 100-percent cultural resources inventory of the project area. Cuartelejo identified one new prehistoric archaeological site (5LA13146), rerecorded two previously recorded prehistoric sites (5LA1526 and 5LA8565) and recorded 4 isolated occurrences. The results of the survey are documented in a report by Richard Carrillo, Roche L. Lindsey and Michelle A. Slaughter titled, "*Final Cultural Resources Report for the Fuels Management Class III Survey, Trinidad Lake State Park, Las Animas County, Colorado.*"

All three prehistoric sites located in the project area are lithic scatters containing chipped stone debitage and tools; the majority of which were manufactured of locally-available silicified shales. Site 5LA1526 contains diagnostic projectile points dating the site to the Paleoindian and Archaic periods. According to Cuartelejo, site 5LA8565 dates to the Archaic or Late Prehistoric based on the general characteristics of the artifact assemblage. Site 5LA13146 contained no diagnostic artifacts, and thus, cannot be assigned to any particular time period. The Corps determines that sites 5LA1526 and 5LA8565 are eligible for listing in the National Register of Historic Places (NRHP). The Corps considers the NRHP eligibility of site 5LA13146 undetermined at this time until further recording can be done at the site with a goal of determining dates for the occupation of the site. 5LA13146 will be treated as an eligible historic property for the purposes of project planning. Isolated occurrences in the project area consist of a shale chopper and flake, two small scatters of aqua glass and a single, likely late prehistoric, obsidian projectile point.

The potential exists for project activities to have an adverse effect on three historic properties in the project area. Conversely, fuel reduction in and around sites in the project area can have beneficial impacts by reducing fire intensity within sites and providing material to help stabilize erosion within the project area. In order to avoid adverse effects to sites 5LA1526, 5LA8565 and 5LA 13146, the Corps makes several recommendations here for site treatment:

- Sites 5LA1526, 5LA8565 and 5LA13146 will be flagged using colored flagging tape and avoided by all thinning using the heavy machinery. The flagged boundary will include a

20-meter buffer to insure that each site is fully avoided by ground disturbance from heavy machinery.

- Hand thinning using chainsaws will be allowed within 5LA1526, 5LA8565 and 5LA 13146 where necessary. Hand crews will lop and scatter thinned trees within sites to avoid creating ladder fuels and fuel "jackpots" that could adversely affect historic properties in the event of a wildfire. Where possible, hand crews will place vegetation in areas that will help to counter active erosion within sites. Hand crews will be instructed not to drag cut vegetation within sites to avoid surface impacts to artifact scatters.
- CPW staff will be on site to direct project activities and to periodically monitor the project area to insure compliance with these recommendations.

Provided that these recommendations are followed, the Corps determines that the project will have **no adverse effect to sites 5LA1526, 5LA8565 and 5LA13146**.

The Corps is seeking input for consideration during planning of the project and welcomes any comments you may have. The purpose of this scoping letter is to provide you with the opportunity to submit comments or concerns you may have regarding potential effects for the proposed project. Specifically, any concerns you may have regarding the environment such as natural, biological, or cultural resources; wildlife, vegetation, and special status species; air, water, or sound quality; aesthetics; health and safety; Indian Trust Assets; or Traditional Cultural Properties that may occur in the project area. The Corps anticipates that the project could begin in the fall of 2013. If you have questions or require additional information please contact Mr. Jeremy Decker, Archaeologist at (505) 342-3671 or jeremy.t.decker@usace.army.mil or myself, at (505) 342-3281. Thank you very much for your attention to this matter.

Sincerely:

Julie Alcon
Chief, Environmental Resources
Section

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