THE COLORADO WICKIUP PROJECT VOLUME V:

TEST EXCAVATION OF THE UTE HUNTERS' CAMP (5RB563)
AND THE
DOCUMENTATION OF FIVE ADDITIONAL ABORIGINAL WOODEN FEATURE SITES
IN RIO BLANCO COUNTY, COLORADO

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COMPLETED FOR
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DARG: DOMINQUEZ ARCHAEOLOGICAL RESEARCH GROUP, INC.

A CONSORTIUM FOR CULTURAL RESOURCES, RESEARCH,
PRESERVATION AND EDUCATION
IN THE NORTHERN COLORADO PLATEAU

The Colorado Wickiup Project
Volume V:

Test Excavation of The Ute Hunters' Camp (5RB563) and the Documentation of Five Additional Aboriginal Wooden Feature Sites in Rio Blanco County, Colorado

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Front cover illustration by Holly Shelton
An interpretation of The Ute Hunters' Camp (5RB563)
during its occupation in 1879-1881.

Abstract

The Colorado Wickiup Project (CWP) is a comprehensive effort to document aboriginal wooden shelters and other features known to exist in significant numbers in Colorado. In 2008 and 2009, as Phase V of the project, Dominquez Archaeological Research Group, Inc (DARG) recorded and compiled data from six sites on Bureau of Land Management (BLM) lands in Rio Blanco County, Colorado. The scope of the recorded sites ranged from a single one-pole utility rack (5RB64) to a village consisting of 12 wooden features (5RB4543). A total of 21 structures and other wooden features were documented.

The stated goals of Phase V were to conduct test excavations at site 5RB563, the Ute Hunters' Camp that was documented during Phase IV, and to revisit and evaluate five additional previously recorded aboriginal wooden feature sites in the Yellow Creek Study Area in Rio Blanco County to aid in the assessment of the area's potential eligibility for nomination to the National Register of Historic Places (NRHP) as an archaeological district, multiple property, or other designation. One of these five sites, 5RB53, had been previously recorded during Phase IV of the CWP but was revisited in order to complete the documentation of three partially recorded wickiups. Also, one of the sites proposed for evaluation during the current phase of work, 5RB5624, was determined in the field to consist of a non-aboriginal animal containment feature, and site 5RB530 was recorded as an alternative.

The discussion of findings in this report includes descriptions and evaluations of all aboriginal wooden feature sites recorded during Phase V, an overview of the Colorado Wickiup Project results to date, and recommendations for future research and management of aboriginal wooden feature sites throughout the state. A discussion of the National Register potential for the Yellow Creek Study Area as a whole was presented as Part II of the Phase IV report, and additional data in support of this assessment is presented in this volume.

In addition to meeting the above goals, two sites that had been documented and reported on as a part of previous phases of the project were briefly revisited for the purpose of collecting additional dating samples to further our investigations into these sites. A luminescent sherd sample was collected from the surface of site 5RB2624, Rader's Wickiup Village (Phase III), and several dendrochronological samples were procured at site 5RB568 (Phase IV). With the exception of the luminescent sample, the results of the analyses of these samples, and others from the Phase V sites, have been received and are discussed herein.

Three pertinent ancillary sites that were independently test excavated by Martin and DARG associates in 2008 and 2009, and not part of the CWP itself, are also discussed in this report; 5ME974; 5ME16097, the Horsethief Creek Structural Clearing site; and 5RB509, the Perforated Can Site. Information from these sites has been included in the compilation of

wooden feature data for the project (Table 7). A type of wooden feature new to the CWP was identified at 5ME974; a bark-peeled piñon tree.

New categories of trade goods were also encountered during the excavation of the Ute Hunters' Camp, 5RB563. The results of these tests have led to a possible re-interpretation of this site from that of a hunting camp to a potential warriors' camp. It is notable that the Milk Creek (Thornburgh) Battle and the Meeker Incident took place a short distance away from the site (Warner 1985), and several months after its occupation.

Partial funding for this project was provided by the Colorado Historical Society State Historical Fund (Project # 2009-M1-021). Additional funding was provided by the Bureau of Land Management (Assistance Agreement No.LO9AC15861).

Figure 1: Location map of sites recorded during Phase V of the CWP

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

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Acknowledgments

The field work for Phase V of the Colorado Wickiup Project (CWP) was conducted between October 28th and November 19th, 2008, and between May 18th and June 5th, 2009. Curtis Martin served as Principal Investigator and he was assisted in the field by Dominquez Archaeological Research Group, Inc. (DARG) research associates John Lindstrom, Travis Archuleta, and Dana Archuleta. Mesa State College students Michael Brown and Holly "Sonny" Shelton volunteered during the test excavations at site 5RB563. Brown was subsequently employed during the report preparation phase and was responsible for preparation of site and feature maps, artifact tabulations, and numerous other tasks. The hard work and dedication of all of the crew members is greatly appreciated.

Carl Conner, President of DARG, and Richard Ott, Project Coordinator, provided invaluable service and direction throughout. In the lab Nicole Darnell, DARG's GIS specialist, and Barbara Davenport produced and fine-tuned the project maps and site plans and aided in the report preparation and editing. Richard Ott prepared the section pertaining to Ute culture history for the Phase IV report, which is partially reproduced herein. The illustration providing an interpretation of life at the Ute Hunters' Camp (5RB563), shown on the front cover and in the site description section, was created by Holly Shelton.

James C. Miller contributed the discussion of Paleoclimate and Depositional Sequences. Phil Born of The Museum of the West, provided valuable insights into the interpretation, description, and dating of the numerous historic trade items recovered, especially in regard to the ammunition components. The dendrochronological analysis was performed by Ron Towner of the Laboratory of Tree-Ring Research at the University of Arizona in Tucson; analysis of the glass trade beads from all phases of the project was conducted by Roderick Sprague of the University of Idaho; and luminescent analysis of ceramic sherds was done by James Feathers of the Luminescence Dating Laboratory at the University of Washington in Seattle.

Special recognition is due to Sam Marso and W. Wayne Bryant, Crime Scene Reconstruction agents for the Colorado Bureau of Investigation, for volunteering their time to perform an in-depth analysis of the ordnance from site 5RB563 and a comparative collection from the site of the Milk Creek Battle of 1879. This analysis is ongoing and the final results will be presented upon its completion.

In this, and in all previous phases of the CWP, our efforts have been aided immeasurably in regard to ethnohistory and landscape archaeology considerations by Betsy Chapoose, Director of Cultural Rights and Protection Department, and Clifford Duncan, Ute Elder and NAGPRA Consultant, from the Ute Indian Tribe of the Uintah & Ouray Reservation. White River Area BLM Archaeologist Michael Selle, and his staff archaeologists Kristin Bowen, and Geoffrey Haymes have been extremely helpful and accommodating throughout the field work and report preparation.

PART I: PHASE V PROJECT OVERVIEW

Colorado Wickiup Project Background

More than three hundred archaeological sites containing nearly eight hundred aboriginal wooden structures and features are known to exist in Colorado (Martin, Ott, and Darnell 2005). The text accompanying an exhibit in the Ute Museum in Montrose in which a field-collected wickiup has been reconstructed reads, in part:

> Wickiups are widely known but rarely well-preserved in the state's archeological record. Compared to archeological sites dating to the Archaic and Formative eras of prehistory on Colorado's Western Slope, wickiups of the late prehistoric period and that just following are very rare. Almost no undisturbed wickiups have been recorded. Few exist in partial remains and even fewer have been archeologically tested. Site inventory data in the Colorado Historical Society's Office of Archeology and Historic Preservation list [relatively few] known wickiup sites of any level of preservation or archeological integrity in the whole state. This [structure in the display case] is the only early example known to survive in an educational institution.

Although the on-going research of the Colorado Wickiup Project (CWP) is beginning to make obsolete some of the above statements, the point is well taken: ephemeral aboriginal wickiups and other wooden features are "regarded as among Colorado's rarest and most fragile Native American sites" (Baker, Carrillo, and Spath 2007:104).

Almost universally attributed to the Utes, the state's wooden features represent the cultural heritage of the only indigenous people to reside within Colorado from prehistory to the present (ibid:29). Unfortunately, a preponderance of such sites and features have yet to be fully documented and they are increasingly threatened by disintegration from natural processes, fire, and destruction by livestock, wildlife, and human actions, particularly in areas of rapid energy development and population growth such as the Western Slope.

Dominquez Archaeological Research Group, Inc. (DARG), with partial funding from the Colorado State Historical Fund and the Bureau of Land Management (BLM), initiated the Colorado Wickiup Project (CWP) in 2003. The primary objective of the project is to mitigate the threat to Colorado's aboriginal wooden features to the extent possible by thoroughly recording all known wooden feature sites, collecting materials for chronometric analysis, and conducting extensive data recovery—including excavation—of significant sites. Long-range goals of the project include the development of a dedicated aboriginal wooden feature knowledge base and facilitation of collaborative research and education through information sharing and professional and public outreach.

Phase I of the CWP, conducted during 2004 and 2005, consisted of a review and assessment of existing knowledge regarding aboriginal wickiups and other wooden features located in Colorado, and the development of an archaeological context and a strategic plan for future investigations. Results were published in 2005 as The Colorado Wickiup Project Volume I: Context, Data Assessment and Strategic Planning (Martin, Ott, and Darnell 2005).

Phase II of the project, also conducted during 2004 and 2005, comprised the first in a series of field investigations. The Phase II survey recorded a dense occurrence of varied and well-preserved wooden features in the Gunnison Gulch area of Mesa County. A total of 29 wooden features were recorded, including 21 wickiups, a brush corral, an apparent windbreak, a culturally scarred juniper, a limbed tree (apparent wickiup pole production site), a juniper pole cache, and several standing utility poles. The project also served as a pilot test for proposed recording protocols, including an extensively re-designed wooden structure component form, GPS mapping, plan and elevation view drawings of significant structures, comprehensive photography, metal detection, collection of significant surface artifacts, and sampling of materials for chronometric analysis. Results were published in 2005 as The Colorado Wickiup Project Volume II: Cultural Resources Class II Reconnaissance Inventory for the Gunnison Gulch Area of Mesa County, Colorado (Martin, Conner, and Darnell 2005).

Phase III recorded and compiled data from a total of twelve sites in west central and northwest Colorado during 2005 and 2006. A total of 81 wooden structures and other wooden features were documented, ranging in scope from single wickiups and tree platforms to a village containing 43 wooden features. Several new types of wooden features were identified during this study, as were some newly recognized patterns within known structure types, including: low tree platforms, ax-split/shaped "boards", a storage "shelf", and a number of wickiups with integrated "utility" poles. As a result of these findings, recording protocols were refined during the course of field work and the Aboriginal Wooden Feature Component Form was adapted to facilitate recording of these new data types. Selected collections were made of dendrochronological, radiometric, and macrobotanical samples and five tree ring samples, one carbon sample, and two flotation samples were submitted to outside laboratories for analysis. Results of Phase III activities were published in 2006 as The Colorado Wickiup Project Volume III: Recordation and Re-evaluation of Twelve Aboriginal Wooden Structure Sites in Eagle, Garfield, Mesa, and Rio Blanco Counties, Colorado (Martin, Ott, and Darnell 2006).

Phase IV activities of the Colorado Wickiup Project in 2007 focused primarily on BLM administered lands in Rio Blanco County, Colorado in a region of the northern Piceance Basin within the Yellow Creek drainage. The area, referred to in our reports as the Yellow Creek Study Area, incorporates 44 previously recorded wickiup sites containing at least 114 aboriginal wooden features. During Phase IV fieldwork a total of 15 sites were revisited or newly discovered and 70 aboriginal wooden features were recorded on 14 of these sites. Additionally, sites with wooden features were newly discovered and recorded during independent Class III inventories conducted by Grand River Institute in 2007 that were incorporated into our Yellow Creek Study Area totals (Martin and Ott 2009 and Conner

2007). Also, unaffiliated DARG research and Cultural Resource Management (CRM) activities in 2007 were included in that report in which aboriginal wooden features were re-visited as well as newly recorded in Moffat, Garfield and Mesa Counties (Martin and Ott 2007a, Martin and Ott 2007b, and Martin and Conner 2007).

Phase IV activities also raised new research questions regarding historic brush fences and corrals widely recorded in western Colorado. Wooden features of these types have typically been interpreted as historic Euro-American animal control features. However, recent studies (Baily 2005a, Keyser and Poetschat 2008 and James D. Keyser by personal communication 2007) hypothesize possible Ute cultural affiliation for some of these sites.

Phase IV included a baseline assessment of the Yellow Creek Study Area's potential eligibility for nomination to the National Register of Historic Places as an archaeological district, multiple property, or other designation. An assessment of NRHP eligibility for the Study Area was presented in Part II of that report.

Phase V Project Overview and Summary of Findings

As with Phase IV of the CWP, our Phase V field studies in 2008 and 2009 concentrated on aboriginal wooden feature sites in The Yellow Creek Study Area. This region, and the greater Piceance Basin overall, is being impacted by energy development activities including the construction of natural gas well pads, access roads, pipelines, and processing facilities. Additionally, significant oil shale research and development projects are underway in the study area. The unfortunate mix of cultural resources and energy development presents a significant challenge to land managers, cultural resource managers and researchers, and energy developers.

One of the sites recorded during Phase IV was a highly unique resource that we have named the Ute Hunters' Camp (5RB563), where the occupants were living in canvas wall tents, tending horses, smelting lead, reloading bullets, processing deer carcasses, and possibly working leather. This site was revisited and test excavated as part of the current phase of research; the first excavation activities as part of the CWP. This site proved to be highly productive, producing nearly 500 artifacts including those recovered in 2007, resulting in the possible re-evaluation of the site as, not only a hunting camp per se, but also as a camp being used in preparation for battle.

The Phase V activities at the other wooden feature sites in the Piceance Basin were also productive, resulting in the "mitigation level" documentation of a total of 21 structures and other wooden features. A summary of the site and feature data from the all of the above sites and from all five phases of the CWP is included in Table 7 of this report.

Dominquez Archaeological Research Group's programs of public outreach and education continued during 2008 and 2009 in the form of presentations and educational

programs for the professional and avocational communities and the general public. During these years, Curtis Martin, Principal Investigator, delivered papers and PowerPoint presentations at the Colorado Wickiup and Ute Ethnohistory Meeting in Grand Junction, which was attended by several Ute tribal members as well as representatives from the Forest Service and BLM, at Colorado Preservation, Inc's. *On the Road* program in Glenwood Springs, to the general public at the Frisco Historical Museum, to a meeting of the Denver Chapter of the of the Colorado Archaeological Society, and at the 2008 Annual Meeting of the Colorado Council of Professional Archaeologists (CCPA) in Ft. Collins. He also organized and chaired a panel discussion entitled "Ephemeral Aboriginal Wooden Features" at the 2009 CCPA Meeting in Alamosa which included papers by himself and archaeologists Adrienne Anderson, Steven Baker, and Brian O'Neil.

In addition to the above presentations, Martin included training in wickiup and wooden feature recognition and recording as part of his Field Methods in Archaeology class which he teaches at Mesa State College in Grand Junction.

Project Coordinator, Richard Ott also made presentations at the above-mentioned meeting in Grand Junction, the Glenwood Springs *On the Road* program, a meeting of the Western Colorado Congress Public Lands Committee, the Grand Junction First Baptist Church's Men's Fellowship, and a Ute Prehistory presentation on native landscapes as cultural resources. A complete list of the Phase V outreach activities is presented in the section of this report entitled Public and Professional Outreach.

Location of the Project Area

All of the sites investigated during Phase V are located on BLM managed lands within the Yellow Creek Study Area of Rio Blanco County (Figures 1 and A-1) in the northern portion of the Piceance Basin and within the White River drainage. One of these sites, 5RB5624, was visited only briefly, photographed, and determined to be of Euro-American origin. Instead, another aboriginal wickiup site, 5RB530, was documented as a replacement. The project area is situated roughly half way between the communities of Meeker and Rangely, Colorado.

Environment

The Phase V project area, in northwest Colorado, is situated in the Piceance Creek Basin, an elongate structural downwarp of the Colorado Plateau province that apparently began its subsidence approximately 70 million years ago during the Laramide Orogeny. Sediments from surrounding highlands were deposited in the basin, accumulating to a thickness of as much as 9000 feet by the lower Eocene epoch, when subsidence ceased. Regional uplift occurred in the Late Tertiary, and erosion of the area has continued since (Young and Young 1977:43-46). The Wasatch formation underlies the study area. It consists

of a series of interbedded variegated mudstones, sandstones, and siltstones of varying colors — brick red, tan, white, and purple. Forming after a period of erosion, the Wasatch is the first extensive continental deposit following those of the Cretaceous-age Mesaverde Group. Sediments are stream, floodplain, and swamp deposits. The types of fossils found in the Wasatch suggest that a moist tropical to subtropical environment existed here.

The sites dealt with in this report range in elevation from 6300 to just under 6900 feet. All sites are situated within the Upper Sonoran plant zone. Vegetation is primarily piñon/juniper forest. Mule deer, elk, and coyote are common, as are cottontail rabbits and various rodents. Mountain lion, bobcat, black bear, elk, fox, skunk, badger, and weasel are also likely inhabitants. Bird species observed in the area include the jay, raven, magpie, red-shafted flicker, owls, golden eagle, bald eagle, and various other raptors. Present land use in the project area is primarily in the form of natural gas exploration, cattle grazing, wood and fence post gathering, and recreational activities such as hiking, camping, hunting, and exploring with off-road vehicles.

In the present day, the project area is typified by a cool semiarid climate where temperatures can drop to -10 degrees F or lower during the winters and summer temperatures may reach 100 degrees F or more; there is a maximum of 160 frost-free days and the annual precipitation is about 10 to 16 inches (USDA SCS 1978: 6).

Paleoclimate and Depositional Sequences (by James C. Miller)

The following discussion of typical depositional sequences in northwestern Colorado is based on radiocarbon ages obtained from a broad range of studies compiled in Miller (1992 and in prep.). The region included in Miller comprises the western Plains from western North Dakota and eastern Montana to the vicinity of Pueblo, Colorado, and many of the Rocky Mountain basins from Western Montana, throughout Wyoming (including the Wyoming Basin), and in northern Colorado and Utah (including the Parks and the Uinta Basin). Over this broad region, it is now apparent that major shifts in climate occurred more or less at the same time and had correlatable consequences in alluvial and aeolian depositional systems.

There are two major periods of climatic transition since the end of the ice age about 13,000ya (years ago). The first occurs at that date and marks the initial stage of climatic warming — the beginning of the so-called Holocene climatic envelope—the Pleistocene extinctions, and the advent of the human species in the New World (all sites with older ages for the presence of humans in North America are controversial). The second occurs at about 6500ya, and marks a fundamental change in both alluvial and aeolian depositional systems, and shifting cultural patterns in the Plains and Rocky Mountains. There are smaller cycles apparent as well. Each of the two main periods are roughly divided in two, and in both cycles cooler, concomitantly wetter conditions in the first half of the broader periods were succeeded by periods of fluctuating conditions including severe drought which had telling affects on the human population in the latter parts.

Aeolian System (after Miller 1992, Miller in prep)

Since the beginning of the Holocene climatic envelope, aeolian deposits accumulated. The type of aeolian deposits vary according to climate, with the warmest, driest periods marked by mobile deposits, i.e., dunes, and the coolest, wettest periods marked by shadows, sheets, drift, and coppice mounds. From about 13,000 to 10,000 years ago, shadows, sheets and associated deposits first started to form. A regional drought became effective after 10,000ya, and from then until about 6500ya, the major dune fields in the mountain west — some approaching ergs in dimension — started to form, including the Killpecker (Ahlbrandt 1973) and Lost Soldier (Gaylord 1983) fields in Wyoming, and the Sand Hills of Nebraska (Ahlbrandt and Freyberger 1980). Around 6500ya, a general stabilization took place, and seasonal deposition became the normal aggradational process.

In the major dune fields, the change is marked by a shift from high-angle fore-set beds relic of dune slip face migration to low angle beds representing laminar aggradation in drift and shadow areas (e.g., Gaylord 1983). In many areas, the sudden accumulation of wind blown deposits starting at 6500ya marks the advent of phytogenic (of plant origin) aeolian deposits, accumulated by virtue of sustained vegetal growth.

The Yarmony Site (Metcalf and Black 1991) in north central Colorado is perhaps the closest documented example of this type of accumulation, but many more sites have similar deposits, including Sage Creek (Latady 1986) and Trapper's Point (Miller et al. 1999) in southwestern Wyoming, the McKean site (Kornfeld et al 1995) in northeastern Wyoming, and the Upper Twin Mountain site (Kornfeld et al. 1999) and other sites in Middle and South Park in north central Colorado (Miller 1996, Metcalf and Miller 1997), and sites in the Uinta Basin (Michael D. Metcalf personal communication 2005). These types of sites also provide the primary pollen evidence to indicate that the climate was coolest and wettest in the middle Holocene, from about 6500 to about 4500ya in opposition to the established dogma of the mid-Holocene drought or Altithermal usually placed at 7000 to 4000ya.

The old deposits are extremely difficult to separate from the lower part of the second series deposits (after 6500ya) in surface exposure, since both have experienced nearly the same duration of in-place weathering. Four distinct deposits occur in sequence: the earliest deposit accumulated and began weathering in place between 6500 and 4500ya; the second deposit, between about 2800 and 1000ya; the third, between 500 and 150ya; and the fourth in the last hundred years. The last is probably related to large scale surface disturbances since the late 19th Century (Miller 1992). The missing years are periods of erosion and serir formation — i.e. lacunas (a missing interval at an unconformity).

The aeolian and alluvial systems react in concert to climatic change. Figure 2 provides a time line from 14,000ya to the present and shows the progression of deposition, erosional events (lacunas), and the one important hiatus in the alluvial sequence (a period of no deposition) referenced to generalized cultural and geologic periods. The figure and the

following narrative are drawn from the compilation of related data presented in Miller (1992, and in prep.).

At about 13,000ya, the last of the Pleistocene glaciers had receded to higher elevation and the so-called Holocene climatic envelope set in. At or slightly before the time, the ephemeral drainages in the survey block were seasonal, roaring torrents, capable of moving boulders. A developed soil, sedimentologically a loess, likely supporting (and stabilized by) grass and sage steppe vegetation, probably covered most surfaces (except the shale terrane) with gradients less than the angle of repose. With warming temperatures, vegetation thinned and the slopes destabilized. Slope erosion increased, and much sediment stored on the slopes moved into the alluvial system and started to gradually fill the Late Pleistocene dissections. Early deposits were relatively coarse, and later, finer, deposits, reflected diminishing capacity and competence in what were quickly becoming anastomosing streams choked with sediment.

By the time of Haynes' "Clovis drought," the first aeolian deposits started to form. These early deposits were shadows and sheets and related forms, and were phytogenic in nature, and were fully stabilized during the Younger Dryas (coeval with Folsom and Goshen times). The most severe drought of the Holocene began shortly after 10,000 years, marked by dune formation and initiation of fine grained braided stream deposits (relative to previous deposits). Bison recovered from the Casper site in central Wyoming show severe signs of stress due to climatic conditions at 9500ya (Frison 1974). In the following thousand years, the early Paleoindian traditions gave way to the late Paleoindian traditions, and the Archaic tradition developed. Paleoindian big game hunters and foragers, and Archaic collectors coexisted for the next 3000 years.

The period between 7500 and 6500 years marks the cessation of braided stream deposition and is followed by the initial deposition and stabilization of the transitional aeolian deposits. This period represents the harshest drought conditions. Non-deposition on the alluvial hiatus suggests there was insufficient surface water to accomplish much work in alluvial systems. This implies that what water was available was transmitted or stored in the aquifers represented by the loose alluvial fill. The last of the now extinct bison species did not survive the interval. Starting at around 6500ya or shortly after, the second series of aeolian deposits began to accumulate. These deposits are phytogenic, meaning the accumulation was significantly aided by more vibrant vegetal growth, which in turn prospered thanks to cooler climates which allowed stored pore (vadose) water to persist in the subsoil. These waters provided the medium for the remarkable syndiagenetic weathering (the process of chemical and physical change in the conversion of rock to sediments) that took place in the interval, and subfreezing temperatures began the low-level frost heaving that seems prevalent. Culturally, small village settlements containing house-pits began to appear in Colorado and Wyoming. Ameliorating conditions persisted for at least the next two thousand years.

After about 4500ya, conditions started to gradually warm again. In the alluvial system, loss of capacity and competence again resulted in channel infilling, again implying slope instability. The effect on aeolian deposits initially was intermittent deflation. As the

impending drought intensified, channel fill increased, and deflation in aeolian deposits proceeded to the upper margin of the middle Holocene syndiagenetic zone, forming the first major lacuna (a gap or missing part) and serir (dry zone, gravel terrace) in the post 6500 years-old deposits. Exposure of the syndiagenetic zone and serir formation further limited deflation. The severest part of the drought came between 3500 and about 2800ya. Culturally, the well established middle Archaic traditions deteriorated entering the drought, and Late Archaic traditions emerged on the other side.

From 2800 to about 1000 or 900ya, new phytogenic aeolian deposits accumulated and remained stabilized, although there are several shorter periods of deflation contained within; for example, coeval deposits at site 5ME12825, about five miles east of DeBeque, Colorado, had four periods of minor deflation. Syndiagenesis proceeded again in the interval which also affected older deposits. Sometimes paraconformities (poorly developed serir deposits) are present, but are not usually continuous throughout contiguous deposits, and generally not traceable from one deposit to another even in a restricted area; some of these may even be the result of cultural activity in a confined area.

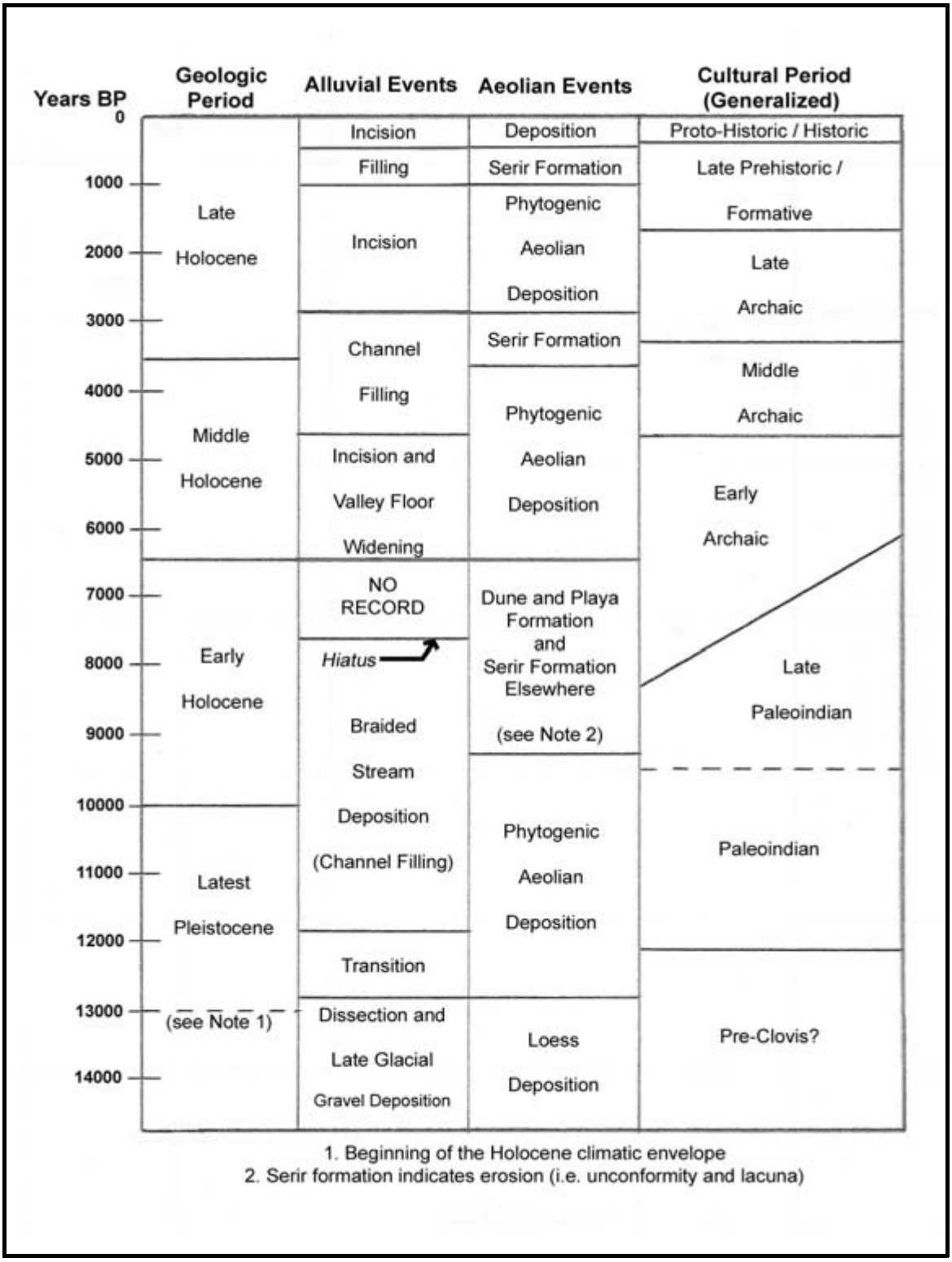

Figure 2. Chronology of events in alluvial and aeolian systems since the Latest Pleistocene (after Miller 1992 and Miller in prep)

In the alluvial system during the interval, incision alternated with intermittent infilling, but the net effect was incision and continued valley widening. In many drainages the middle Holocene fill was removed completely, and in others, fill from the period was preserved. The varied evidence of fill and incision seems more acutely affected by local conditions. From 1000 or 900 years to about 500ya, another severe, regional drought affected the mountain west and bordering areas. Alluvial deposits from this period were named Lightning Formation in eastern Wyoming (Leopold and Miller 1954). These deposits are represented by the lowest terrace above the present day channel bottoms. In aeolian systems the second notable serir (i.e. an unconformity) formed. In Europe, the same period of drought is referred to as the Medieval drought. On the Plains and in the northern and middle Rocky Mountains, this interval coincided with the first evidence of warfare between native groups. Locally, the Fremont fragmented.

The Little Ice Age is well documented and persisted from 500 to about 150ya. Incision renewed in alluvial systems, and stabilization and slow aggradation ensued in phytogenic aeolian deposits. The last serir or unconformity formed in aeolian deposits. Since that time, alluvial systems have generally continued to incise where not affected by human activity, and aeolian deposits have continued to aggrade. Revisiting concerns of present day global warming, it is obvious that the three main periods of drought in the Holocene (from 9500 to 6500, 3500 to 2800, and 900 to 500ya) had a much more drastic effect on the landscape — i.e., the present drought is relatively minor compared to previous ones.

The Holocene deposits are separated by three periods of erosion (lacunas) marked by unconformities indicated by serir deposits. The serirs formed between about 9500 and 6500, and 3500 and 2800ya, capping the latest Pleistocene and middle Holocene units, respectively, are the best developed, marked by granule- and pebble-sized particles (a result of frost heaving), while the two serirs separating the last three Holocene deposits are generally marked by granule-sized particles and very coarse sand (a result of deflation alone).

In general when looking for these deposits, the best exposures are in two-track roads, where deflation and sometimes alluvial erosion is exacerbated by motor traffic; the top of the horizon still forms a credible base for aeolian and sheet flow alluvial erosion today as it did previously, before deposition of the later units. In most areas, “soil” structure is a useful relative indicator, as well. The Little Ice Age deposit exhibits a crumb structure, marking the initial stage of illite (any of a group of clay minerals, hydrous potassium alumino-silicates, characterized by a three-layer mica-like structure and a gray, light green, or yellowish-brown color) to smectite (a hydrous silicate of alumina, of a greenish color, which, in certain states of humidity, appears transparent and almost gelatinous) conversion, and the Late Holocene deposit, a weak blocky structure. The earlier deposits (including latest Pleistocene, and early and middle Holocene phytogenic deposits) exhibit a strong blocky to weak prismatic structure.

General Culture History

Previous cultural resource investigations in the region have yielded surface diagnostic artifacts and excavated cultural materials consistent with the regional cultural history and prehistory. Evidence of the Paleoindian, Archaic, Formative, and Protohistoric Eras has been found in the area. Historic records beginning as early as the 1620s describe Spanish contacts with indigenous peoples in central and northwestern Colorado. Later records chronicle the expanding presence of Euro-American trappers, settlers, miners, farmers, and ranchers as well as their interactions with the historic Utes.

Overviews of the prehistory and history of the region are provided by the Colorado Council of Professional Archaeologists publications *Colorado Prehistory: A Context for the Northern Colorado Plateau* (Reed and Metcalf 1999), and *Colorado History: A Context for Historic Archaeology* (Church et al 2007). An archaeological context for Colorado wickiups is provided by The Colorado Wickiup Project Volume I: Context, Data, Assessment, and Strategic Planning (Martin, Ott, and Darnell 2005).

There is a great deal of debate as to whether ethnic groups can be detected in the archaeological record, as well as to the distinction between ethnicity and culture (Sanfilippo 1998:4 and Stiger 1998:1). Nevertheless, early historical records in the American west, and in the state of Colorado in particular, provide us with insights into the ethnic affiliations and cultural relationships of the native peoples inhabiting the area at the time of earliest contact with non-native intruders. These chronicles, and their descriptions of the material culture of the inhabitants, often offer a valid framework from which to derive the ethnic association of those archaeological sites that can be dated to protohistoric and historic times within specific geographic regions.

In late-prehistoric and historic time frames the "Native American archaeological record of western Colorado is very largely, if not nearly exclusively, Ute derived" (Baker 1995:2) and the ephemeral aboriginal wooden features and structures of interest to the Colorado Wickiup Project are assumed to be predominantly associated with the Utes. A thorough review of Ute culture history for western Colorado, with specific focus on the White River Ute, was prepared by DARG Project Coordinator Richard Ott and is presented in full in the CWP Phase IV report as Part II. The following are excerpts from that report.

Ute Culture History (by Richard Ott)

In late-prehistoric and historic time frames the "Native American archaeological record of western Colorado is very largely, if not nearly exclusively, Ute derived" (Baker 1995:2). Records from Spanish explorers and colonizers in the seventeenth and eighteenth centuries produced the earliest written descriptions of the indigenous people inhabiting central and northwestern Colorado in the Early Contact phase (Sánchez 1997) and offer clear, although fragmentary, evidence of Ute presence in the region during the close of the protohistoric time

frame. Later historical records, largely from the nineteenth century, chronicle the seminal incursions into the area by Euro-American explorers, trappers, traders, and miners—and ultimately the permanent occupation of the region by ranchers, settlers, and other immigrants to Colorado's last frontier (Baker et al. 2007; Husband 1984; Athern 1977).

The Utes played a central role in the historic changes that occurred in western Colorado all through the nineteenth century—up to—and beyond—1881/1882 when they were forcibly removed to reservations in northeastern Utah. As Baker (Baker et al. 2007:31) pointed out, "the only indigenous people to reside within the state from prehistory into their Late Contact phase" were the Utes, and their living descendants continue to help shape the cultural landscape of western Colorado. Consequently, the ephemeral aboriginal wooden structures of interest to the Colorado Wickiup Project are generally considered to be of Ute origin, and this overview of culture history looks primarily at the Northern Utes, with specific focus on the White River Utes. It should be noted, however, that other indigenous groups also appear in the history of the region—notably the Eastern Shoshone and the Comanche— and they are tangentially considered in this discussion as well.

The Utes, or "Nuuciyu" (Goss 1999:79), are a "culturally self-identifying group" (Lewis 1994:22) of people affiliated by shared language, lifeways, and history. The Ute language, a member of the Numic branch of the Uto-Aztecan language family, is "affiliated most closely with the Southern Paiute in the Colorado River drainage to the west, less closely with the Comanche and Northern Shoshone in the Plains and Plains-Plateau to the east and north respectively, and least closely to the Northern Paiute in the Great Basin area of western Nevada and Oregon" (Jorgensen 1965:9). Although there is disagreement regarding the earliest prehistory of Numic speakers, it is generally agreed that during the last thousand years they expanded from the southwest Great Basin to reach their historically known territory in Utah and western Colorado (Madsen and Rhode 1994). Brown ware ceramics and increasing numbers of Desert Side-notched and Cottonwood Triangular projectile points began to appear in the archaeological record of eastern Utah and western Colorado at approximately AD1100 (Reed 1994:196), and may represent the earliest known prehistoric markers of Numic-speaking people in western Colorado.

David Rich Lewis (1994:30, 191), drawing on the work of fellow anthropologists Smith, Steward, Stewart, Jorgensen and others, concisely summarizes Ute social organization as it may have existed in the Early Contact phase:

> Ute society centered around the extended bilateral family, and periodic congregation of related or affinal kindreds to form local residence groups of from twenty to one hundred persons. These groups frequently traced relations through the matriline and resided matrilocally, but membership was fluid and flexible enough to adjust to personal and local environmental realities. Local leaders were older men who, through persuasion, influence, and proven ability, achieved a level of consensus for their plans. Most groups recognized specialized leaders

> who directed specific activities (hunting, moving camp, dances, or raiding) and had little or no authority over the group in other matters.
>
> Larger "band" organization was limited to periodic congregations for defense, for spring Bear dances, or for summer hunting or fishing camps. Such summer congregations especially around Utah Lake, could number a thousand people. Bands consisted of local residence groups linked by bilateral kinship networks and their common territorial range—specific features usually reflected in their band name. Local groups and even extended family groups remained relatively autonomous, because most bands lacked formal political organization. Local leaders in band councils (which could include women) decided necessary matters subject to community approval. Dominant groups often provided the most influential leaders—leaders who ultimately came to the attention of white officials looking to negotiate with a single "chief." Ute bands recognized their larger group identity in custom, language, and territory, and remained united through kinship, trade, and defense against common enemies, but there was no larger Ute "nation" with long-lasting political allegiances or tribal councils.

The regional setting of the Yellow Creek Study Area is within the historic territory of the "White River" Utes living today mostly on designated reservation lands in eastern Utah. This group appellation began to appear in documents in the 1860s (Baker et al, 2007:49), concurrently with the "Uncompahgre" Utes, whose traditional homelands lie immediately south. Both band names were widely adopted after the U.S. government established agencies for the Utes on the White River near Meeker in 1868 (Burns 2004), and on the Uncompahgre River south of Montrose in 1875. The names persist today in the political structure of the Northern Utes (Constitution and By-laws of the Ute Indian Tribe of the Uintah and Ouray Reservation 1937) and are widely used by contemporary Utes.

Naming specific historical antecedents of the White River and Uncompahgre Utes is not a straightforward task. Ethnohistorical descriptions of the indigenous people occupying central and northwestern Colorado prior to the 1860s are sketchy, at best, and include shifting and inconsistent names for Ute subgroups (Jorgensen 1965; Callaway et al, 1986:338). The White River and Uncompahgre Bands were nineteenth century amalgamations of earlier Ute groups which had become increasingly mobile with the widespread adoption of equestrian lifeways during the Middle Contact period. During this time Eastern Utes expanded their territory "becoming important middlemen in the intertribal horse trade...[while clashing] more frequently with the Cheyenne, Arapaho, Lakota, and Comanche" (Lewis 1994:30-31).

The full geographic extent of Ute territory at its apex is generally accepted as reaching from western Utah to the eastern slope of the Rocky Mountains in Colorado, and

from northern New Mexico to the northernmost reaches of western Colorado (Callaway et al, 1986:337; Jorgensen 1965). Recent investigations (Keyser and Poetschat 2008) cite evidence—rock art, wickiups and brush fences—suggesting that the Utes ranged as far northward as Wyoming's Upper Powder Spring Basin during the Late Contact phase. Jorgensen (1972) extends his ca. 1880 "Yamparka" Ute territory to the northern reaches of Colorado's Sand Wash Basin, and ascribes lands beyond to the Wind River Shoshone. Baker and his colleagues (2007) appear to concur with Jorgensen, but only for the Phase I Late Pre-contact and earliest Phase II Early Contact periods, arguing that the "Sabuagana" Utes encountered by Rivera in 1765 and Dominguez and Escalante in 1776 represented the northern limit of core Ute territory at the end of protohistory in northwestern Colorado. They (Baker et al. 2007) further ascribe the area north of the Sabuaganas as Eastern Shoshone, during ca. AD1540-1600, and Comanche during the late eighteenth century.

In the decades following the Dominguez-Escalante expedition, and until the 1820s, there were few direct incursions into west-central and northwestern Colorado by Euro-American interests. The Early Contact lifeways of the Eastern Utes, however, was increasingly transformed by the acquisition of horses and trade items introduced by the Spanish (Baker et al. 2007; Simmons 2000; Lewis 1994), and by the 1820s the Eastern Utes were widely enjoying an equestrian lifeway. Jorgensen (1972) describes them as "fine horsemen with vast herds of horses" living "parts of the springs and summers in large encampments of 200 or more lodges." In his description of changes in Ute society sparked by the appearance of horses, Lewis (1994:30) notes their "accumulation of more material goods and ... an elaboration of Ute material culture", adoption of certain Plains cultural traits, expansion of their territory as "noted [horse] raiders", and their role as "important middlemen in the intertribal horse trade."

The Utes, however, were not the only indigenous people in the region who were adopting equestrian lifeways during this period. The Eastern Shoshones, mounted on horses, occupied lands north of the Utes in western Colorado and appear in the regional ethnohistories of the Yampa, Little Snake and Green Rivers. (Jorgensen 1972; Baker et al 2007). The Comanches held similar status on the east, along with other plains groups—namely the Cheyenne, Arapaho, and Lakota. The Shoshones and Comanches, even though they share language affinities with the Utes, have distinct ethnographic profiles, and their presence in northwestern Colorado is pointed to by both archaeological and ethnohistorical evidence.

In northwestern Colorado, in historic periods, local ethnic groups appear to have shifted repeatedly in the Yampa and White River drainages. The northern boundary of Ute occupation in west central Colorado late in the eighteenth century probably did not reach beyond the local northern extent of the Colorado River drainage (Baker et al. 2007:46-49). This supposition, based largely on the Dominguez and Escalante journal from 1776 (Chavez and Warner 1976), is supported to some degree by several rock art panels—located in Canyon Pintado south of Rangely and in West Salt Creek Canyon

north of Grand Junction—which exhibit characteristics of the "Plains Biographic Style." Cole (1987:222-224) attributes this style of rock art—described as developing ca. AD 1750 (Keyser 1975, 1977, 1984)—to either Shoshone or Comanche groups.

In the early decades of the nineteenth century the fur trade rush heralded the beginning of "revolutionary transformation" of Ute life (Husband 1984:IV-12). Trading posts and Euro-American trade goods became a part of the Ute landscape, and the American success in the Mexican War in 1848 marked the "beginning of the end for Ute sovereignty in the region" (Husband 1984:IV-12). In 1849, with the signing of the Calhoun Treaty by seven Ute bands, the Utes irretrievably entered the sweep of American political history and expansionist policies. Ute homelands in western Colorado were subsumed first by Utah Territory in 1851, then Colorado Territory in 1861, and finally by the State of Colorado in 1876. The treaty of 1849 was followed by a series of subsequent treaties, agreements and land cessions which constrained the Utes into ever smaller territories, and by the late 1870s the Eastern Utes were "among the last free roaming Native Americans in the United States" (Baker et al, 2007:74). The Ute Reservation boundary established in 1868 persisted in northwestern Colorado until 1881/1882, when the White River Utes, along with the Uncompahgre Utes to the south, were forcibly removed to reservation lands in eastern Utah.

Ute history and ethnohistory for the Late Contact period have been expanded in recent years by historic archaeological evidence from throughout western Colorado. The Colorado Wickiup Project (Martin et al. 2005, 2006, and 2009) has documented aboriginal wooden feature sites in central and northwestern Colorado—including sites located in the Yellow Creek and the Douglas Creek drainages which are reliably dated to as late as 1915 to 1916.

Despite the official "removal" of the Utes from their traditional northern Colorado homelands, they clearly continued to exert a presence in western Colorado well into the twentieth century. Some northern Utes, in fact, may have remained in western Colorado, off reservation, after the 1881-1882 expulsion (Stewart, unpublished comments at the Symposium of the Archaeology of the Eastern Ute, Grand Junction, Colorado, 1988). Utes are known to have been counted in the census records of various communities in the area (for example Collbran, Colorado) as late as the 1920s. Historical newspaper accounts describe almost annual Ute hunting forays into many areas of northwestern Colorado from 1881 to as late as 1909, including numerous appearances in the Yellow Creek area.

Project Goals and Objectives

Phase V of the Colorado Wickiup Project is the fourth in a series of field reconnaissance and documentation projects directed toward known, but insufficiently documented, wickiup sites and locales. The primary objectives of our field activities are to

comprehensively document these cultural resources and continue to develop and refine recording protocols that will — to the greatest feasible extent — mitigate the inevitable disappearance of Colorado's wickiups and other ephemeral aboriginal wooden features along with the archaeological information they contain.

The CWP's preservation and cultural resource management objectives include evaluation of resources for eligibility to the National Register of Historic Places (NRHP), assessment of the current condition of wooden structures and sites, as well as the potential effects of continuing natural and human impacts on their archaeological integrity, and recommendation of actions for the mitigation of adverse effects. One of the primary long-term objectives of the project is to add significantly to the Late Prehistoric, Protohistoric, and Early Historic Ute archaeological database, thereby expanding the body of knowledge available to tribal, management agency, and research community stakeholders concerned with the preservation of Native American heritage values in Colorado landscapes. Near-term project objectives include documentation of additional aboriginal wooden feature sites and testing of significant sites. Specific sites targeted for study in the next phase of the CWP are described below in "Future Directions and Proposed Field Activities".

We feel that the CWP's strategy of "preservation through documentation" deserves continued, accelerated and expanded effort and commitment of resources. The knowledge we have gained thus far about Colorado's aboriginal wooden structures has further deepened our appreciation of these fragile archaeological resources in and of themselves, has more than confirmed our original assessment of their immeasurable value, not only to Ute/Numic archaeology, but to the archaeology of the earlier Formative, Archaic and PaleoIndian inhabitants as well, and to the living descendants of the people who created them. We have also come to recognize that we can leverage the results of our efforts by expanding the scope of our studies to include broader research questions and preservation challenges related to aboriginal wooden feature sites in Colorado. A discussion of potential research design considerations directed to this end is presented in the Future Directions and Proposed Field Work section of this report.

Field and Analytic Methodology

The Project uses standard Office of Archaeology and Historic Preservation (OAHP) and BLM forms as the basis for its field recording protocols, including *the Colorado Cultural Resource Survey Management Data Form*, the *Prehistoric Archaeological Component Form*, and the *Cultural Resource Reevaluation Form*. For detailed recording of wooden features, our primary recording form is the *Aboriginal Wooden Feature Component Form*.

The *Aboriginal Wooden Feature Form* was developed (and continues to be refined) by DARG research associates based on direct field experience and attribute lists drawn from Sanfilippo (1998), BLM archaeologist Michael Selle, and others. It has evolved from the former *Conical Wooden Structure Form* (ibid), and continues to be modified for the purpose

of providing a single form for the documentation of all types of ephemeral aboriginal wooden features in archaeological contexts.

All Phase V work was performed according to the guidelines set forth by the Office of Archaeology and Historic Preservation (OAHP) of the Colorado Historical Society. All cultural resources were recorded to standards set by the BLM and the OAHP utilizing methods established primarily during the first two phases of field work and research by the Colorado Wickiup Project (Martin, Ott, and Darnell 2005 and Martin, Conner, and Darnell 2005).

Mapping of site boundaries and the location of selected surface artifacts and features was conducted using a BLM certified Trimble GeoExplorer XT GPS unit and USGS 7.5' series topographic maps. Site boundaries were determined by the extent of surface artifacts and features and/or a protective buffer zone, however, it was beyond the scope of the project to conduct intensive mapping of all lithic debitage, or the determination of the definitive extent of lithics on site surfaces, when such artifacts were numerous. As a result, in certain cases, the original boundaries of sites as described in previous site inventories were excepted without confirmation, when such boundaries were determined by the extent of lithic scatters.

Lithic tools, however, were mapped (and collected in the case of diagnostics), as were flakes and cores when their numbers were somewhat limited. All historic artifacts ("trade goods"), on the other hand, were mapped and collected as diagnostic artifacts. When additional artifacts or features were found during CWP field work outside of previously established site perimeters, the boundaries were expanded. Areas surrounding sites that appeared likely to produce additional wooden features were always surveyed for such occurrences.

Crew members mapped, made digital photographs and recorded observations and measurements of each individual wooden feature, including the completion of an *Aboriginal Wooden Feature Component Form*. Feature plan maps were constructed for both standing and collapsed structures when warranted. A Fisher M-Scope 1236-X2 metal detector was used on all sites to survey areas within, beneath and surrounding wickiups, platforms and other significant wooden structures, as well as within areas of the site surface deemed likely to contain buried or concealed cultural resources. In the spring of 2009, during the excavation of site 5RB563, the metal detector described above was replaced with a White's Model M6 unit which proved to be significantly superior in terms of locating and isolating small metal objects.

Metal detection of Protohistoric and early Historic sites such as those presented herein has proven to be an absolute requirement in our efforts to interpret and date the activities represented. Along with the use of extremely fine mesh sifting screens (window screen and 1mm mesh soil sieves) to isolate bullet primers and minute glass seed beads during excavation, the metal detection activities have proven invaluable in the location of diagnostic artifacts. Without these two innovations many Protohistoric Native American sites would be misinterpreted as historic Euro-American resources, or missed altogether, and individual

wooden features such as Feature 6 at 5BR563 could similarly be overlooked. A technique that was established by the excavation crew is to utilize wooden golf tees to mark the locations of metal detector "hits", rather than metal pin flags, which interfere with subsequent metal detection.

In addition to lithic, metal, ceramic, and hard rubber artifacts, supplemental collections in the form of charcoal, burnt and unburnt bone, soil, and macrobotanical (flotation) samples were collected. As warranted, dendrochronological (tree-ring) samples were collected from metal ax cut feature poles and associated tree stumps and a total of nine samples were submitted to the Laboratory of Tree-ring Research at the University of Arizona for analysis. The results of these analyses are presented in Appendix C.

Luminescent samples were collected from several sites in the form of ceramic sherds and their surrounding sediments (Appendix D). Also, when justified, the deposits within wooden shelters were sampled, and occasionally collected, for potential future analysis.

A six-foot aluminum step-ladder was often utilized for photographing collapsed structures from an elevated vantage point, in order to reveal the nature of collapsed features; a triangular pattern occasionally results when a conical structure collapses to one side, or a wheel-spoke pattern when one gradually sags and settles directly to the ground surface.

Accurate plan maps of individual standing wickiups and other types of shelters were constructed by hanging a plumb bob from the apex of the structure to establish a datum, then, using a metric tape and a Brunton pocket transit, the collapsed poles and the “footprints” of the bases of standing feature elements were plotted on polar-coordinate grid paper (Figures 13 and 14 are examples of this technique). In all cases a magnetic declination of 12.5° from true north was employed.

Regarding the test excavations at site 5RB563, the Ute Hunters’ Camp, the details of the proposed investigations were altered slightly as excavation proceeded, based on the positive and negative findings in the subsurface deposits. A datum point was established and an intensive surface map was constructed as excavation and metal detection proceeded. As the accuracy of GPS is far too inaccurate for the mapping of artifacts as dense and closely-spaced as those at this site, the site map was constructed utilizing a Brunton pocket transit and metric tapes, showing the location of all test units, artifacts, and cultural features, employing the project’s site plan from the Phase IV recordation as a foundation (Figures 4 through 8). During this phase the entire site area was also re-scanned with the new metal detector. Numerous artifacts, of metal and other materials, were located on or near the surface through the efforts of both metal detection and the screening of excavated fill. A few newly discovered artifacts were found outside of the previous site boundary, as defined in Phase IV, and the boundary was somewhat expanded.

Excavation was conducted with trowels, brushes, and whisk brooms in the shallow layers of light brown to brown sandy loam that comprised Levels 1 and 2; the only deposits at

the site that produced cultural remains. All removed soil was sifted through either fine-mesh window screen inserts for standard shaker screens, or a series of soil sieves in which the smallest mesh was 1mm, in search of cultural materials. It was determined early in the excavation phase that any less-fine mesh screens, including 1/8th-inch, would fail to isolate the extremely small "micro" seed beads that were present on the site. In addition to the small amounts of soil sifted at each metal-detected artifact location (an average of roughly 500cc, or two cups, per incident), a total of 14.5 square meters was excavated in a series of eight 50cm-wide test trenches (Figure 4).

The excavations ranged in depth from a minimum of two centimeters to a maximum of 26 centimeters. Although a high majority of the cultural materials were found in the upper 7cm of sediment, some artifacts were recovered at up to 17cm below the present ground surface (pgs) in the so-called "Field of Dreams Locus", where soil deposition had been most rapid in the decades since the site was occupied.

A series of eight dendrochronological samples were collected at 5RB563 and submitted to the Laboratory of Tree-ring Research at the University of Arizona for analysis, in order to corroborate, or refute, the results produced during the Phase IV research. The results of the tree-ring analysis are discussed in the description of the tests at the site and are presented in Appendix C.

Field notes from Phase V recording activities are on file at Dominquez Archaeological Research Group, Inc. (DARG), and copies of the report and digital photographs will be submitted to the White River Area BLM Office and the OAHP. Collected artifacts, chronometric, soil, and macrobotanical samples will be curated at the Museum of Western Colorado in Grand Junction.

Study Findings for Phase V

Table 7 provides a summary of the findings from Phase V of the CWP and ancillary wooden feature studies from 2008 and 2009. All of the field work during this phase of the CWP consisted of revisits to previously recorded sites. The project sites comprise two wickiup villages of 12 to 14 wooden features (5RB53 and 5RB4543), three smaller sites of one to eight features (5RB129, 5RB530, and 5RB563), and an isolated single utility pole (5RB64). As all of the features at 5RB563 were previously recorded, and only the last three remaining undocumented features at 5RB53 were recorded during this phase, a total of 21 wooden features were newly recorded including 12 wickiups, four utility poles and racks, two pole caches, and three firewood piles (Table 7). A brush and wire fence that runs through site 5RB129 has been determined to be of historic origin and was not recorded as an aboriginal feature.

Two additional wooden feature sites that had been fully documented during Phase IV, 5RB568 and 5RB2624, were revisited in 2008 and 2009 for the purpose of collecting

dendrochronological and luminescent samples, and the results of these investigations are reported herein.

Additional investigations of wooden features from non-Colorado Wickiup Project activities by DARG and its affiliate, Grand River Institute, are discussed in the section entitled "Aboriginal Wooden Feature Sites from Ancillary Projects" and the quantifiable data from these ancillary projects has been added to the totals in Table 7.

Descriptions of each site and evaluations of site significance follow. The UTM data for the cultural resources are found in Appendix A. Table A-1 in that appendix provides location information, and also in that appendix are USGS Quad maps showing individual site locations. Appendix B contains lists of collected artifacts including their location data. Detailed information for the Phase V resources is provided in Appendix H, which includes OAHP Reevaluation**,** Management, and/or Prehistoric Component forms for each site and Aboriginal Wooden Feature Component Forms for the wooden features. Forms are *not* provided for those resources recorded as a part of the ancillary projects not officially part of the Colorado Wickiup Project. These records are also available at the White River BLM field office and the OAHP. Data from both Phase V and the auxiliary projects has been integrated into the comprehensive Colorado Wickiup Project data which is summarized in Table 7.

Review of Site Significance

The National Historic Preservation Act of 1966 (NHPA) directs federal agencies to evaluate the significance of recorded cultural properties and their qualifications for inclusion in the National Register of Historic Places (NRHP). The statements of significance included in this report are field assessments to support recommendations to the BLM and State Historic Preservation Officer (SHPO). The final determination of site significance is made by the controlling agencies in consultation with the SHPO and the Keeper of the Register.

The Code of Federal Regulations was used as a guide for the in-field site evaluations. Titles 36 CFR 50, 36 CFR 800, and 36 CFR 64 are concerned with the concepts of significance and historic value of cultural resources. Titles 36 CFR 65 and 36 CFR 66 provide standards for the conduct of scientific data recovery activities. Finally, Title 36 CFR 60.6 establishes the measure of significance that is critical to the determination of a site's NRHP eligibility, which is used to assess a site's research potential:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance 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 history; or b) that are associated with the lives of persons significant in our past; or c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a

> master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d) that have yielded, or may be likely to yield, information important to prehistory or history.

Due to the fragile and ephemeral nature of aboriginal wooden features, the relative lack of detailed documentation and study of such resources, and their significant potential to yield valuable information regarding the prehistory, protohistory, and early history of Colorado's aboriginal cultures, a majority of the sites that contain such features are recommended as eligible to the National Register of Historic Places (NRHP) and Colorado's State Register of Historic Places. "Any potential Ute household site from any phase of cultural change should be eligible for the National or State register unless it has been significantly degraded" (Baker, Carrillo, and Spath 2007:85). Protection and preservation of these resources is paramount. In 2003, Colorado Preservation, Inc. listed "Native American Arboreal Wickiup and Teepee Sites" as one of *Colorado's Most Endangered Places* due to the ongoing impacts of vandalism and natural degradation.

Table 1, below, presents summary descriptions and evaluations of the cultural resources recorded during Phase V of the Colorado Wickiup Project and the supplemental DARG and Grand River Institute projects. Of the ten sites described in this report (not including the two sites that were revisited solely for the purpose of collecting chronometric samples and the one site that was determined to be of historic, non-aboriginal affiliation), nine have been field-evaluated as "Eligible" for the NRHP (5RB53, 5RB129, 5RB230, 5RB563, 5RB4543, 5ME974, 5ME16097, 5MF6511, and 5RB509), and one (5RB64) as "Not Eligible".

Discussion of potential NRHP eligibility for the proposed Yellow Creek Archaeological District is presented in the "Discussion and Synthesis" section of this report.

Table 1: Summary of Cultural Resources Recorded by Phase V of the Colorado Wickiup Project and Ancillary Projects

Site Number	Description	Eligibility
Colorado Wickiup Project Phase V Sites (Yellow Creek District)		
5RB53	"Duck Creek Wickiup Village" 3 wooden features (2 wickiups and 1 utility rack) (of the 14 total features on the site, these are 3 of the 4 partially recorded features discovered during Phase IV; the fourth feature has been determined to be non-cultural)	Eligible
5RB64	1 wooden feature (1 utility pole)	Not eligible
5RB129	1 wooden feature (1 wickiup)	Eligible
5RB530	4 wooden features (2 wickiups, 1 utility pole, and 1 firewood cache)	Eligible
5RB563	"Ute Hunters' Camp" excavation (8 wooden features were fully recorded during Phase IV)	Eligible
5RB568	Fully recorded during Phase IV site was revisited to collect dendrochronological samples (4 wooden features were fully recorded during Phase IV)	Eligible
5RB2624	"Rader's Wickiup Village" Fully recorded during Phase III site was revisited to collect luminescent samples (30 wooden features were fully recorded during Phase III)	Eligible
5RB4543	12 wooden features (7 wickiups, 1 utility rack, 2 pole caches, and 2 firewood piles)	Eligible
Ancillary Projects by DARG and GRI (2008 and 2009)		
5ME974	partially excavated by Grand River Institute in 2009 2 wooden features (1 brush windbreak and 1 bark-pealed piñon tree)	Eligible
5ME16097	"The Horsethief Canyon Structural Clearing" partially excavated by Grand River Institute in 2008 no extant wooden features (a cleared habitation area, possibly a wickiup floor, was excavated)	Eligible

Site Number	Description	Eligibility
5MF6511	"The Yampa Valley Overlook Site" 15 historic "cedar" fence post caches and prehistoric camp (previously identified as possible wickiups)	Eligible
5RB509	"The Perforated Can Site" partially excavated by Grand River Institute in 2008 3 wooden features (1 wickiup and 2 utility poles)	Eligible

PART II: TEST EXCAVATION OF 5RB563, THE UTE HUNTERS' CAMP

Overview and Background of Investigations

Site **5RB563, the Ute Hunters' Camp**, was revisited by the Colorado Wickiup Project as part of the Phase IV activities in 2007. The site is at the original map location of a small, 10m diameter concentration of flakes and two lithic tools recorded in 1973 by Mariane Cassity (of undetermined affiliation) as 5RB59. Another site, 5RB563, was recorded by Alan Olson of the University of Denver in 1975 and placed on the USGS map directly to the south of 5RB59 on the same ridge top and described as containing "3 fallen wickiups" and a variety of lithic tools. It remains unclear as to whether Olsen was referring to the wooden features as recorded herein and in the Phase IV report, however, it would be unlikely that a researcher aware of the potential for wickiups in the area, such as Olsen, could miss noticing at least the standing poles of Features 1 and 3.

As no sites matching either original site description could be located by the current project at either map location, it was jointly decided by DARG and Michael Selle, BLM archaeologist from the White River Area Office, to re-locate the map location for 5RB563 to that described herein, to utilize the previously existing site number for the "wickiup" site, and to incorporate site 5RB59 into the site.

No wooden features of any description were noted by Cassity for 5RB59; not surprising in that numerous ephemeral features such as these have been overlooked by archaeologists in the past, and continue to be. It is also likely, considering the normal practices of the time, that most or all of the lithic flakes and tools were collected in 1973 and 1975, and therefore would not have been present on the site at the time of the revisits by the CWP. The original site form for 5RB59 mentions that a snub nose scraper and a "midsection" (biface?) were found. The nine lithic flakes and tools recorded on the site by the CWP possibly represent artifacts mentioned, or overlooked, by Cassity.

The following description of the site is taken from the CWP Phase IV report (Martin and Ott 2009):

> Although undoubtedly not unique as a site, [5RB563] is certainly rare in the archaeological record–nothing comparable is known to these researchers within the state. The range of activities represented (bullet reloading, meat roasting or smoking, living in wall or "cabin" tents, horse tending, hide or meat drying, possibly leather working, the making of expedient tools from food cans and other metal fragments, etc.) is highly unusual and serves as a rare insight into life at a Protohistoric or Early Historic aboriginal hunting camp.
>
> The site is an open encampment consisting of aboriginal

> wooden features including two apparent wall tent localities, utility poles, piles of firewood in association with large game processing areas, and an undisturbed locus (apparently within one of the tents) where bullets were being readied for reloading and possibly leather was being processed. In addition, the site has produced a wide variety of metal and other trade ware artifacts including numerous spent and unspent bullet primers, bullet lead and a casing, decorative brass or bronze items, horse tack, a shanked ball or "shoe" button, small iron punches or awls, thin plate glass fragments possibly from a broken mirror, food cans, numerous identifiable burnt and unburnt bone fragments including deer and horse, ceramic and non-ceramic buttons, and a series of expedient cutting or scraping tools manufactured from food cans and other metal fragments–including a gun powder scoop fashioned from the lid of a gun powder tin.
>
> The camp is located [in a very slight saddle] on a ridge top at an elevation of 6460 feet. The vegetation consists of a piñon/juniper forest with virtually no understory (a few sagebrush, prickly pear, and sparse bunch grasses). The soil consists of brown to light-brown sandy loam of varying depths of up to 25 or more centimeters. The site measures 60m north-south by 35m east-west. The cultural affiliation of the site is apparently Protohistoric/Early Historic Numic (probably Ute however possibly Shoshone), dating to AD1879 based on a tree-ring cut date from Feature 3.

At that time all eight wooden features were photographed, measured, and placed on the USGS map with the GPS unit, and an Aboriginal Wooden Feature Component Form was completed for each. A metal detector was utilized to scan the entire site area and 67 field specimens were collected in the form of historic trade goods, lithic artifacts, dendrochronological samples, and burnt and unburnt deer and horse bones. Table 2 in this report provides a complete listing of the collections from both Phase IV and the current Phase V (Table B-1 in Appendix B provides a similar list with UTM information). One of the woodpile features, Feature 5, was determined by tree-ring dating to be of modern origin and not affiliated with the aboriginal occupation at the site. This feature has been removed from the new site maps.

In May and June of 2009, a CWP crew returned to 5RB563 for the purpose of conducting test excavations to further analyze the nature and extent of the cultural remains. A datum point was established near the center of the site 7m due west of the temporary mapping datum that had been established at Feature 6 in 2007. A metric grid system, oriented to true north, was constructed from datum for the establishment of the excavation units utilizing a Brunton pocket transit and metric tapes. True north was established using a declination of 12.5° west of magnetic north. The datum point was plotted on the map with the Trimble GPS unit, and marked with a metal pin and aluminum write-on tag. Additional mapping points were established throughout the site that were also marked with metal pins. Several of these

pins, including selected ones immediately adjacent to the various excavation units, were left in place for future orientation in the field if necessary.

As established by the goals and orientation of the research design and scope of work, the placement of test trenches was based on the location of the wooden features as well as surface and metal detected artifacts as indicators of potential subsurface cultural fill. No systematic or randomizing strategy was employed in the selection of the excavation units.

An intensive surface map was constructed as excavation and metal detection proceeded. As the accuracy of GPS is far too inaccurate for the mapping of artifacts as dense and closely-spaced as those at this site, the site map was constructed utilizing a Brunton pocket transit and metric tapes, showing the location of all test units, artifacts, and cultural features, employing the project's site plan from the Phase IV recordation as a foundation (Figures 3 through 8).

The entire site area was also re-scanned with the project's new White's Model M6 metal detector which proved to be significantly superior to the unit utilized in 2007 in terms of locating and isolating small metal objects. Nearly 500 artifacts, of metal and other materials, were located on or near the surface through the efforts of both metal detection and the screening of excavated fill (Tables 2 and B-1). A few newly discovered artifacts were found outside of the previous site boundary, as defined in Phase IV, and the boundary was expanded to an area measuring 75m east-west by 60m north-south (Figure 3). Based on the finding of several previously unrecorded artifacts, the site size has been increased to 75m east-west by 60m north-south.

[FIGURE 3 HERE: SITE MAP OF 5RB563]

Excavation was conducted with trowels, brushes, and whisk brooms. In search of cultural materials, all excavated soil was sifted through either fine-mesh window screen inserts for standard shaker screens, or a series of soil sieves in which the smallest mesh was 1mm (0.0394"). Data was recorded as to which screening system was utilized for each level of each unit in order to document differential results, if any. It was determined early in the excavation phase that any less-fine mesh screens, including 1/8th-inch, would fail to isolate the extremely small "micro" seed beads that were present on the site.

Excavated specimens were collected by trench provenience, or fractions thereof, and by natural and arbitrary stratigraphic levels. No single excavation provenience measured larger than 50cm by 1m. All artifacts found *in situ* were indicated on the plan map, recorded as to depth below present ground surface (pgs), and bagged as individual field specimens

(FSs). Other artifacts and ancillary specimens were bagged in aggregate, and labeled by unit and level, or feature number. Occasionally, as warranted, artifacts were bagged and labeled as portions of excavation units, such as "TT6-C, North ½".

Dendrochronological samples, charcoal, and bone fragments were collected as well as all lithic and historic trade-ware artifacts. Bulk soil/flotation samples and pollen samples were collected as warranted. The only artifact not collected, and left in place on the site surface, is the netherstone, FS1, near Feature 6 (Figure 11). The results of the dendrochronological analysis are discussed in this section and reported in full in Appendix C. Although radiocarbon specimens in the form of charcoal were collected throughout the excavations, none are being processed at this time as the results of the dating would be unlikely to add to the interpretation of the cultural resources of such a recent occupation, especially one that is so precisely dated by dendrochronology and historic artifact analysis. In the laboratory, artifacts were sorted according to morphological category and material type. Tables 2 and B-1 provide a list of the collected artifacts and samples. The analysis of the faunal bone is in progress and will be reported upon completion.

As discussed in the "Field and Analytic Methodology" section, the test excavations consisted of a series of eight 50cm-wide test trenches; Test Trenches TT1 through TT8 (Figure 4). The trenches ranged in length from 50 centimeters to 6 meters and a total of 14.5 square meters was excavated, in addition to the soil that was sifted through at the numerous metal-detected artifact locations (an average of roughly 500 cubic centimeters, or two cups, per incident). Each individual metal-detected artifact was mapped in place and assigned a Field Specimen (FS) number with the exception of several clusters of two or more specimens within 10cm of one another that were collected in aggregate.

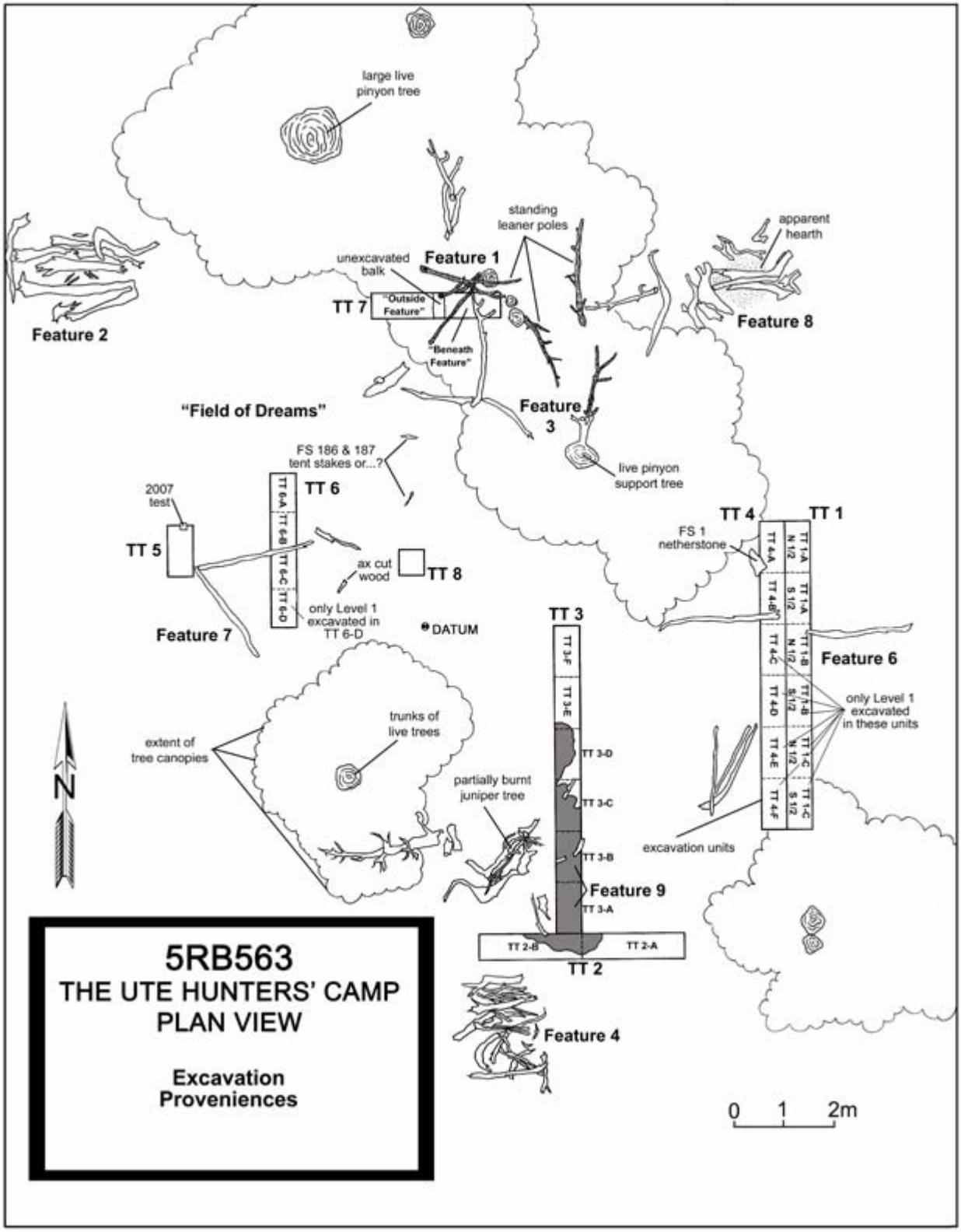

Figure 4. Excavation Proveniences at 5RB563, the Ute Hunters' Camp

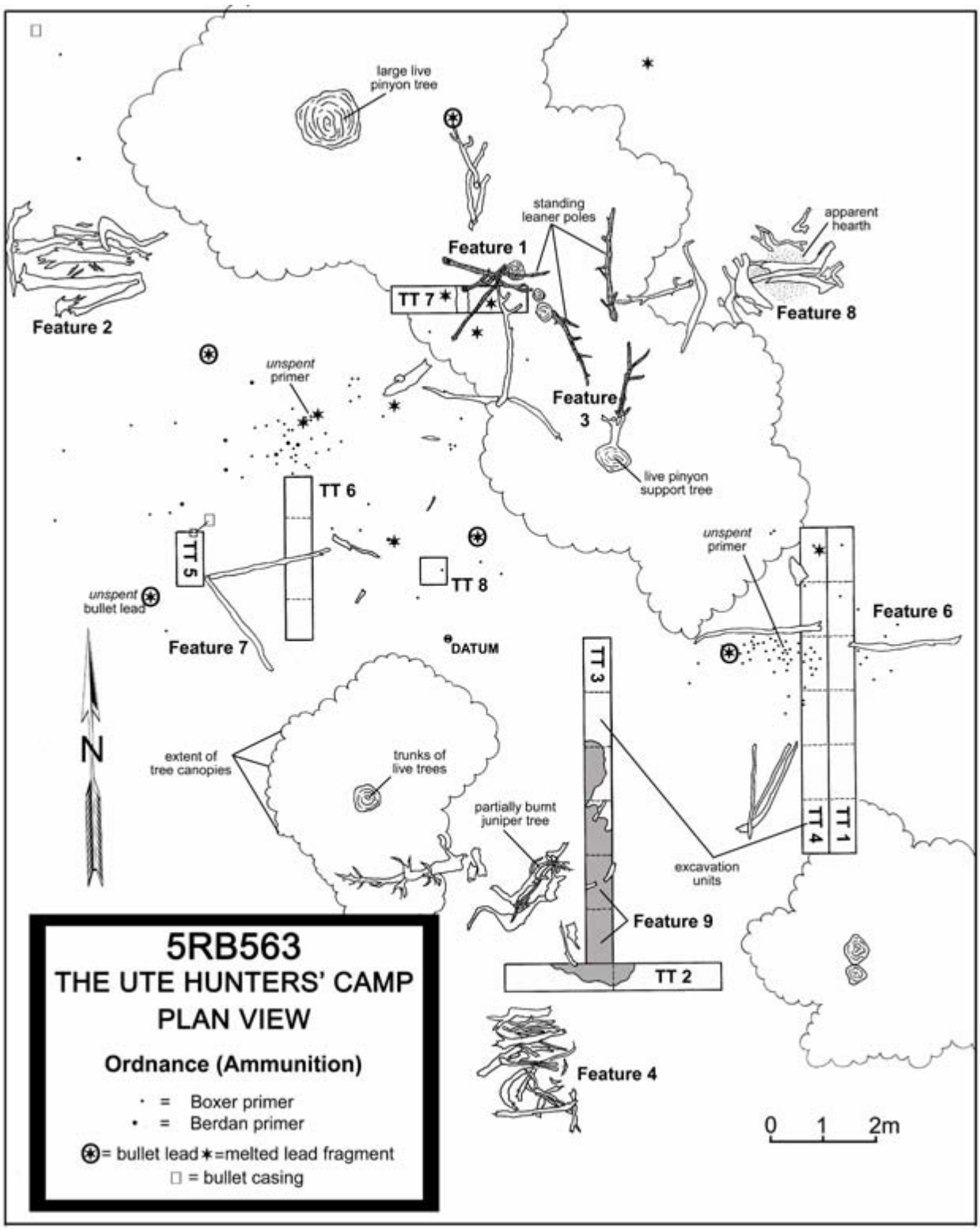

Figure 5. Location of Ammunition Components at 5RB563, the Ute Hunters' Camp

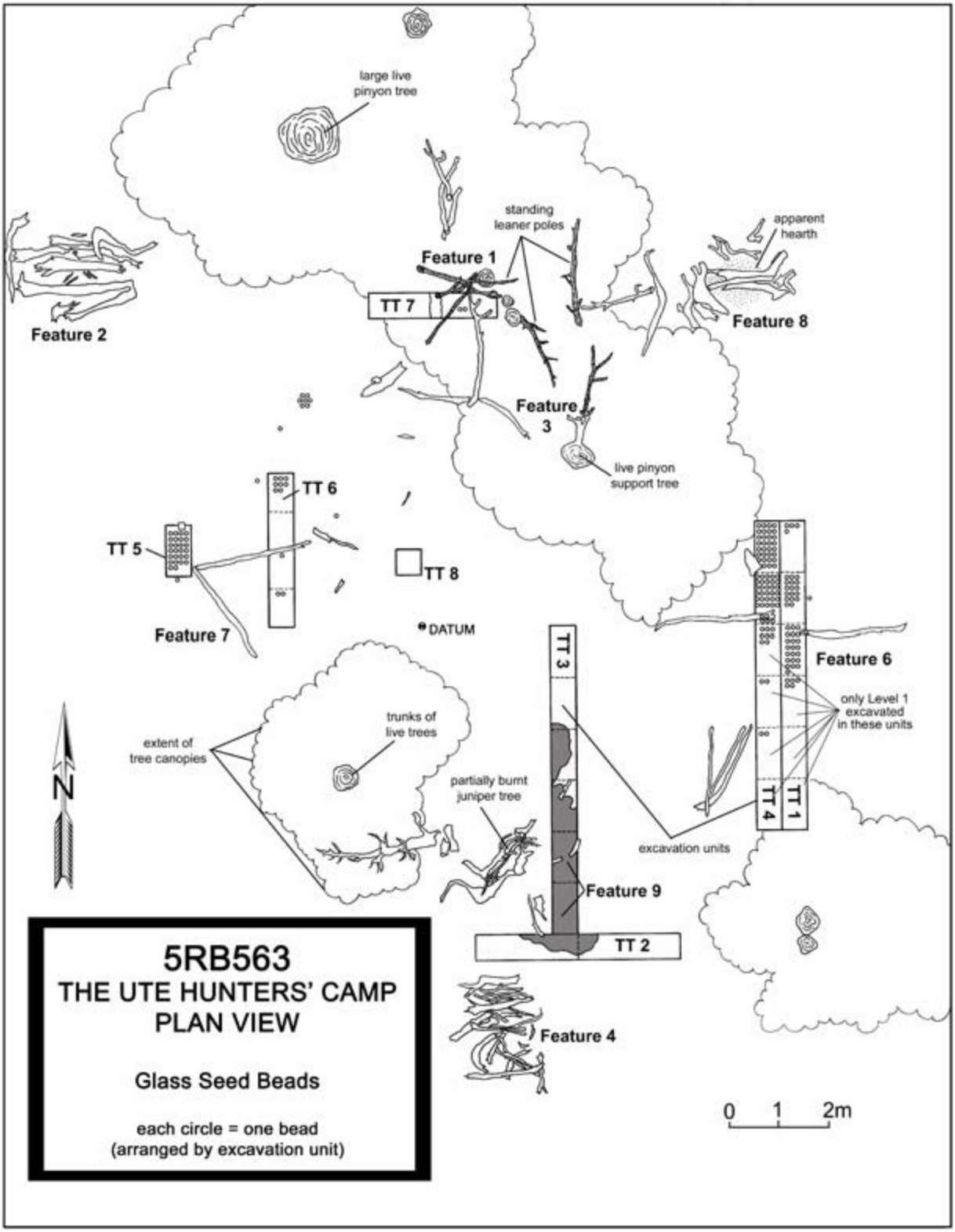

Figure 6. Location of Glass Seed Beads at 5RB563, the Ute Hunters' Camp

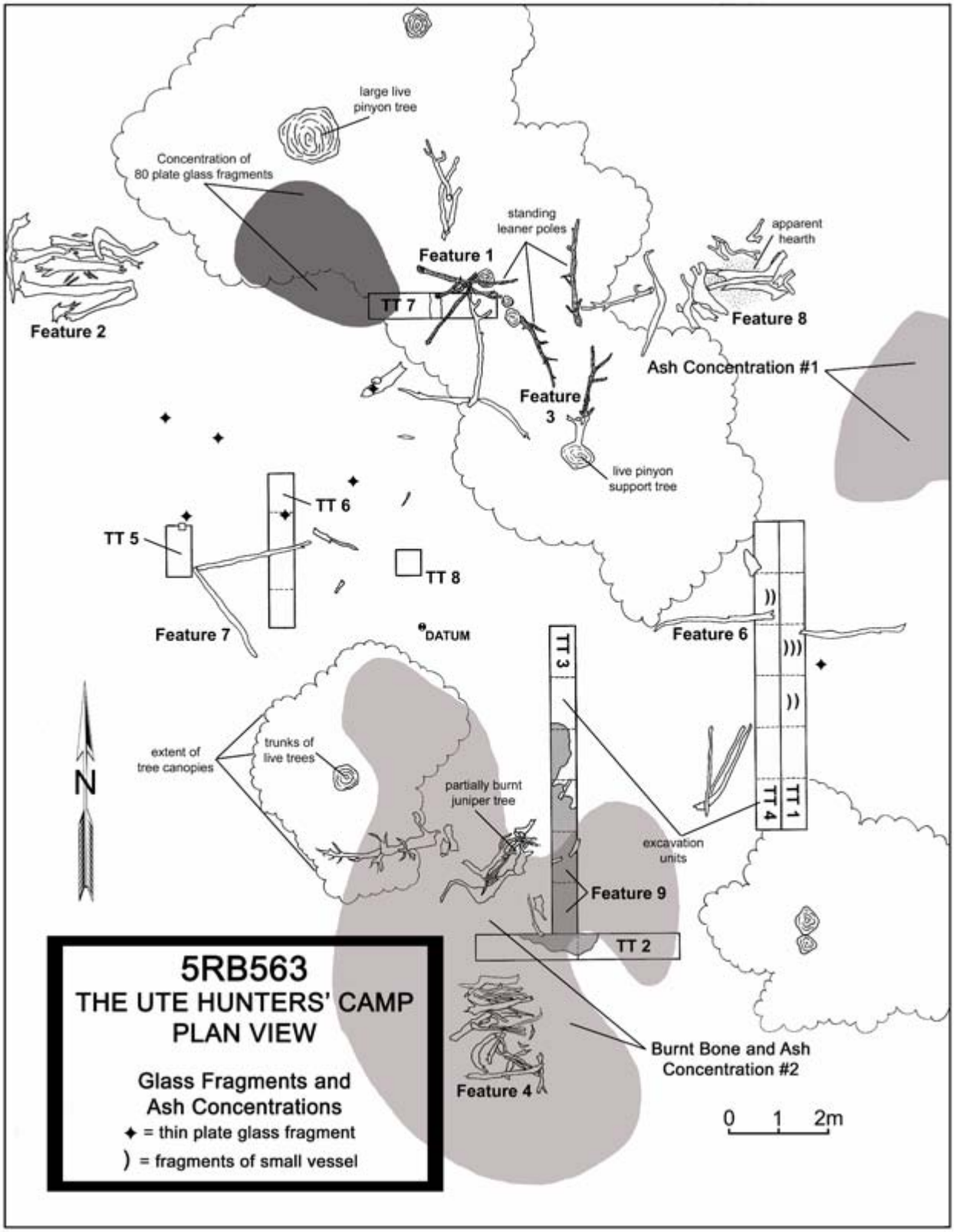

Figure 7. Location of Glass Artifacts and Ash at 5RB563, the Ute Hunters' Camp

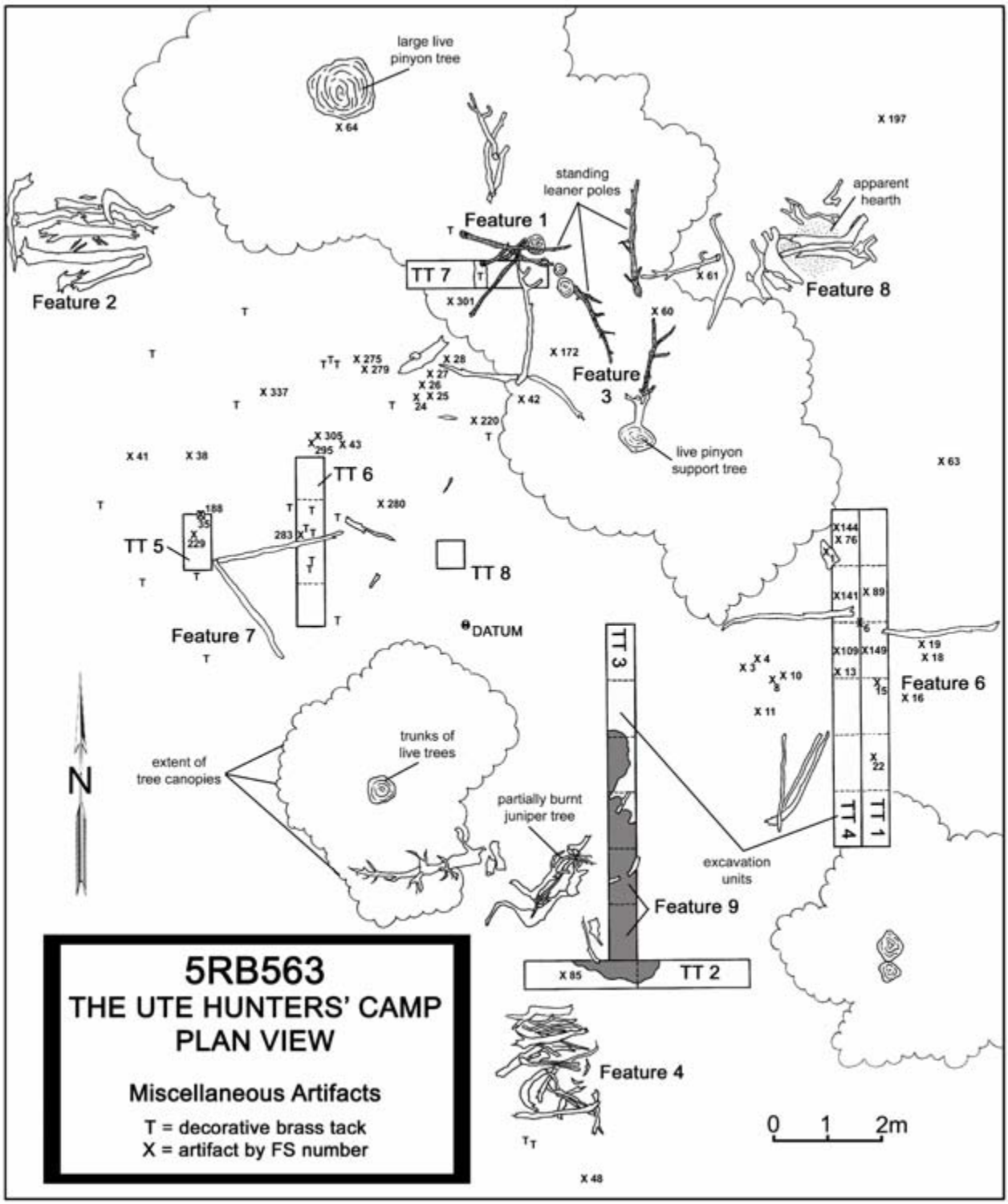

Figure 8. Location of Miscellaneous Artifacts at 5RB563, the Ute Hunters' Camp

Soil Deposits and Stratigraphic Notes

Throughout the tests, Level 1 was defined as the shallow, unconsolidated, light brown sandy loam that could be easily removed with a paint brush or light whisk broom. It ranged from 2cm to 5cm in depth below the present ground surface (PGS). Level 2, directly beneath, was undifferentiated from Level 1 with the exception that it was notably more consolidated and required trowels for removal. In all excavation units with the exception of Test Trenches 5 and 6, which produced deeper sediments, the base of Level 2 was defined by the contact with layered, decomposing sandstone bedrock at depths ranging from 7cm to 9cm. Although Levels 1 and 2 each produced approximately the same volume of fill, a majority of the artifacts were recovered from Level 1, both within the excavated and screened fill, and from the results of the metal detection activities.

Test Trenches 1 and 4 were opened side-by-side to further determine the nature of the fill at Feature 6, a bullet reloading activity area within the confines of where a canvas wall tent had apparently stood. Numerous artifacts of several classes were recovered here from Levels 1 and 2, to a depth of up to 7cm below PGS (Figures 5 through 8 and Tables 2 and B-1).

Test Trenches 2 and 3 were opened for the purpose of investigating the horizontal and vertical extent and nature of Concentration 2, a large surficially-identified area of ashy soil, charcoal, and burnt faunal material. Within these trenches, Layer 1 consisted of up to 5.5cm of burnt and calcined (cooked) bone fragments, charcoal, and ashy soil of varying density but concentrated within Feature 9, an area of oxidized and hardened soil that formed the base of the Concentration 2 ash layer. Similar results were found in Test Trench 8, to the northwest, and the ash, charcoal, and bone there, although potentially a separate thermal feature, possibly represent an extension of Feature 9. Due to the dearth of artifacts recovered from TT 2 and TT3 (only a single piece of red chert angular shatter) and the total lack of response from the metal detector in the area of Concentration 2, only Level 1 was cleared from these units.

The sediments were notably deeper in Test Trenches 5 and 6, within the open and highly productive activity area that became known by the crew members as the "Field of Dreams" due to the appreciable number of metal detector signals there (Figure 4). Bedrock in these proveniences was not contacted until 11cm to 26cm below PGS. Below Level 1, excavation was conducted using arbitrary levels of 2 cm to 10cm in an attempt to ascertain the deepest level at which artifacts were found. Eventually it was determined that cultural materials were present at all depths of TT5 and TT6. The fill in these units was unstratified brown sandy loam with the exception that the density and size of sandstone pebbles increased gradually as depth increased. From the undifferentiated nature of the soils, and the consistency of the historic artifacts found at all depths, it is evident that the resources from the deeper levels are from the same occupation or occupations represented on the site surface.

The western portion of the Field of Dreams locus slopes gradually to the south and west and serves to drain much of the slight saddle in which the site is situated. A graphic demonstration of why the alluvial deposits are deeper at this location, and how quickly the

artifacts there could become buried, was presented to the crew when they arrived at the site on the morning of June 3, after a weekend of thunderstorms in the area. Sheet wash from the north and west had filled the 18-26cm deep Test Trench 5 to the brim and overflowed out of the south end of the unit, leaving the trench half full of mud and duff. This also served to demonstrate the potential for the movement of artifacts, horizontally and vertically, from their original contexts within the Field of Dreams, making the actual level of the original living surface in this area highly speculative.

Test Trench 7 was opened beneath and to the west of Feature 1, the 3-pole utility rack at the northeast edge of the Field of Dreams. The western half of the trench—"outside" of the wooden feature—contacted the sandstone bedrock layers at 9cm. The eastern half, beneath the feature poles and the canopy of the support tree, was highly organic and covered with duff, and excavation was curtailed at an arbitrary depth of 10cm due to lack of productivity, lack of metal detector response, and the end of the last day on the project.

Results of Excavation and Metal Detection

Three of the seven aboriginal wooden features were selected for testing during this phase of the investigations: Feature 1 (a 3-pole utility rack), Feature 6 (a wall tent), and Feature 7 (a possible wall tent). In addition, Concentration 2, a large area of charcoal and burnt bone, was tested, resulting in the discovery of Feature 9 (a large *in situ* thermal feature). The tests at the Feature 7 location provided an opportunity for investigating the subsurface deposits at the Field of Dreams activity area as well. The descriptions of the findings are presented below. The cover illustration of this report by Holly "Sonny" Shelton (also reproduced in the feature descriptions), provides an artist's interpretation of life at the Ute Hunters' Camp during its occupation in 1879 to 1881, including views of Features 1 and 6.

Feature 1 is a standing three-pole utility rack. The initial impression of the feature is that it is a classic, conical, leaner-style wickiup. Closer inspection, however, reveals that the central pole has actually been placed closer to the trunk of the living piñon support tree than the outer two poles, which therefore would have encroached onto what would have been the floor space of a sleeping shelter (Figure 9 and Plate 1). In addition, there is an untrimmed branch on this central pole that extends into what would have been the interior space of a wickiup. It is situated near the north end of the main activity area of the site, beneath the canopy of its support tree and several other live piñon trees. Feature 3, a grouping of three additional standing utility poles, is beneath the same canopy, immediately to the east (Figure 4).

The butt of the largest pole gives the appearance of having been harvested by metal ax, and a dendrochronological sample from this pole, during Phase IV of the project, produced a non-cutting date of AD1870 (several of the outer rings are missing). Considering the deer processing activities represented at the site, likely functions for this feature, and the nearby utility poles of Feature 3, are animal hide preparation, and/or meat drying. There are several

other branches resting on the ground to the south of the standing poles which may or may not be additional cultural poles. It is quite likely that Feature 1 is one of the structures that was originally recorded as a "fallen wickiup" by Olson in 1975. A full description of the quantifiable aspects of the feature is presented on the *Aboriginal Wooden Feature Component Form* in Appendix B of the Phase IV report (Martin and Ott 2009) and will not be reproduced here.

One or more pole "leaners" such as this one are common on aboriginal wooden feature sites, many of which provide no indication that they are the remains of wickiups or brush shelters. It is evident that these poles were utilized by Native Americans for a variety of purposes ranging from hide preparation; drying meat and other foodstuffs; suspending clothing, bedding, horse tack, and other personal items off of the ground; and so forth. One suggestion (Brian O'Neil, personal communication) is that some could even have been directional "sign posts" left for absent group members when the occupants move to a new campsite locality. In addition, many of these, especially those propped up close to the trunks of their support trees, appear to be simply caches of unused feature poles being stored for future use.

Figure 9: Feature 1 Interpretation

Test Trench 7 was opened at Feature 1 in order to test the nature of the fill beneath and in front of the utility rack. A 50cm-wide, 2.5m-long trench was cleared for a total of 1.25 square meters of fill (Figure 4). The trench outside of the feature, to the west, was excavated to the contact with bedrock at 9cm depth. Beneath the utility rack poles, the eastern half of the trench was halted at an arbitrary depth of 10cm due to lack of productivity, lack of metal detector response, and the end of the last day of the project.

Numerous artifacts and ancillary specimens were collected from the immediate vicinity of Feature 1 as a result of surface finds, metal detection, and excavation as summarized on the field specimen lists from both 2007 and 2009 (Tables 2 and B-1). These items include a gun powder tin (the top of which was formed into a powder scoop found elsewhere on the site), a baking powder can, a can lid, a brass or bronze punch tool, miscellaneous metal fragments including one that appears to have been used as a needle or awl, nine spent Boxer primers, a (gun?) screw, four decorative brass tacks and fragments, five pieces of melted lead presumably from bullet casting activities, a concentration of numerous fragments of thin plate (mirror?) glass, an Eqqus (horse) fibula, two glass seed beads, tooth enamel, a bone fragment,

and occasional pieces of charcoal.

Feature 6 is an apparent wall tent location that consists of two end-to-end, limbed poles, apparently of juniper wood, resting on the surface of the site, and three other possibly cultural poles resting in a "collapsed tripod" shape two meters to the south (Figure 4). The most likely interpretation is that the two end-to-end poles represent anchors for the bottoms of the door flaps of a canvas wall, or "cabin", tent. The 60cm gap between the ends of the poles appears to indicate the location of the center of a north-facing doorway where a (no longer present) vertical tent pole would have stood.

Various designs of canvas tents were available and utilized by the Native Americans, including the Ute, during the fur trade and reservation periods in the west. Some were simple A-frame "wedge" tents (typically supported by a single vertical pole at each end), or "pyramid" tents suspended from an exterior A-frame of poles, but more common were the vertical-sided "wall" tents (Figure 10). These also characteristically had a vertical support pole at each end, a third interior ridge pole, and, occasionally, additional exterior horizontal side poles supported at each end by short uprights (PantherPrimitives.com 2004). References and photographs exist showing Colorado Utes using canvas tents (Plate 2), as well as brush shelters and tipis, as primary residences into the 1920s and later (Quintana 2004).

Figure 10: Feature 6 Interpretation

The presence of the end-to-end poles on the site at the time of occupation, and in their present configuration, is unquestioned based on the fact that a high percentage of the metal and glass artifacts are situated immediately adjacent to, and south of, the wooden elements (Figures 4 through 8 and Plate 3). The artifacts to the south of the poles—primarily spent primers and glass seed beads but also a variety of other objects—evidently indicate the interior of the floor-less tent. The interpretation of this feature as a canvas tent was virtually assured by the finding of a deteriorated metal grommet fragment (FS81) approximately 7m to the southeast of the poles (Plate 8).

In total, 90 artifacts were found in association with Feature 6 (Plates 7 through 13). With the exception of seed beads, 71 metal and glass artifacts (84%) were found in what was presumably the interior of the tent, and 14 on the exterior. This is especially evident in Figure

5, which illustrates the locations of where spent bullet primers (and a .40 caliber spent bullet lead) were found; 52 in the tent "interior" (85%) and only nine on the "exterior". Similar to studies of chipped stone debitage on prehistoric sites, from the double-crescent arrangement of the primers it is possible even to contrive the position of where the individual was sitting or kneeling inside the door of the tent while involved in removing the spent primers out of the bullet casings in preparation for reloading with fresh primers and newly cast leads. On the east edge of the primer concentration was also found a blunt-ended metal tool fragment (FS13) that has been interpreted as a possible punch for removing the spent primers, although this job was typically accomplished with a lever or "de-capper" device manufactured for that purpose.

The reverse is true for the tiny glass seed beads, several of which have been categorized as "micro" beads (see Discussion and Synthesis section); a majority of them (83 out of 128 or 65%) were found in the screened fill of Test Trenches 1 and 4 to the *north* (exterior) of the tent poles, and 45 (35%) were on the south (Figure 6). This dichotomy, however, is likely due to the fact that a majority of the excavation units to the south of the poles were only cleared to the upper contact with Level 2, whereas the units to the north were cleared to bedrock (an additional one to four centimeters). Undoubtedly, numerous additional beads remain *in situ* in Level 2 within Test Trenches 1 and 4. In fact, considering the number of similar beads recovered from the excavations elsewhere on the site (in Test Trenches 5, 6, and 7) as well as on the site surface, it can be inferred that thousands of such artifacts remain in the soil at 5RB563.

Numerous other artifacts were found in direct association with Feature 6 as well (Figures 7 and 8). In what has been interpreted as the tent interior were found five fragments of clear, thin, glass from a tiny vessel such as a vial; a fragment of plate (mirror?) glass; a ceramic "Prosser" button; a ball "shoe" button; a jingle from a Spanish style horse bridle; an iron fragment (possibly horse tack); three metal leather-working and/or bullet-reloading punches or awls; three fragments of brass or bronze bands—two with stamped decorative designs; a tightly rolled decorative brass or bronze strip; and two brown chert micro flakes (Plates 7 through 13). Again, it is predictable that additional non-metallic artifacts such as plate and vessel glass remain unexcavated within Level 2 to the south of the feature poles.

To the north of the Feature 6 poles, immediately outside of the apparent doorway of the tent, were found a metal button; two fragments of the thin glass "vial"; a melted fragment of lead; a metal (copper?) wire fragment—blunted on one end and snipped-off at the other; two obsidian flakes; and a sandstone netherstone.

This last artifact (FS1) fits the definition of "netherstone" as a generic bottom stone against which substances or items are worked or altered that cannot be defined by one of the subsets such as metate, mortar, lapstone, anvil, etc. (Adams 2002: 98, 143). Specimen FS1 consists of a small, tabular sandstone boulder that exhibits a number of narrow gouges or cut marks on one face as if it had been used as a "cutting board" for a process involving a metal cutting tool such as a knife (Figure 11). The stone measures 54cm by 27cm by 12cm. It is

virtually the only sandstone rock on the site surface and surrounding ridge top (and by far the largest), and was evidently transported to the site from some distance away. It was found one meter to the north of the tent "door" with the utilized surface down, imbedded up to 5cm into the fill, and resting atop the spalled sandstone bedrock layer at the base of Level 2. Lichens had formed on the upper, exposed surfaces of the stone. The 15 identifiable scratch marks measure 1mm in width at their widest and taper to 0.5 to 0.3mm wide at the ends. They range in length from 1cm to 13cm and all but one are generally parallel to each other. The surface of the netherstone is uneven and "bumpy", however it appears as if the area in the vicinity of the cut marks has possibly been slightly ground on the raised areas, particularly in one area measuring 5cm in diameter near the center of the worked face. Additional apparent battering marks and unifacial flake scars are present on one end of the artifact.

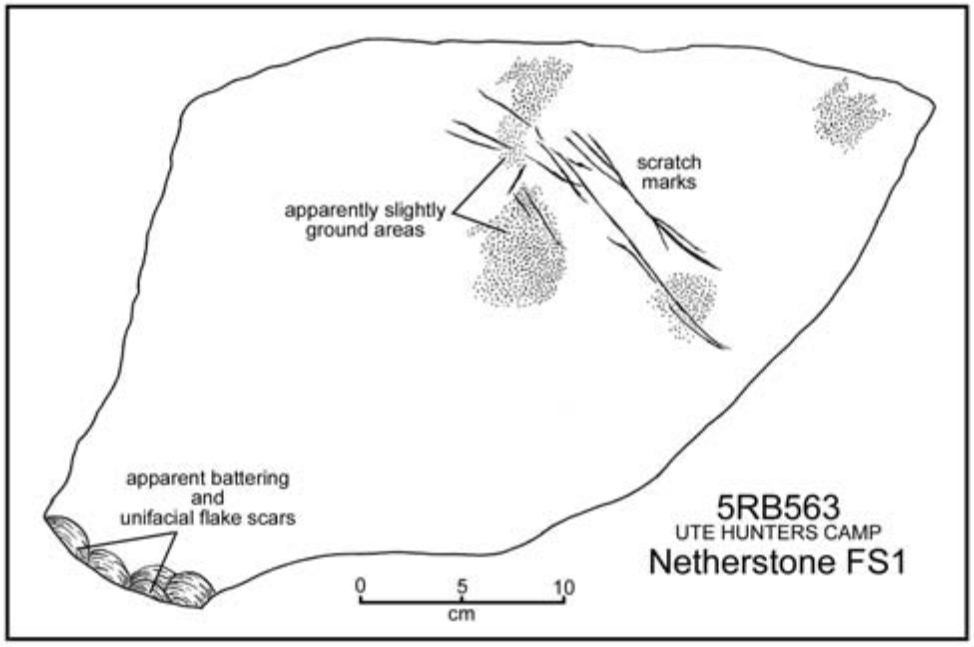

Figure 11: FS1, Netherstone

Test Trenches 1 and 4 were opened, side-by-side passing north-south through the apparent doorway of the wall tent, in order to ascertain whether the deviation between the artifact density to the north and south of the feature poles was substantiated by the sub-surface findings, to determine if a "floor" or living surface could be defined, and to search for indications of a tent pole "post hole" in the presumed entryway.

The resultant 1m-wide, 6m-long excavation unit was cleared for a total of 6 square meters of removed fill. The unit extended two meters to the north of the poles and 4m to the south (Figure 4). The northern portions of both trenches (TT1-A, TT1-B, TT4-A, and TT4-B) were cleared to the contact with bedrock at depths ranging from 5cm to 7cm. The remainder

of both trenches (TT1-B, TT1-C, TT4-C, TT4-D, TT4-E, and TT4-F) was cleared only to the upper contact with Level 2 at 3cm to 4cm due to a lack of metal detector response after the removal of Level 1 and time constraints due to the labor-intensive nature of the investigations. As discussed above, there undoubtedly remain additional artifacts *in situ* in Level 2, primarily in the form of seed beads.

Feature 7 consists of another arrangement of apparently cultural poles resting on the site surface eight meters to the west of Feature 6. The two main poles lie in a "V" shape with their ends meeting at a 65° angle (Figure 4). A third, shorter, pole is situated immediately to the northeast. It was hypothesized in the Phase IV report (Martin and Ott 2009) that these wooden elements were possibly the remains of a second wall tent location.

Test Trenches TT5 and TT6 were established in order to test this hypothesis (Figure 4) and, although these excavations were highly productive in terms of artifact recovery and insights into the nature of the alluvial deposits in the Field of Dreams locus, the nature and purpose of the wooden elements remains unresolved.

TT5 consists of a 50cm-wide (east-west), 1m-long (north-south) test unit that was opened immediately to the northeast of the juncture of the wooden elements and to the south of where Field Specimens FS34 (a bullet casing) and FS35 (a hard rubber button) were recovered in 2007. The casing was found at a depth of 11cm below pgs, as a result of a signal from the metal detector, which was the initial indication that the soil deposition in this part of the site was significantly deeper than elsewhere. The excavation at TT5 produced numerous seed beads (Figure 6), a brass disk button (FS229), and an Elko series lithic projectile point (Figure 8 and Plates 7 through 13).

TT6, also 50cm-wide east-west, was oriented across one of the wooden elements for purposes similar to those at Feature 6: to ascertain whether a deviation between the artifact density to the north and south of the feature pole existed, and to determine if a "floor" or living surface could be defined. This 4m-long trench extended two meters to the north of the feature pole and two meters to the south. Test Trench 6 produced additional beads (Figure 6), a fragment of plate glass (Figure 7), several decorative brass tacks (Figure 8), and a single red chert flake (Plates 9 and 10).

TT5 and the northern three meters of TT6 were cleared to the contact with bedrock, at depths ranging from 11cm to 26cm. Only Level 1 was removed from TT6-D, to the upper contact with Level 2 at 3cm to 5cm below pgs. A thorough description of the nature of the sub-surface fill in TT5 and TT6 is presented above in the "Soil Deposits and Stratigraphic Notes" section. A total of one square meter of fill was removed and screened from TT5, and two square meters from TT6.

Another test, Test Trench 8, was conducted at the location of a surficial ash stain several meters to the east of Feature 7, near the southeast boundary of the Field of Dreams. It was quite apparent, from the presence of melted lead fragments on the site, that bullet leads

were being cast on the site as part of the reloading activities, and, therefore, it is assumed that one or more thermal features were present for the smelting of lead. The ash stain at TT8 was chosen for testing with this in mind, however, upon excavation of the 50cm by 50cm unit, rather than a defined feature such as a hearth, what appears to be another large burn area similar to that at Feature 9 was discovered. The only artifact recovered from within this excavation unit is a Boxer style bullet primer (Figure 5).

The entirety of both Levels 1 and 2 throughout TT8 consisted of a 4-to-6cm thick bed of ash, numerous charcoal fragments, and burnt and unburnt Odocoileus (deer) bone. It is possible that this material is simply a north-westward extension of Feature 9 as exposed in Test Trenches 2 and 3, however, further excavation would be required to verify this.

Concentration 2/Feature 9. During the Phase IV investigations, 500 or more burnt bone fragments were noted on the surface, among the charcoal fragments and ashy soil of Concentration 2. At least two adult and one newborn or full-term fetal Odocoileus (deer) were identified in the faunal analysis (Martin and Ott 2009). Numerous additional specimens of, apparently, Odocoileus bone were collected in 2009 from the surface and upper 4cm of fill. The analysis of this faunal collection is in progress and will be reported in the upcoming CWP Phase VI report.

The southern and eastern boundaries of Feature 9, the *in situ* thermal area responsible for at least a portion of the charcoal and ash in Concentration 2, were defined by the excavation of Test Trenches TT2 and TT3. The remnants of a partially burnt juniper tree rest on the ground surface to the east of Test Trench 3 that undoubtedly also produced some of the charcoal. Were it not for the burnt remains of the deer, the tree could easily have been presumed to be the sole source.

Feature 9 was defined, in contrast to the surrounding fill, by a reddening and hardening of the native soil. The large amorphous surface burn, with no readily identifiable basin, hearth stones, or other formal feature attributes, measures 10.5m north-south as exposed by TT2 and TT3, and an undetermined distance east-west (Figure 4). No artifactual materials were found within these test units, other than the bone, ash, and charcoal itself, with the exception of a single fragment of red chert angular shatter from Test Trench 2-B.

Artifact Tabulation and Analysis for 5RB563

At the Ute Hunters' Camp, combining both the artifacts recorded in 2007 and those collected during the test excavations in 2009, a total of 640 separate items were recorded as 365 separate FSs—not counting the multiple fragments in many of the bone and charcoal collections. All items, with the exception of FS1, the sandstone netherstone, were collected. Further discussion of several of these classes of artifacts is presented in the "Artifact Analysis and Interpretation" portion of the "Discussion and Synthesis" section of this report.

Of the Field Specimens, 131 are ancillary collections (55 faunal specimens—almost exclusively bone—42 samples of charcoal, 13 dendrochronological samples, 13 pollen samples, four miscellaneous unidentified botanical specimens, and four soil/macrobotanical samples) and 232 (509 individual artifacts) consist of metal, ceramic, lithic, wood, and rubber items. Two of the FSs were ultimately discarded in the lab as being non-artifactual. Individual artifact classes are discussed below.

Table 2 presents a summary of these artifacts and ancillary collections and Table B-1 in Appendix B provides UTM locations for each FS.

Table 2 : Field Specimen List from Ute Hunters' Camp (5RB563)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
Collections from 2007 Field Activities (all found on surface or within upper 5cm during metal detection activities unless otherwise noted)		
5RB563.s1	Sandstone netherstone with cut marks on one face (not collected)	Feature 6 "exterior"
5RB563.s2	Spent "Boxer" type cartridge primer	Feature 6 "interior"
5RB563.s3	Brass or bronze fragment	Feature 6 "interior"
5RB563.s4	Decorative brass/bronze band fragment with stamped decorative design and hole at one end	Feature 6 "interior"
5RB563.s5	Spent "Boxer" type cartridge primer	Feature 6 "interior"
5RB563.s6	Ceramic 4-hole "Prosser" button	Feature 6 "interior"
5RB563.s7	.40 caliber spent bullet lead	Feature 6 "interior"
5RB563.s8	Two interlocked links of a metal hook-and-eyelet bridle "jingle"	Feature 6 "interior"
5RB563.s9	Spent "Boxer" type cartridge primer	Feature 6 "interior"
5RB563.s10	Decorative brass/bronze band fragment with stamped decorative and hachure design	Feature 6 "interior"
5RB563.s11	Iron fragment (horse tack?)	Feature 6 "interior"

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s12	Spent “Boxer” type cartridge primer	Feature 6 “interior”
5RB563.s13	Blunt-ended metal tool fragment (punch for removing spent bullet primers?)	Feature 6 “interior”
5RB563.s14	Spent “Boxer” type cartridge primer	Feature 6 “interior”
5RB563.s15	Fragment of decorative brass/bronze band compressed into tight roll	Feature 6 “interior”
5RB563.s16	Fragment of brass/bronze band with hole at one end that has been split lengthwise	Feature 6 “interior”
5RB563.s17	Fragment of thin plate glass (mirror?) with residue on one surface (reflective metallic coating?)	Feature 6 “interior”
5RB563.s18	Small brass/bronze ball (“shoe”) button with wire loop shank	Feature 6 “interior”
5RB563.s19	Metal punch or awl (round at one end, squared at the other)	Feature 6 “interior” (found stuck point up against interior edge of feature pole)
5RB563.s20	Spent “Boxer” type cartridge primer	Feature 6 “interior”
5RB563.s21	Spent “Boxer” type cartridge primer	Feature 6 “interior”
5RB563.s22	Metal punch or awl with squared tang and round point	Feature 6 “interior”
5RB563.s23	Eqqus (horse) fibula	Feature 1
5RB563.s24	Flattened gun powder can (the lid was used to create a powder scoop, s41)	Feature 1
5RB563.s25	Metal fragment	Feature 1
5RB563.s26	Triangular, scored and snapped metal fragment	Feature 1
5RB563.s27	Metal food can lid	Feature 1

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s28	Baking powder can	Feature 1
5RB563.s29	Sample of nine of the larger fragments of thin plate glass (mirror?) from Plate Glass Concentration. 25 additional fragments visible on surface were left *in situ*	Plate Glass Concentration near Feature 1
5RB563.s30	Baking powder can and lid (found 12cm apart)	General site surface
5RB563.s31	Baking powder can with two holes punched in rim for holding a (missing) wire bale	General site surface
5RB563.s32	Dendrochronological core sample from metal ax cut butt of standing Pole #1	Feature 3
5RB563.s33	Dendrochronological core sample from metal ax cut butt of standing Pole #2 (middle of 3 poles)	Feature 3
5RB563.s34	.44-40 caliber cartridge casing	Feature 7
5RB563.s35	Two-hole hard rubber (?) button	Feature 7; Trowel Probe #1 (4-6cm below PGS while excavating for .s34)
5RB563.s36	Dendrochronological sample: metal ax cut butt of Pole #1	Feature 1
5RB563.s37	Brass tack	Field of Dreams
5RB563.s38	Metal tack	Field of Dreams
5RB563.s39	Metal fragment (tack fragment?)	General site surface
5RB563.s40	Spent bullet lead	Field of Dreams
5RB563.s41	Lid from gun powder can (Specimen s24) (cut and bent to use as powder scoop for reloading bullets)	Field of Dreams

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s42	Small triangular cut metal fragment (possibly used as an awl or needle?)	Feature 1
5RB563.s43	Curved fragment of brass or bronze (possibly a shell casing fragment)	Feature 7
5RB563.s44	Unburnt Odocoileus femur fragment	General site surface
5RB563.s45	Unburnt Odocoileus tibia fragment	General site surface
5RB563.s46	2 burnt Odocoileus bone fragments	Concentration 2 near Features 4 and 5
5RB563.s47	Sample of 11 burnt and unburnt Odocoileus bone fragments	Concentration 2 near Features 4 and 5
5RB563.s48	Fragment of can top with a central orifice for a pry-out lid (from the same can as Specimens s50, s51, and s53)	Feature 4
5RB563.s49	Unburnt Odocoileus tibia fragment	Concentration 2 near Features 4 and 5
5RB563.s50	Fragment of can top with a central orifice for a pry-out lid (from the same can as Specimens s48, s51, and s53)	Concentration 2 near Feature 5
5RB563.s51	Can top fragment (apparently cut to use as an expedient cutting tool)	near Features 4 and 5
5RB563.s52	Unburnt Odocoileus phalanx	near Features 4 and 5
5RB563.s53	Fragment of the base (?) of a can (from the same can as Specimens s48, s50, and s51)	S of Concentration 2
5RB563.s54	Fragment of metal strip	General site surface
5RB563.s55	Unburnt Odocoileus humerus fragment	near Concentration 2
5RB563.s56	2 unburnt Odocoileus bone fragments	General site surface

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s57	16 "Boxer" type cartridge primers (one of which is unspent)	Feature 6
5RB563.s58	5 Spent "Boxer" type cartridge primers	Feature 6
5RB563.s59	Fossilized bone or tooth enamel fragment	Feature 6
5RB563.s60	Triangular cut metal fragment with apparent utilization on two pointed corners	Feature 3
5RB563.s61	Can lid (removed from can by cutting with knife)	Feature 3
5RB563.s62	Odocoileus humerus fragment	Hearth #1
5RB563.s63	Metal tack	Concentration 1
5RB563.s64	Red chert flake	near Plate Glass Concentration
5RB563.s65	Unburnt Odocoileus phalanx	General site surface
5RB563.s66	Dendrochronological sample: *(saw*-cut butt of branch)	Feature 5
5RB563.s67	Dendrochronological sample: (butt of branch with two *saw*-cut limbs at opposite end of large branch)	Feature 5
Collections from 2009 Test Excavations and Metal Detection		
5RB563.s68	22 spent "Boxer" type cartridge primers	Feature 6 "interior"; Level 1 (0-2cm bpgs)
5RB563.s69	Plate glass (mirror?) fragment	Concentration 1 (surface)
5RB563.s70	Plate glass (mirror?) fragment	Concentration 1 (surface)
5RB563.s71	62 plate glass (mirror?) fragments	Plate Glass Concentration (surface)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s72	Spent "Boxer" type cartridge primer	Feature 6 "exterior"; Level 1 (adjacent to netherstone FS .s1; 0-5cm bpgs)
5RB563.s73	Burnt bone	Feature 6 "exterior"; Test Trench 1-A; Level 1 (0-3cm bpgs)
5RB563.s74	Bone fragments	Concentration 2 (north of Test Trench 2; surface)
5RB563.s75	Bone fragments	Concentration 2; (south of Test Trench 2; surface)
5RB563.s76	Metal (copper?) wire punch; blunted, polished & beveled on one end, snipped-off on opposite end	Feature 6 "exterior" Level 1 (adjacent to netherstone FS .s1; 0-5cm bpgs)
5RB563.s77	Burnt bone	Concentration 2; TT 2-A; Level 1
5RB563.s78	Charcoal	Concentration 2; Test Trench 2-A; Level 1 (1-5.5cm bpgs)
5RB563.s79	Charcoal	Feature 6 "interior"; Test Trench 1-C; Level 1 (1-5cm bpgs)
5RB563.s80	Charcoal	Feature 6 "exterior"; Test Trench 1-A, N ½; Level 1
5RB563.s81	Metal grommet fragment (from tent or other canvas sheeting)	7m east of Feature 6 (surface)
5RB563.s82	4 seed beads	Feature 6 "exterior"; Test Trench 1-A, N ½; Level 1
5RB563.s83	Charcoal	Concentration 2; Test Trench 2-B; Level 1
5RB563.s84	Bone	Concentration 2; Test Trench 2-B; Level 1
5RB563.s85	Red chert angular shatter	Concentration 2; Test Trench 2-B; Level 1

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s86	Spent "Boxer" type cartridge primer	Feature 6 "exterior"; Test Trench 1-A, N ½; Level 1
5RB563.s87	13 seed beads	Feature 6 "exterior"; Test Trench 1-A, S ½; Level 1
5RB563.s88	Hole-in-cap can	South edge of site (surface)
5RB563.s89	Obsidian flake	Feature 6 "exterior"; Test Trench 1-A, S ½; Level 1
5RB563.s90	Burnt bone	Feature 6 "exterior"; Test Trench 1-A, S ½; Level 1
5RB563.s91	Charcoal	Feature 6 "exterior"; Test Trench 1-A, S ½; Level 1
5RB563.s92	Charcoal	Feature 9; Concentration 2; Test Trench 3-A; Level 1
5RB563.s93	Bone	Feature 9; Concentration 2; Test Trench 3-A; Level 1
5RB563.s94	Charcoal	Feature 6 "interior"; Test Trench 1-B, N ½; Level 1
5RB563.s95	Burnt bone	Feature 6 "interior"; Test Trench 1-B, N ½; Level 1
5RB563.s96	Vessel glass fragments 3 pieces	Feature 6 "interior"; Test Trench 1-B, N ½; Level 1
5RB563.s97	18 seed beads	Feature 6 "interior"; Test Trench 1-B, N ½; Level 1
5RB563.s98	Charcoal	Feature 9; Concentration 2; Test Trench 3-B; Level 1
5RB563.s99	Burnt bone	Feature 9; Concentration 2; Test Trench 3-B; Level 1
5RB563.s100	Pollen sample #1	Feature 6 "exterior"; (beneath netherstone FS .s1; 0-5cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s101	Charcoal	Feature 9; Concentration 2; Test Trench 3-C; Level 1
5RB563.s102	Charcoal	Feature 6 “interior”; Test Trench 1-B, S ½; Level 1
5RB563.s103	4 seed beads	Feature 6 “interior”; Test Trench 1-B, S ½; Level 1
5RB563.s104	2 vessel glass fragments	Feature 6 “interior”; Test Trench 1-B, S ½; Level 1
5RB563.s105	Burnt bone	Feature 9; Concentration 2; Test Trench 3-C; Level 1
5RB563.s106	Charcoal	Feature 9; Concentration 2; Test Trench 3-D; Level 1
5RB563.s107	Charcoal	Feature 6 “interior”; Test Trench 4-C; Level 1
5RB563.s108	Burnt bone	Feature 6 “interior”; Test Trench 4-C; Level 1
5RB563.s109	Brown chert micro-flake	Feature 6 “interior”; Test Trench 4-C; Level 1
5RB563.s110	3 spent “Boxer” type cartridge primers	Feature 6 “interior”; Test Trench 4-C; Level 1
5RB563.s111	8 seed beads	Feature 6 “interior”; Test Trench 4-C; Level 1
5RB563.s112	Charcoal	Concentration 2; Test Trench 3-E; Level 1
5RB563.s113	Triangular biface (brown chert)	Southwest portion of site (surface)
5RB563.s114	Charcoal	Feature 6 “interior”; Test Trench 4-D; Level 1
5RB563.s115	2 seed beads	Feature 6 “interior”; Test Trench 4-D; Level 1
5RB563.s116	Burnt bone	Feature 6 “interior”; Test Trench 4-D; Level 1

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s117	Unidentified botanical specimen	Feature 6 “interior”; Test Trench 4-D; Level 1
5RB563.s118	Plate glass (mirror?) fragment	Field of Dreams (surface)
5RB563.s119	Plate glass (mirror?) fragment	Feature 1 (immediately SW of; surface)
5RB563.s120	Charcoal	Concentration 2; Test Trench 3-F; Level 1
5RB563.s121	Charcoal	Feature 6 “interior”; Test Trench 4-E; Level 1
5RB563.s122	2 seed beads	Feature 6 “interior”; Test Trench 4-E; Level 1
5RB563.s123	Charcoal	Feature 6 “interior”; Test Trench 4-F; Level 1
5RB563.s124	Burnt bone	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s125	Charcoal	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s126	3 seed beads	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s127	Burnt bone	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s128	Charcoal	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s129	2 seed beads	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s130	Dendro sample #1; juniper root	Feature 9; Concentration 2; Test Trench 3-B; Level 1
5RB563.s131	Dendro sample #2; partially burnt juniper log	Feature 9; Concentration 2 (surface)
5RB563.s132	Charcoal	Feature 6 “exterior”; Test Trench 4-B; Level 1

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s133	Burnt bone	Feature 7 “interior”; Test Trench 6-D (surface)
5RB563.s134	Charcoal	Feature 6 “interior”; Test Trench 1-B, N ½; Level 2
5RB563.s135	3 seed beads	Feature 6 “interior”; Test Trench 1-B, N ½; Level 2
5RB563.s136	Bone	Feature 6 “interior”; Test Trench 1-B, N ½; Level 2
5RB563.s137	Bone	Feature 6 “interior”; Test Trench 1-B, S ½; Level 2
5RB563.s138	Seed bead	Feature 6 “interior”; Test Trench 1-B, S ½; Level 2
5RB563.s139	Charcoal	Feature 6 “interior”; Test Trench 1-B, S ½; Level 2
5RB563.s140	Vessel glass fragment	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s141	Obsidian micro flake	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s142	21 seed beads	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s143	Burnt bone	Feature 6 “exterior”; Test Trench 4-B; Level 1
5RB563.s144	Metal button	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s145	14 seed beads	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s146	Hollow burnt bird (?) bone	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s147	Charcoal	Feature 6 “exterior”; Test Trench 4-A; Level 1

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s148	Burnt bone	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s149	Brown chert micro-flake	Feature 6 “interior”; Test Trench 1-B, N ½; Level 1
5RB563.s150	Spent “Boxer” type cartridge primer	Feature 6 “exterior”; Test Trench 1-A, S ½; Level 1
5RB563.s151	Burnt bone	Feature 6 “exterior”; Test Trench 1-A, N ½; Level 1
5RB563.s152	Charcoal	Feature 6 “exterior”; Test Trench 1-A, S ½; Level 2
5RB563.s153	13 seed beads	Feature 6 “exterior”; Test Trench 4-A; Level
5RB563.s154	Burnt bone	Feature 6 “exterior”; Test Trench 1-A, S ½; Level 2
5RB563.s155	Burnt bone	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s156	Charcoal	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s157	Spent “Boxer” type cartridge primer	Feature 6 “exterior”; Test Trench 4-A; Level 1
5RB563.s158	4 seed beads	Feature 6 “exterior”; Test Trench 1-A, S ½; Level 2
5RB563.s159	Blue fibers	Feature 6 “exterior”; Test Trench 4-B; (surface)
5RB563.s160	Shell ? enamel ?	Feature 6 “exterior”; Test Trench 4-B (surface)
5RB563.s161	Charcoal	Feature 6 “exterior”; Test Trench 1-A; N ½ of N ½; Level 2
5RB563.s162	Charcoal	Feature 6 “interior”; Test Trench 1-B, N ½; Level 2

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s163	Seed bead	Feature 6 “interior” (surface)
5RB563.s164	Burnt bone (bird ?)	Feature 6 “exterior”; Test Trench 4-A; Level 2
5RB563.s165	Burnt bone	Feature 6 “interior” (surface)
5RB563.s166	Unspent bullet lead	Feature 7 “exterior” *(in situ* 52cm W & 21cm S of SW corner of Test Trench 5; 4.5cm bpgs)
5RB563.s167	Brass tack	Feature 7 “exterior”; (NW of; 0-2cm bpgs)
5RB563.s168	4 seed beads	Feature 6 “exterior”; Test Trench 4-A (Level 2)
5RB563.s169	Brass tack	Feature 7 “exterior” (W of; 1-1.5cm bpgs)
5RB563.s170	Spent “Boxer” type cartridge primer	Feature 7 “exterior” (NW of; 0-2cm bpgs)
5RB563.s171	Unknown metal	Feature 6 “exterior”; Test Trench 4-A (Level 2)
5RB563.s172	Metal punch; snipped off at one end, faceted and polished on other end (brass/bronze?)	Feature 1 exterior (2cm bpgs)
5RB563.s173	2 spent “Boxer” type cartridge primers	Feature 1 exterior (0-3cm bpgs)
5RB563.s174	Bone fragment	Feature 1 exterior (0-1cm bpgs)
5RB563.s175	Pollen sample #2	Feature 6 “exterior”; Level 2 (1.2 m N of eastern beam; 2-5cm bpgs)
5RB563.s176	Pollen sample #3	Feature 6 “exterior”; Level 2 (90 cm N of western beam; 2-5cm bpgs)
5RB563.s177	Pollen sample #4	Feature 6 “interior”; Level 2 (80cm S of western beam; 2-5cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s178	Pollen sample #5	Feature 6 “interior”; Level 2 (1.8 m S of western beam; 2-5cm bpgs)
5RB563.s179	Pollen sample #6	Feature 6 “interior”; Level 2 (1.1 m S of western beam; 2-5cm bpgs)
5RB563.s180	Pollen sample #7	Feature 6 “interior”; Level 2 (2.1 m S of western beam; 2-5cm bpgs)
5RB563.s181	Pollen sample #8	Feature 7 “interior”; Level 2 (2-5cm bpgs)
5RB563.s182	Pollen sample #9	Feature 7 “exterior”; Level 2 (2-5cm bpgs)
5RB563.s183	Pollen sample #10	Feature 1 interior; Level 2 (beneath 3-pole leaner; 2-5cm bpgs)
5RB563.s184	Pollen sample #11	Feature 3; Level 2 (beneath 1-pole leaner; 2-5cm bpgs)
5RB563.s185	Pollen sample #12	General site surface (away from all features)
5RB563.s186	Possibly sharpened stick (tent stake or...?)	Field of Dreams (between Features 3 and 7; surface)
5RB563.s187	Possibly sharpened stick (tent stake or...?)	Field of Dreams (between Features 3 and 7; surface)
5RB563.s188	Elko series corner to low-side-notched projectile point base (reddish-brown chert)	Feature 7 “exterior”; Trowel Probe #1 (0-17cm bpgs)
5RB563.s189	Charcoal	Feature 7 “exterior”; Trowel Probe #1 (11-17cm bpgs)
5RB563.s190	Unidentified plant part	Feature 7 “exterior”; Trowel Probe #1 (0-17cm bpgs)
5RB563.s191	Seed bead	Feature 7 “exterior”(surface)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s192	Seed bead	Feature 6 “exterior”; Test Trench 1-B, N ½; Level 2
5RB563.s193	Burnt bone	Feature 6 “exterior”; Test Trench 1-B, N ½; Level 2
5RB563.s194	10 seed beads	Feature 7 “exterior”; Test Trench 5; Level 1
5RB563.s195	Charcoal	Feature 7 “exterior”; Test Trench 5; Level 1 (0.5-1cm bpgs)
5RB563.s196	Seed bead	Feature 6 “exterior”; Test Trench 4-B; Level 2
5RB563.s197	Cut metal fragment	Feature 8 (adjacent to; surface)
5RB563.s198	Bone, possibly butchered	Feature 8 (surface)
5RB563.s199	Tooth enamel ?	Feature 7 “exterior”; Test Trench 5; Level 2
5RB563.s200	Charcoal	Feature 7 “exterior”; Test Trench 5; Level 2
5RB563.s201	11 seed beads	Feature 7 “exterior”; Test Trench 5; Level 2
5RB563.s202	Spent bullet lead	Feature 1 exterior (North of; 7cm bpgs)
5RB563.s203	Plate glass (mirror?) fragment	Feature 7 “exterior” (directly north of Test Trench 5; surface)
5RB563.s204	Charcoal	Feature 6 “interior”; Test Trench 4-B; Level 2
5RB563.s205	Bone	Feature 6 “interior”; Test Trench 4-B; Level 2
5RB563.s206	Seed bead	Feature 6 “interior”; Test Trench 4-B; Level 2

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s207	Melted lead	Feature 1 (4.3m N/90cm W of site datum; 0-3cm bpgs)
5RB563.s208	Spent "Boxer" type cartridge primer	Feature 1 (0-2.5cm bpgs)
5RB563.s209	Brass tack (half of shank missing)	Feature 1 (surface)
5RB563.s210	Spent "Boxer" type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s211	Seed bead	Field of Dreams (0-2cm bpgs)
5RB563.s212	Spent "Boxer" type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s213	Spent "Berdan" type cartridge primer	Field of Dreams (0-1cm bpgs)
5RB563.s214	Burnt bone	Feature 7 "exterior"; Test Trench 5; Level 2
5RB563.s215	Spent "Boxer" type cartridge primer	West edge of site (0-4cm bpgs)
5RB563.s216	Charcoal	Feature 6 "exterior"; Test Trench 4-B; Level 2
5RB563.s217	Soil sample	Feature 6 "exterior"; Test Trench 4-B; Level 2
5RB563.s218	Soil sample	Feature 7 "exterior"; Test Trench 5 (10cm bpgs)
5RB563.s219	Spent "Boxer" type cartridge primer	Feature 1exterior (south of; 0-5cm bpgs)
5RB563.s220	Cut metal fragment	Feature 1 exterior (south of; 0-3cm bpgs)
5RB563.s221	Rusted (baking powder ?) can lid	Extreme NW corner of site (surface)
5RB563.s222	Bone	Feature 6 "exterior"; Test Trench 4-B; Level 2
5RB563.s223	7 seed beads	Feature 6 "exterior"; Test Trench 4-B; Level 2
5RB563.s224	3 spent "Boxer" type cartridge primers	Feature 1 exterior (south of at 0-2cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s225	Brass tack	Feature 1 exterior (south of at 0-2cm bpgs)
5RB563.s226	3 seed beads	Feature 7 “exterior”; Test Trench 5; Level 3 (10-12cm bpgs)
5RB563.s227	Plate glass (mirror?) fragment	Plate Glass Concentration (surface)
5RB563.s228	Seed bead	Feature 7 “exterior”; Test Trench 5; Level 4 (12-14cm bpgs)
5RB563.s229	Brass disk button	Feature 7 “exterior”; Test Trench 5; Level 4 (12-14cm bpgs)
5RB563.s230	Charcoal	Feature 7 Test Trench 5; Level 4 (12-14cm bpgs)
5RB563.s231	Unknown botanical	Feature 7 “exterior”; Test Trench 5; Level 4 (12-14cm bpgs)
5RB563.s232	Spent “Boxer” type cartridge primer	Field of Dreams; south of Feature 1 (0-6cm bpgs)
5RB563.s233	Lead fragment- possible spent bullet	Field of Dreams; south of Feature 1 (0-6cm bpgs)
5RB563.s234	Burnt bone	Feature 7 “exterior”; Test Trench 5; Level 4 (12-14cm bpgs)
5RB563.s235	Spent “Boxer” type cartridge primer	Field of Dreams;south of Feature 1 (0-1cm bpgs)
5RB563.s236	Spent “Boxer” type cartridge primer	Field of Dreams;south of Feature 1 (0-5cm bpgs)
5RB563.s237	Charcoal	Feature 7 “exterior”; Test Trench 5; Level 3 (10-12cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s238	Spent “Berdan” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s239	Charcoal	Feature 7 “exterior”; Test Trench 5; Level 5 (14-17cm bpgs)
5RB563.s240	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s241	Spent “Boxer” type cartridge primer	SW of Feature 7 (0-1cm bpgs)
5RB563.s242	Brass tack (tip of shank missing)	South of Feature 7 (0-3cm bpgs)
5RB563.s243	Brass tack	Feature 7 “exterior”; Test Trench 5 (south end; 0-2cm bpgs)
5RB563.s244	Brass tack(tip of shank missing)	Field of Dreams (0-4cm bpgs)
5RB563.s245	Brass tack head (shank missing)	Field of Dreams (0-3cm bpgs)
5RB563.s246	Spent “Berdan” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s247	Pollen sample #13	Feature 7 “exterior”; Test trench 5 (16-18cm bpgs)
5RB563.s248	Seed bead	Feature 7 “exterior” Test Trench 5; Level 5 (14-17cm bpgs)
5RB563.s249	Unknown organic matter	Feature 7 “exterior” Test Trench 5; Level 5 (14-17cm bpgs)
5RB563.s250	Spent “Berdan” type cartridge primer	Field of Dreams (0-7cm bpgs)
5RB563.s251	Charcoal	Feature 7 “exterior”; Test Trench 5; Level 6 (18-26cm bpgs)
5RB563.s252	Charcoal	Feature 6 “exterior” (Test Trench 4-B; Level 2)
5RB563.s253	Seed bead	Field of Dreams (3.4m N/4.98m W of site datum; surface)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s254	Melted lead	Field of Dreams (1cm bpgs)
5RB563.s255	Spent “Berdan” type cartridge primer	Field of Dreams (1.25cm bpgs)
5RB563.s256	Spent “Boxer” type cartridge primer	Field of Dreams (1cm bpgs)
5RB563.s257	Plate glass (mirror?) fragment	Field of Dreams (0.5cm bpgs)
5RB563.s258	Brass tack	Field of Dreams (0.5cm bpgs)
5RB563.s259	Seed bead	Field of Dreams (1cm bpgs)
5RB563.s260	Spent “Boxer” type cartridge primer	Field of Dreams (1cm bpgs)
5RB563.s261	Spent “Boxer” type cartridge primer	Test Trench 8 (2cm bpgs)
5RB563.s262	Burnt bone	North of Feature 2 (0-3cm bpgs)
5RB563.s263	Spent “Boxer” type cartridge primer	North of Feature 2 (0-3cm bpgs)
5RB563.s264	Cartridge casing	North of Feature 2 (1cm bpgs)
5RB563.s265	Spent “Berdan” type cartridge primer	North of Feature 2 (0-1cm bpgs)
5RB563.s266	Vertebrae (deer ?)	Field of Dreams (0-2cm bpgs)
5RB563.s267	Spent “Boxer” type cartridge primer	Field of Dreams (2cm bpgs)
5RB563.s268	Brass tack	Feature 7 “interior” (2-5cm bpgs)
5RB563.s269	Plate glass (mirror?) fragment	Feature 7 “exterior” (0.5 cm bpgs)
5RB563.s270	Brass tack head (missing shank)	Feature 7 “interior” (1-3cm bpgs)
5RB563.s271	Spent “Berdan” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s272	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s273	Spent “Boxer” type cartridge primer	Field of Dreams (0-1cm bpgs)
5RB563.s274	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s275	(discarded: non-artifactual)	n/a
5RB563.s276	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s277	Spent “Boxer” type cartridge primer	Field of Dreams (0-1cm bpgs)
5RB563.s278	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s279	Metal fragment	Field of Dreams (0-3cm bpgs)
5RB563.s280	Metal aglet (tube w/3 holes)	Feature 7 “exterior” (1.5cm bpgs)
5RB563.s281	Brass tack	Feature 7 “exterior” (2-4cm bpgs)
5RB563.s282	2 brass tack heads (missing shanks)	Feature 7 “exterior” (2-4cm bpgs)
5RB563.s283	Red chert flake	Feature 7 “exterior” (2-4cm bpgs)
5RB563.s284	Brass tack head (missing shank)	Feature 7 “exterior” (2-3cm bpgs)
5RB563.s285	Brass tack head (missing shank)	Feature 7 “exterior” (3-4cm bpgs)
5RB563.s286	Spent “Boxer” type cartridge primer	Field of Dreams (2-3cm bpgs)
5RB563.s287	Spent “Boxer” type cartridge primer	Field of Dreams (0-1cm bpgs)
5RB563.s288	Spent “Boxer” type cartridge primer	Field of Dreams (0-2.5cm bpgs)
5RB563.s289	Spent “Boxer” type cartridge primer	Field of Dreams (3cm bpgs)
5RB563.s290	Spent “Boxer” type cartridge primer	Field of Dreams (0-1cm bpgs)
5RB563.s291	Spent “Boxer” type cartridge primer	Field of Dreams (1-3 cm bpgs)
5RB563.s292	Spent “Berdan” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s293	Spent “Berdan” type cartridge primer	Field of Dreams (0-1.5cm bpgs)
5RB563.s294	Spent “Boxer” type cartridge primer	Field of Dreams (0-2cm bpgs)
5RB563.s295	Metal fragment	Field of Dreams (3-4cm bpgs)
5RB563.s296	Spent “Boxer” type cartridge primer	Field of Dreams (3-4cm bpgs)
5RB563.s297	2 spent “Boxer” type cartridge primers	Field of Dreams (0-2cm bpgs)
5RB563.s298	Brass tack	Feature 1 exterior (0-2cm bpgs)
5RB563.s299	Spent “Boxer” type cartridge primer	Feature 1 exterior (0-1cm bpgs)
5RB563.s300	Brass tack head (missing shank)	Feature 1 exterior (surface within pine needle duff)
5RB563.s301	Machine screw fragment (gun?)	Feature 1 exterior (0-4cm bpgs)
5RB563.s302	Melted lead	NE portion of site (surface)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s303	4 plate glass (mirror?) fragments	Feature 1 exterior; Plate Glass Concentration (surface)
5RB563.s304	2 seed beads	Feature 1 interior (0-7cm bpgs)
5RB563.s305	(discarded: non-artifactual)	n/a
5RB563.s306	2 spent "Boxer" type cartridge primers	Field of Dreams (0-2cm bpgs)
5RB563.s307	2 brass tack heads (missing shanks)	Feature 4 (immediately S of; 0-1 cm bpgs)
5RB563.s308	Deteriorated long bone	South end of site (surface)
5RB563.s309	Spent "Boxer" type cartridge primer	Field of Dreams; (N of TT 6 & Feature 7; 1cm bpgs)
5RB563.s310	5 plate glass (mirror?) fragments	Plate Glass Concentration (surface)
5RB563.s311	3 plate glass (mirror?) fragments	Plate Glass Concentration (surface)
5RB563.s312	Spent "Boxer" type cartridge primer	Feature 7 "exterior"; Test Trench 6 (1cm N of; 0-1cm bpgs)
5RB563.s313	Melted lead	Feature 1 (3-5cm bpgs)
5RB563.s314	Melted lead - 2 pcs	Feature 1 (0-1cm bpgs)
5RB563.s315	Spent "Boxer" type cartridge primer	Feature 2 (2.7m south of; 0-1cm bpgs)
5RB563.s316	2 spent "Boxer" type cartridge primers	Feature 6; (W of N end of TT 4-A; 0-3.5cm bpgs)
5RB563.s317	Seed bead	Feature 6; (26cm E & 1.4m S of NE corner of Test Trench 1; 2cm bpgs)
5RB563.s318	Spent "Boxer" type cartridge primer	Feature 6; (E of the S ½ of TT 1-A; 0-2cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s319	Spent "Boxer" type cartridge primer	Concentration 1; (4.9m NE of Test Trench 1-A; surface)
5RB563.s320	Spent "Boxer" type cartridge primer	Field of Dreams (73cm N of Test Trench 6; 0-1cm bpgs)
5RB563.s321	Spent "Boxer" type cartridge primer	Field of Dreams; (61cm N of Test Trench 6; 0-1cm bpgs)
5RB563.s322	3 seed beads	Feature 7 "exterior"; Test Trench 6-A; Level 1
5RB563.s323	5 seed beads	Feature 7 "exterior"; Test Trench 6-A; Level 2
5RB563.s324	Seed bead	Feature 7 "interior"; Test Trench 6-C; Level 1
5RB563.s325	2 seed beads	Feature 7 "interior"; Test Trench 6-D; Level 1
5RB563.s326	Charcoal	Feature 7 "exterior"; Test Trench 6-A; Level 1
5RB563.s327	Brass tack shank	Feature 7 "interior"; Test Trench 6-C, Level 1
5RB563.s328	Tooth enamel	Feature 7 "interior"; Test Trench 6-D; Level 1
5RB563.s329	Dendro sample (ax-cut branch)	Immediately north of Feature 1 (surface)
5RB563.s330	Charcoal	Feature 7 "exterior"; Test Trench 6-B; Level 1
5RB563.s331	Charcoal	Feature 1 exterior Test Trench 7 (surface)
5RB563.s332	Seed bead	Field of Dreams (N of Test Trench 6; 0-3cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s333	2 spent "Boxer" type cartridge primers	Field of Dreams; (N of Test Trench 6; 0-2cm bpgs)
5RB563.s334	Spent "Boxer" type cartridge primer	Field of Dreams; (N of Test Trench 6; 0-1.5cm bpgs)
5RB563.s335	Dendro sample	Feature 7 (surface)
5RB563.s336	Spent "Boxer" type cartridge primer	Field of Dreams; (NW of Test Trench 6; 0-0.5cm bpgs)
5RB563.s337	Bent (fashioned) wire	Field of Dreams; (NW of Test Trench 6; 3-6 cm bpgs)
5RB563.s338	Spent "Boxer" type cartridge primer	Field of Dreams; (N of Test Trench 5; 0-0.5cm bpgs)
5RB563.s339	Dendro sample (pinyon ?)	Feature 1 (south of) surface
5RB563.s340	Dendro sample (pinyon ?)	Feature 3 (east of) surface
5RB563.s341	Dendro sample	Feature 1 (north of) surface
5RB563.s342	Tooth enamel ?	Feature 1 interior; Test Trench 7; Level 1
5RB563.s343	Charcoal	Feature 1 interior; Test Trench 7; Level 1
5RB563.s344	Dendro sample (ax-cut support limb stump)	Feature 3 (1.28m above pgs)
5RB563.s345	Spent "Boxer" type cartridge primer	Field of Dreams; (1.4m N of Test Trench 6; 0-1.5cm bpgs)
5RB563.s346	Spent "Boxer" type cartridge primer	Field of Dreams; (1.2m N of Test Trench 6; 0-2.5cm bpgs)
5RB563.s347	Spent "Boxer" type cartridge primer	Field of Dreams; (1.0m N of Test Trench 6; 0-2.5cm bpgs)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s348	Maxillary fragment w/teeth (deer ?) Associated w/charcoal	Field of Dreams; (1.3m N/10cm W of site datum; 0-3cm bpgs)
5RB563.s349	Spent "Berdan" type cartridge primer	Feature 2 (west of; 0-1cm bpgs)
5RB563.s350	Spent "Boxer" type cartridge primer	Feature 2 (west of; 0-1.5cm bpgs)
5RB563.s351	Unidentified metal	Field of Dreams; (1.0m N of Test Trench 6; 2-4cm bpgs)
5RB563.s352	6 seed beads	Field of Dreams; (1.3m N of Test Trench 6; 0-2.5cm bpgs)
5RB563.s353	Un-spent "Boxer" type cartridge primer	Field of Dreams; (1.3m N of Test Trench 6; 0-2.5cm bpgs)
5RB563.s354	3 brass tack shanks (heads missing)	Field of Dreams; (1.3m N of Test Trench 6; 0-2.5cm bpgs)
5RB563.s355	Spent "Boxer" type cartridge primer	Field of Dreams; 0-2.5cm bpgs (1.3m N of Test Trench 6)
5RB563.s356	Melted lead	Field of Dreams; (1.3m N of Test Trench 6; 0-2.5cm bpgs)
5RB563.s357	Melted lead ?	Feature 1 interior; Level 1
5RB563.s358	Spent "Boxer" type cartridge primer	Test Trench 8; Level 1 (adjacent Thermal Feature A)
5RB563.s359	Charcoal/soil	Test Trench 8; Level 1 (adjacent Thermal Feature A)
5RB563.s360	Bone	Test Trench 8; Level 1 (adjacent Thermal Feature A)
5RB563.s361	Charcoal/soil	Test Trench 8; 1-4cm bpgs (from Thermal Feature A)

Specimen (FS #)	Description	Associated Feature or Activity Area and Depth Below PGS
5RB563.s362	Bone	Test Trench 8; Level 2 (1-4cm bpgs) (adjacent Thermal Feature A)
5RB563.s363	Charcoal	Test Trench 7; Level 2 Feature 1 interior
5RB563.s364	Charcoal	Test Trench 7; Level 2 Feature 1 exterior
5RB563.s365	8 plate glass (mirror?) fragments	Test Trench 7 Feature 1 exterior; Level 2

Ordnance

It is obvious that bullet reloading was one of the primary activities taking place at the Ute Hunters' Camp either in connection with substantial deer harvesting, or as an indication of the restive times that were prevalent in northwest Colorado between the Ute and the Euro-American populations during the late 1870s and 1880s; most likely a combination of the two as presented in the "Artifact Analysis and Interpretation" section of this report.

Of the 509 artifacts recovered, 148 (29%) are associated with ordnance (ammunition and gun parts). Of these, 135 consist of ammunition components, ten are globs of melted lead (sprues) from bullet casting activities, two are pieces of a gun powder can (the lid of which had been removed and formed into a powder scoop), and one is a machine screw that most likely came from a rifle or handgun (Figures 5 and 8, and Plates 7, 8, and 13). Other artifacts, such as one or more of the metal punches and the wire fragments, are also possibly associated with weaponry or reloading. At least two and probably three separate weapons are represented within these collections (Appendix E).

Within the ammunition assemblage, 128 of the specimens consist of centerfire primers; a small metal cup and inclosed anvil containing a volatile substance that ignites when struck by a firing pin, detonating the powder charge in the cartridge case. Two of the primers are unfired, the rest of which are "spent"—having been removed from the cases and discarded and characterized by a dent or impact mark from the firing pin of the weapon from which they were fired. Of the primers, 118 are Boxer type primers (of two different sizes) and 10 are Berdan primers. As is evident in Figure 5, the primers were concentrated in two locations; within Feature 6 and in the Field of Dreams, indicating the areas where this phase of the bullet re-loading activities took place. The Boxer primers measure 0.175" and 0.21" in diameter and the Berdans are 0.24". The smaller diameter Boxers are characterized by two different anvil styles, as illustrated in Plate 7.

The Boxer primer system was invented by Edward M. Boxer, a British army officer, around 1880 and the Berdan system by an American ordinance officer named Hiram Berdan around 1870 (Wikipedia 2009). Berdan primers are, in effect, a simpler system than the Boxers in that the anvil is part of the case as opposed to separate components. Berdan system ammunition is considered as difficult or impossible to reload by many modern hunters and gun enthusiasts, however others consider it a superior and more reliable system and worth the extra effort to reload. Although it is possible to knock a spent primer from a case by placing a metal rod or punch into the interior of the casing and striking a blow, typically a threaded, screw-type primer removal or "de-capper" die is utilized.

Five bullets or bullet fragments were found randomly distributed on the site (Figure 5); one newly cast and unspent .38 caliber, the other four had been recovered by the occupants as spent bullets exhibiting impact marks and deformation (Plate 7). Only two brass cartridge cases were found left on the site; an indication of the appreciable value of these items in a time of conflict, when ammunition was no longer easily obtainable by the Native inhabitants from local trading posts and agencies. The Winchester casings consist of a .44-40 and a crushed case that is either another .44-40 or a .38-40. On-going analysis of the ammunition from this site and others, and notes on future research are discussed in "Artifact Analysis and Interpretation" and in Appendix E.

Seven of the ten globs of molten lead were found beneath the poles of Feature 1 and to the southwest of there in the Field of Dreams (Figure 5).

Glass Seed Beads

Another category of artifacts that were recovered in significant numbers on the site is seed beads. With only a few exceptions, these were all found within the excavation units during the screening activities. These artifacts are the primary reason that the fill was sifted through either window screen or the 1mm diameter mesh soil sieve—tests showed that even a 1/8th inch mesh hardware cloth proved insufficient to trap the smallest beads. A total of 178 beads were found on the site at Feature 6, the Field of Dreams, and two beneath the cultural poles of Feature 1 (Figure 6). The large number of beads suggests that there are likely thousands more remaining in the unexcavated fill of 5RB563.

The beads at the Ute Hunters' Camp (with the exception of the "micro" beads discussed below) ranged in diameter from 0.067 to 0.095 inches (1.70 to 2.41mm)—approximately sizes "14" to "9" in the parlance of modern commercial bead workers. They were found in white, blue, dark blue, pink, yellow, green, orange (one bead), and red with white preliminary gathers or "hearts" (known as cornaline d'Aleppo).

Of the 178 beads, eight can be considered as "micro" beads, which are notably smaller in size than the others at the site, as well as any thus far found by the CWP at other sites (Plate 9). The "micro" beads are all green and range in diameter from 0.0475 inch to 0.0555 inch (1.21 to 1.41mm). All eight micro beads were found within or to the north (exterior) of the apparent

entryway of Feature 6. The glass trade beads from all phases of the CWP, including these micro beads, are discussed in more detail in "Artifact Analysis and Interpretation".

Other Glass Artifacts

Vessel glass. Possibly associated with the glass beads at the site, and found exclusively within the entryway and the apparent interior of Feature 6, the wall tent, are seven fragments of clear, thin-walled vessel glass (Figure 7 and Plate 9). The curvature and small thickness of these sherds suggests that they are the remains of one or more very small cylindrical vessels, in the size range of syringes, perfume or medicine bottles, or glass vials. The fragments measure .025" (approximately 1/50") in thickness and indicate a vessel diameter of approximately 1/4". See "Artifact Analysis and Interpretation" for further discussion of this artifact class.

Plate glass. In addition to the vessel glass, a total of 100 small fragments of thin (5/8") plate glass were also recovered (Plate 9). Eighty of these were found in a concentration immediately to the west and northwest of Feature 1 (Figure 7). No finished (cut, ground, or smoothed) edges could be identified on the sherds, either straight or curvilinear. However a metallic-looking residue or adhesive remains on one face of several of the sherds and, although merely speculative, it is hypothesized that these may be fragments of a mirror, and that the residue represents the remains of the reflective backing. A virtually identical fragment of glass was recovered at site 5RB530 that is characterized with one, and possibly two, finished straight edges that meet at a right angle. See "Artifact Analysis and Interpretation" for further discussion of this artifact class.

Decorative Brass Tacks or Studs

A total of 25 decorative brass tacks and tack fragments were found during the metal detection activities at the Ute Hunters' Camp. These dome-headed, square shanked, "embroidery" tacks were used frequently by Native Americans in the Protohistoric and Early Historic periods to decorate gun stocks, knife handles, saddles, pipe stems, mirrors, cradle boards, and other artifacts by hammering or pressing them into the wood or leather in designs and patterns (Plate 10).

Interestingly, only five of these tacks are complete, and, of them, two of the shanks are notably bent as if they had been previously used and subsequently pried from whatever artifact they had adorned (or possibly been bent while being hammered in and consequently discarded by the artist). The remainder of the tacks or "studs" are fragmentary: 16 heads and four shanks without heads—again, suggesting that many or all had been used and then removed from whatever they had been decorating. See "Artifact Analysis and Interpretation" for further discussion of this artifact class.

Other Tacks or Nails

One complete and two fragmentary tacks or small nails, unlike the decorative brass

"upholstery" tacks described above, were collected in 2007—FSs38, 39, and 63 (Plate 10). Their purpose remains undetermined, however, suggested uses include boots or shoes, or possibly horse tack.

Punches and Awls

Five metal punches, awls, or perforators, or fragments thereof, were found at the site (Plate 11). FS13 consists of a blunt-ended section of rod or heavy-gauge wire (brass or bronze?) that is 1-5/16" long and 1/8" in diameter. It appears to have been cut off at one end and the other end is rounded and polished from use. There are seven transverse scars or cut marks on the central portion of the tool; apparently having been intentionally scored with a knife blade or file—possibly to aid in securing the tool to a wood or bone handle. It is conceivable that this tool was being used as a punch to knock or press the spent primers from the cartridge casings during the reloading process.

FS19 is possibly a complete tool (minus a handle if one was used). It measures 1-7/8" long and 1/8" maximum diameter. It appears to have been hand forged of iron and has a round tang with three short transverse scores similar to those on specimen FS13. What is apparently the point, or "business" end of the tool has been hammered into a tapering point with a rectilinear cross-section. A smooth black residue remains on portions of the entire length of the artifact indicating that a coating or plating once covered the tool. It was found stuck vertically into the ground surface adjacent to the inner edge of the eastern "door flap" pole of Feature 6.

FS22 is another complete specimen that measures 1-1/4" in length and 1/8" in maximum diameter. What appears to be the working end of the iron tool is round in cross-section and possibly exhibits some slight polish at the tip. The tang or "handle" end has been smithed into a diamond-shaped cross-section with a beveled tip. Both FS 19 and FS 22 are comparable to historic and modern leather working tools. All three of the above tools were found within the interior of Feature 6 and possibly indicate that leather work was being conducted within the tent.

FS76, also found in association with Feature 6—found adjacent to the FS1 netherstone—is a length of wire, possibly copper, that measures 2" in length and 3/32" in diameter. One end is snipped off however the opposite end is blunt and exhibits two slight depressions in the extreme tip, with a minute ridge between the indentations. Again, it appears to have served in some manner as a punch.

FS172, found between Features 1 and 3, is a section of metal (brass or bronze?) heavy gauge wire that has been snipped or cut off at one end. The other end is rounded and faceted and appears to exhibit use-wear in the form of a high polish. It measures 1-9/16" long and 3/32" in diameter.

Buttons

A total of five buttons of different styles and materials were found on the site (Plate 12),

all five associated with either Feature 6 or Feature 7; the two apparent wall tent locations. Considering the fact that none of the buttons are of the same style or material, it is obvious that a number and variety of articles of clothing were present at the Ute Hunters' Camp, and that the occupation of the site lasted long enough for at least five buttons to become detached from their respective garments and subsequently lost (assuming that the detached buttons were of some value to their owners and were awarded at least a cursory search).

Three of these were found in 2007 during the Phase IV research and are described in that report (Martin and Ott 2009). These consist of a ceramic four-hole "Little China" Prosser button that measures 7/16" in diameter and 3/32" in thickness (FS6) that dates to post-1840 (Baker, Carrillo, and Spath 2007), a 2-piece brass/bronze ball or "shoe" type button with a wire loop shank that measures 5/16" in diameter (FS18) in a style that was common from 1812 to 1830 (IMACS 2001), and a two-hole hard rubber (?) button—common by 1849—that measures ½" in diameter and 3/32" thick (FS35).

In 2009 two additional buttons were recovered: a small three-hole pressed metal button (post-1870) embossed with a decorative hachure that measures 11/32" in diameter and 1/32" thick (FS144), and a plain brass/bronze disk button (FS229) with an alpha loop shank (1785-1800) that measures 13/16" in diameter and 1/64" in thickness not including the shank (IMACS 2001).

Tin Cans

Although "tin" cans were invented and manufactured much earlier, they are not common on Ute sites, or in western Colorado in general, until the 1860s or later (Baker, Carrillo, and Spath 2007), and reputedly did not appear in the Piceance Basin until approximately the 1870s.

Fourteen metal cans, can lids, or portions of cans were found at the Ute Hunters' Camp; all but two were recovered in 2007, which are described in the Phase IV report (Martin and Ott 2009). Two specimens were found during the current project: FS88, a hole-in-cap can found at the south end of the site, and FS221, a friction lid probably from a baking powder can, found at the extreme northwest edge of the site (Figures 3 and 8).

Of the total can collection, five of the specimens (FSs 48, 50, 51, 53, and 88) are of the hole-in-cap variety (four of which are lid fragments apparently from the same can—possibly the FS88 can), four are baking powder-style cans (of two sizes) and lids that employed lift-off friction lids, and one is a gun powder tin and lid. The hole-in-cap closure design is attributed to the period from the 1820s to the 1910s (Waechter 2009 and IMACS 1990). These specimens, as well as the baking powder cans can easily be construed as contemporaneous with the dendrochronological dates from 5RB563.

At least two of the cans show distinct evidence of having been opened with knives, and half of the lid of the gun powder can (FS24) has been removed and bent into a funnel shape for apparent use as a powder scoop (Plate 13) associated with the reloading activities as described

in the Phase IV report (FS41).

Miscellaneous Metal Artifacts

Other artifacts from the 2007 investigations at 5RB563 include FS8, a jingle from a Spanish-style horse bridle (Plate 8); four fragments of machined strips of brass or bronze sheet metal, two of which have stamped decorative elements and two that have had holes punched in them; a tight roll of decorative metal strip (Plate 13); and various fragments of iron, and possible horse tack. Descriptions of these specimens are presented in the Phase IV report for the CWP (Martin and Ott 2009) and will not be repeated here.

In 2009, three additional metal artifacts are of note. Of particular interest is FS81, a fragment of a grommet, or reinforcement eyelet, that was found several meters to the east of Feature 6—presumably one of the rope tie-down grommets from the canvas covering of the wall tent (Plate 8). The remaining portion of the exterior diameter measures 5/8" in diameter, the interior hole is 7/16" in diameter, and it is 3/32" in thickness.

FS280 is an aglet, most likely for a boot or shoe lace or some other type of cordage. An aglet, or aiglet, is the small sheath or tubular band on the end of a lace or rope that both keeps the twine from unraveling and makes it easier to feed through eyelets. It consists of a piece of light-weight sheet metal that has been somewhat crudely-rolled into a small tube and three oval-shaped crimp indentations have been punched end-to-end on one side of the tube. Several machined ridges run the length of the tube (Plate 8). It was found in association with Feature 7.

FS337 is a crimped and bent section of wire that was found in the Field of Dreams that is similar in length and diameter to a modern paper clip. The two loops in the wire seem to have been intentionally created, however its use remains undetermined.

Four additional miscellaneous fragments of metal were collected in 2009, two of which are sheet iron which has been scored and cut, presumably in the process of tool-making.

Sharpened Wooden Sticks

Two apparently whittled or ax-sharpened sticks were found on the surface of the Ute Hunters' Camp in the Field of Dreams (Figure 4) between Feature 1 and Feature 7 (FS186 and FS187). The two pieces of piñon or juniper are split lengthwise and, although the wood is somewhat weathered and the fit somewhat questionable, they appear to have been split from the same fragment of wood and subsequently sharpened at each end. They measure 11-3/4" by 1-1/8" (FS186) and 12" by 1-1/8" (FS187). Their purpose remains conjectural, however suggested uses are tent stakes or lacing pins for tent door flaps.

Blue fibers

A very small amorphous wad or bundle of gray, black, blue, and red fibers (FS159) was

found on the ground surface beneath the western feature pole of Feature 6. Under a 30X microscope the fibers appear to be synthetic, however this needs to be verified by more refined analysis than mere visual inspection in order to confirm this interpretation. Although it is possible that the fibers are contemporary with the Numic occupation at the site, it is also likely that they inadvertently originated from the clothing of one of the members of the archaeological field crew.

Lithic Artifacts and Groundstone

In addition to the sole groundstone artifact, a sandstone netherstone (Figure 11) that has been scarred or scratched with a metal tool on one face (FS1), nine chipped stone artifacts were collected on the site (Figure 8). It is unascertainable as to whether these tools and debitage, which were widely distributed on the site surface, are contemporaneous and associated with the Protohistoric/Early Historic occupation at 5RB563. They consist of four flakes/angular shatter fragments of red chert, one of brown chert, two of obsidian, a biface, and a projectile point base. Four of the flakes are minute pressure flakes or micro flakes that were found on both the interior and exterior of the Feature 6 entryway, however, again, it is undetermined as to whether this is merely coincidence.

FS113 consists of a triangular biface of brown mud stone that appears to have been heated as evidenced by several potlids. It was found in the southwest portion of the site and it measures 3.6cm by 3.1cm by 0.7cm in thickness.

FS188 is the base of side-notched or low corner-notched mottled red and black chert projectile point, comparable to Elko Series Archaic points. It also gives the appearance of having been heated. The basal edge has been notably ground; possibly an indication of re-use by the later Ute site occupants as a tool for purposes other than tipping a spear or arrow. It measures 1.1+cm in length by 1.8+cm in width by 0.4cm in thickness. A photo of this specimen is presented in the Phase IV report. It is notable that projectile points of types traditionally identified as being of Archaic age have been found on 13% (seven of 53) of the Protohistoric/Early Historic sites thus far recorded by the CWP (Table 7).

Evaluation and Management Recommendation

The site's uniqueness as a representative of a Protohistoric aboriginal hunting and butchering camp, its integrity, the presence of several rare and fragile aboriginal wooden structures including wall tent locations, securely dated wooden elements, thermal features, numerous diagnostic trade goods (many of which appear to be indicative of the restive nature of northwest Colorado at this time in history), and a potential connection with the Meeker Incident and the Milk Creek Battle all strongly argue that the site be nominated for placement on the National Register of Historic Places (NRHP).

Preservation is highly recommended for the entire site area. The wooden features and

site as a whole are threatened by continuing deterioration, wildfire, livestock grazing, energy exploration, and intentional or inadvertent vandalism. Based on the noteworthy results of the test excavations, a more thorough excavation of the site is recommended.

PART III: OTHER ABORIGINAL WOODEN FEATURE SITES

Site Descriptions: Colorado Wickiup Project Phase V

Site **5RB53, the Duck Creek Wickiup Village**, is a large open village of eight aboriginal wooden features including wickiups, a possible tipi, utility poles, and a livestock pen (Figures 12 and A-2). The site was largely documented during Phase IV of the Project in 2007 and fully described in the report for that phase (Martin and Ott 2009). At the conclusion of the 2007 field season Wooden Features 12 through 15 were found by the DARG crew on the talus to the north, below the ridge that contains the main body of the site. These last features were only partially recorded at that time. DARG returned to 5RB53 during the Phase V field season in 2008 and completed the recordation of Features 12, 13, and 14, the results of which are presented here. At that time Feature 15 was determined to be non-cultural.

The village is located on the southwest end of a ridge top to the southeast of Yellow Creek at an elevation ranging from 6480 to 6530 feet (Figure 1). The vegetation consists of piñon/juniper forest with an understory of sagebrush, prickly pear cactus, snakeweed, and sparse bunch grasses. The soil consists of brown to light-brown pebbly, sandy loam of varying depths of up to 30 or more centimeters. During Phase IV the CWP increased the site size to 190m northeast-southwest by 100m northwest-southeast. The cultural affiliation of the site has been identified as Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1800 to 1920 based on the metal artifacts and the condition of the wooden cultural elements.

This site was placed on the National Register of Historic Places in 1973 and a protective fence was constructed around the site under the direction of the BLM. A metal plaque was erected outside the person-gate to the site that identifies the resource as the Duck Creek Wickiup Village and suggests that it is the "largest reported village of this type in Colorado having standing wickiups"—a claim that is certainly no longer valid.

The site was originally recorded by Bob Hurlbutt of the University of Colorado in 1973. The site form mentions "11 wickiup structures on the site and four to six probable wickiup remains to the northwest and southwest of the site." A very crude site map is appended to the site form showing the rough locations of the 11 primary "wickiups" with no feature descriptions or photographs provided. Using this map as a guide, the DARG field crew was able to locate what appears to be all of these 11 previously recorded features, which were photographed, measured, and placed on the USGS map with the aid of a Trimble GeoXT GPS unit.

Six of these features ("Wickiups" 1, 3, 4, 5, 7, and 8) were determined to be non-cultural concentrations of wooden branches or trees that have died and collapsed onto other trees. For each of the remaining features, an *Aboriginal Wooden Feature Component Form* was completed in 2007 with the exception of Features 12 through 15, which were placed on the

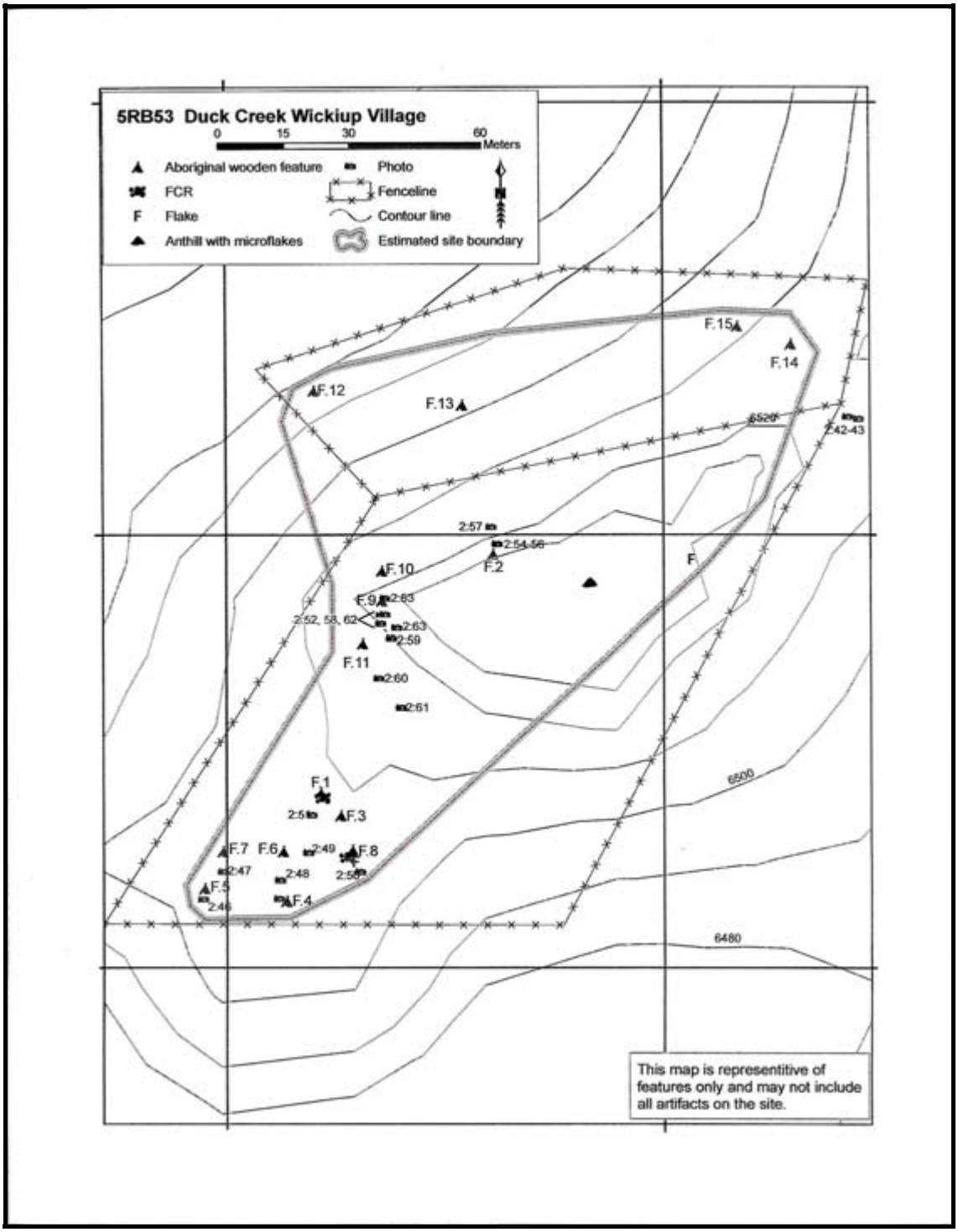

Figure 12. Site plan of 5RB53, Duck Creek Wickiup Village.

USGS map with the aid of a Trimble GeoXT GPS unit and photographed and otherwise left for recordation during the Phase V field work when they were re-photographed, measured, and fully recorded on *Aboriginal Wooden Feature Component Forms* (Appendix H).

Table 3 presents a summary of all of the cultural wooden features at the site, and the descriptions of Features 12, 13, and 14 follow.

Table 3: List of Features at 5RB53, The Duck Creek Wickiup Village

DUCK CREEK WICKIUP VILLAGE (5RB53)	
Designation	**Description**
Feature 2	Collapsed Freestanding Wickiup
Feature 6	Livestock Containment Pen
Feature 9	Standing Utility Pole
Feature 10	Standing Utility Pole
Feature 11	Large Partially Collapsed Leaner Wickiup (possibly Tipi)
Feature 12	Large Partially Collapsed Leaner Wickiup
Feature 13	Partially Collapsed Leaner Wickiup
Feature 14	Two-pole Standing Utility Rack
Feature 15	(determined to be non-cultural)

In 2007 a metal detector was utilized to scan a majority of the site area in the vicinity of Features 2 through 11 with special emphasis within and surrounding each of the wooden features. No metal artifacts were located at that time, and no other evidence of European trade goods was found on the site in the form of metal ax cut poles, glass beads, etc. during the 2007 field season. However, during the Phase V revisit to the site, the CWP crew located a metal chain fragment and a .44 caliber cartridge near Feature 14, which are described herein and presented on a Field Specimen list with UTM data in Table B-2 in Appendix B.

Feature 12 consists of a large, tall, partially collapsed leaner wickiup situated on the talus to the north of the main body of the site which is on the ridge above (Figure 12). Four of the seven feature poles are still standing and are leaned onto the trunks and limbs of two live standing juniper support trees. The oval floor of the shelter measures 2.7m by 2.1m and the internal height (headroom) is 2.0m (Figure 13).

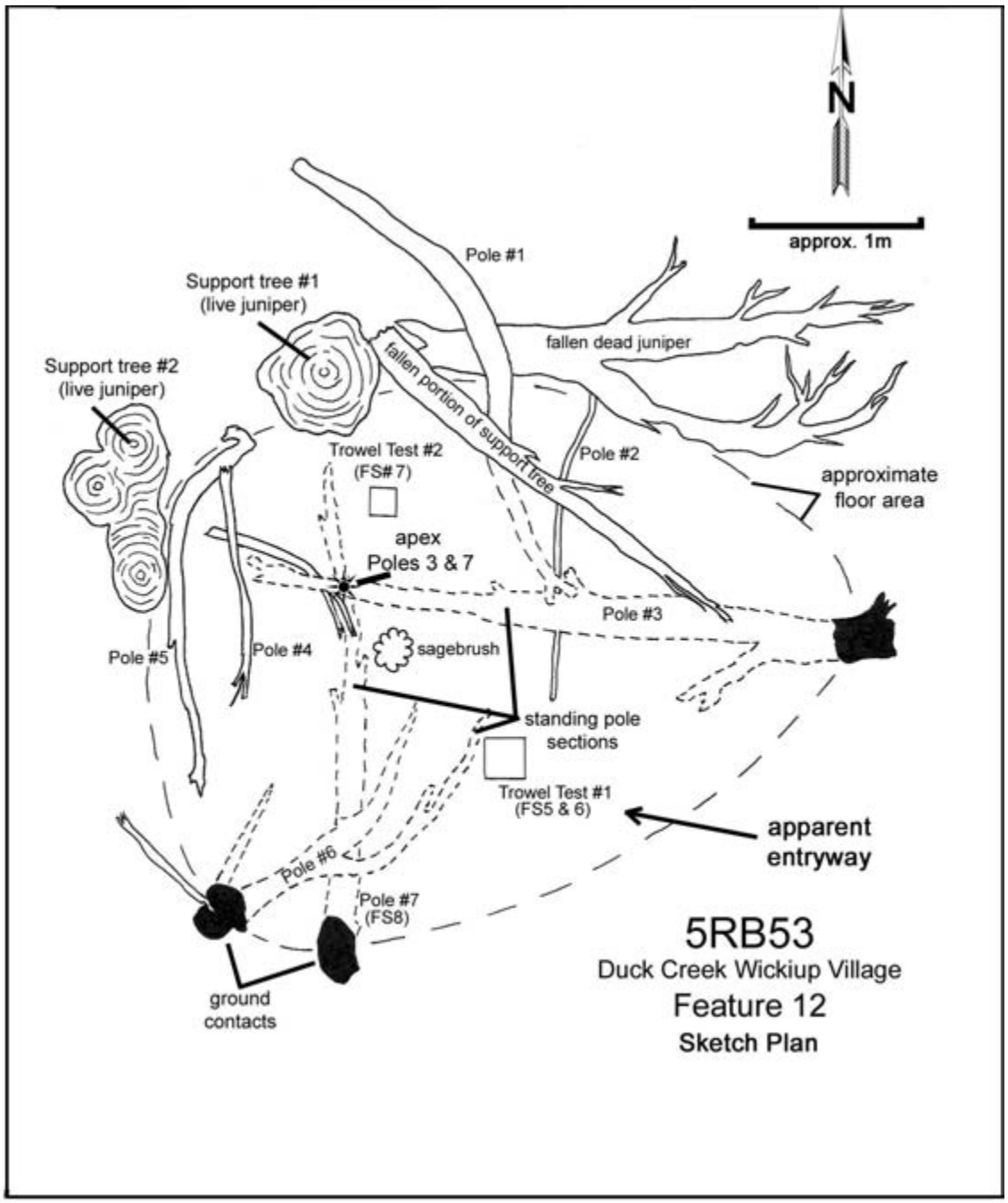

Figure 13. Sketch Plan of Feature 12 at 5RB53

Similar to Feature 11 on the ridge above, Feature 12 is large and tall compared to a majority of wickiups in western Colorado. Although the CWP has suggested elsewhere that hide or canvas coverings were employed on some of these larger shelters, that they were transported from site to site, and that they could potentially be categorized as tipis rather than

wickiups, the nature of the untrimmed, heavy poles that form Feature 12 suggests that this feature was *not* a transportable tipi, but simply a large, expedient wickiup.

Two trowel tests were conducted into the floor of the wickiup (see Figure 13). Occasional charcoal fragments, a burnt bone, and ashy soil were encountered throughout the entire 22cm depth of Trowel Test 1 immediately inside the apparent southeast-facing entryway, suggesting the presence of an interior hearth.

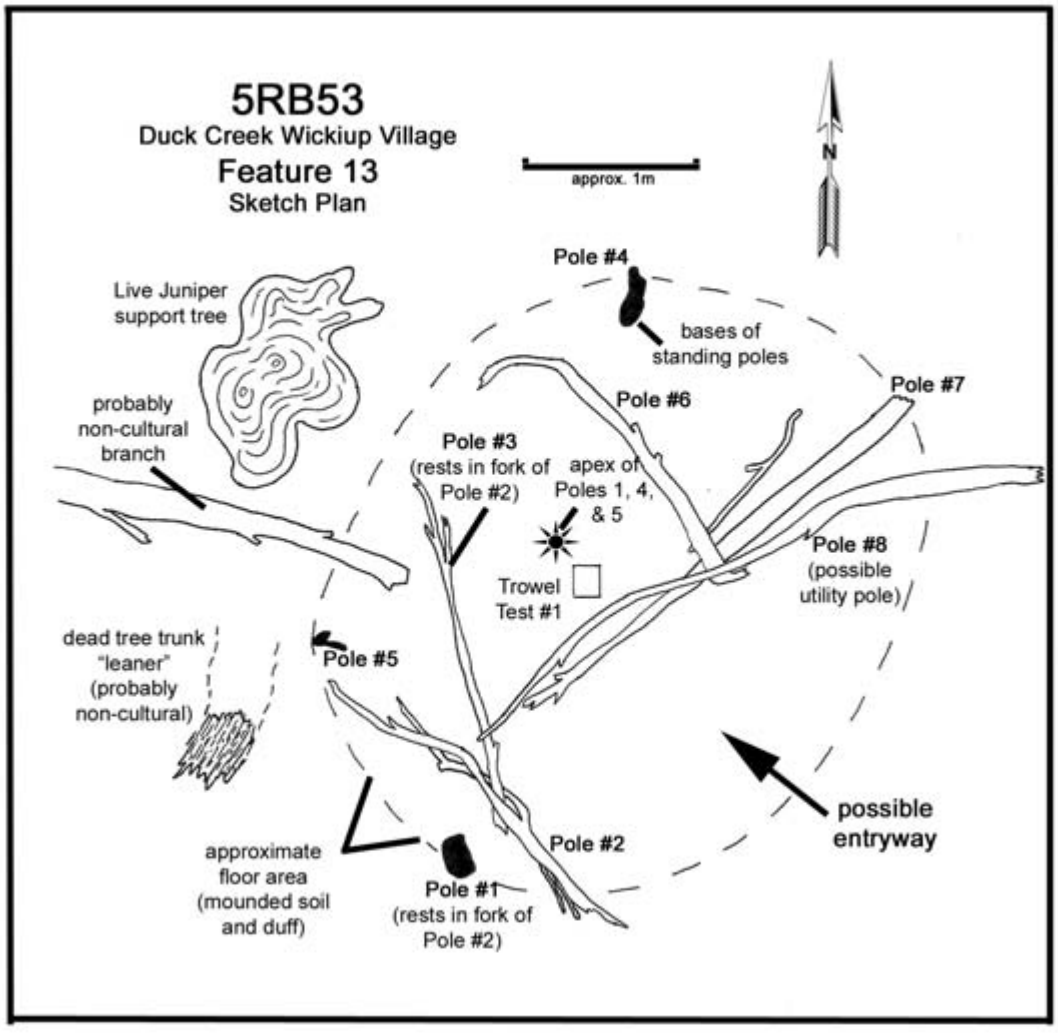

Figure 14. Sketch plan of Feature 13 at 5RB53.

Feature 13 consists of another relatively large, partially collapsed leaner wickiup on the talus to the north and below the main body of the site (Figure 12). Three of the eight feature poles remain standing, leaned onto a limb of the live standing juniper support tree. One of the collapsed feature poles, Pole #8, is notably longer than the others and it is possible that it had originally served as a utility pole incorporated into the wickiup construction. The oval floor of the shelter measures 3.6m by 2.9m and the internal height (headroom) is 1.3m (Figure 14 and Plate 4). A single trowel test was conducted near the center of the wickiup, however no ash or charcoal was noted.

Feature 14 consists of two standing poles leaning into the branches of a live standing juniper support tree that have been interpreted as utility poles. Although no ax-cut marks are evident on the poles, they both have been fully limbed and are interlocked by means of a fork near the end of one of the poles.

Metal detection beneath, and in the area surrounding, Feature 14 produced a length of "S"-shaped iron chain links (possibly bridle fragments) 1m to the north of the feature and a .44 caliber cartridge case 2.4m to the south. Both artifacts were located within the upper 4cm of soil. These artifacts provided the first evidence of European trade goods at the Duck Creek Wickiup Village and substantiated the CWP's initial interpretation of the site as a Protohistoric to Early Historic Numic occupation dating from ca. 1800 to 1920.

Evaluation and Management Recommendation

This site was placed on the National Register of Historic Places in 1973 and a protective fence was constructed around the site under the direction of the BLM. The documentation during both Phases IV and V of the Colorado Wickiup Project have greatly substantiated this site's eligibility for placement on the NRHP. Test excavations, particularly in the vicinity of Features 11 and 14, are recommended.

Site **5RB64** is an open architectural site consisting of a single one-element utility pole, a flake, a mano fragment, and a bone fragment. The site is located on a low, gently sloping ridge top on the south side of Duck Creek at an elevation of 6430 feet (Figures 1 and A-3). The vegetation consists of piñon/juniper woodland, sagebrush, prickly pear cactus, and sparse grasses, and the soils are very shaley, grayish-brown sandy loam of undetermined depth. The site measures 30m north-south by 40m east-west.

The site was originally recorded in 1973 by Jeanette Smith of the University of Colorado Museum as having "flakes, fire pit, wickiup, burned bone, 2 possible structures". During Phase IV field work the CWP briefly revisited the site and then returned to fully record it during Phase V. Only one cultural wooden feature could be located by the CWP crew, Feature 1, and no evidence of a hearth was found at this time. Feature 1 was photographed, measured, and fully

recorded on an Aboriginal Wooden Feature Form (Appendix H).

The uncollected sandstone mano fragment is bifacially shaped, pecked, and heavily ground and measures 7 x 7 x 5.5cm. The only specimen collected from the site, other than the tree-ring sample described below, consists of a fragment of the left tibia of an elk. These specimens, and their UTM coordinates are provided on a Field Specimen list in Table B-2 in Appendix B.

Feature 1 is a single, 1.6m long, metal ax cut juniper branch that has been leaned, butt-end up, onto the upper surface of a low limb in a live juniper support tree. As no other cultural poles or artifacts were found in direct association, the pole has been interpreted as a "utility" pole of undetermined purpose, or possibly merely a cached pole (based on the low angle of repose and nearness to the ground surface). A dendrochronological sample was collected from the feature pole as "Dendro Field Specimen V-2". This sample produced a non-cutting date (an unknown number of the outer rings are missing) of AD1837.

Evaluation and Management Recommendation

Due to the limited nature of the aboriginal wooden resource and other artifactual material at this site, it is field recommended as non-eligible for listing on the National Register of Historic Places. No further work is recommended.

Site **5RB129, the Smirnoff Site**, is an open architectural site consisting of a single leaner-style wickiup, a sparse lithic scatter, a mano fragment, and a single glass seed bead. In addition, the site is bounded on the south and west by a brush fence that has been determined to be of recent or historic origin due to the presence of barbed wire, numerous fencing staples, and flattened tin can "noise-makers" strung on the wire. As the fence line descends into the valley floor of Duck Creek to the northwest, it becomes a modern barbed wire fence strung on steel T-posts. As a result the fence has not been recorded as an element of the Protohistoric wooden feature site. An east-west trending two-track road bisects the site.

The site, named in 1974 after a vodka bottle found on the site, is located at an elevation of 6500 feet on a ridge top overlooking Duck Creek to the north (Figures 1 and A-4). It measures 260m by 60m. The vegetation consists of piñon/juniper forest with an understory of sagebrush, prickly pear cactus, rabbit brush, snakeweed, and bunch grasses. The soil varies from brown gravelly sandy loam to light brown sand that is at least 25cm in depth.

The site was originally recorded by Tom Stout with the BLM in 1974 as a lithic scatter with "3 standing wickiup structures and several down". The site was reevaluated by Tom McGarry, also with the BLM, in 1976. During Phase IV field work the CWP briefly revisited the site and then returned to fully record it during Phase V.

Only one cultural wooden feature was located by DARG, however other natural occurrences of dead juniper and piñon branches on the ground or leaning into trees were noted which are possibly those that had been identified as cultural features in 1974. Feature 1 was photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and an Aboriginal Wooden Feature Component Form was completed (Appendix H). A metal detector was utilized to scan a majority of the site area with special emphasis beneath and surrounding Feature 1. No metal artifacts were located, despite the fact that evidence of European trade goods existed on the site in the form of a single blue seed bead on an anthill near the east end of the site, which was collected as FS #3 (5RB129.s1). In addition, 19 lithic flakes were observed (two of obsidian) including micro flakes on anthills, and a unifacially-ground basalt mano was found. UTM coordinates are provided for the collected bead on a Field Specimen list in Table B-2 in Appendix B.

Feature 1 is a small, partially collapsed, leaner wickiup consisting of four limbed juniper poles; two standing and two collapsed. The two standing poles lean onto a limb on the west side of a live juniper support tree. The standing poles and support tree trunk appear to indicate a floor with a diameter of approximately 1.3m and an interior headroom of 0.74m.

A non-productive trowel test was conducted into the center of the floor of the wickiup. No ash or charcoal was recovered from the 24cm deep test.

Evaluation and Management Recommendation

Due to the fragile and ephemeral nature of aboriginal wooden structures, the relative lack of detailed documentation and study of such resources, and their significant potential to yield valuable information regarding the prehistory, protohistory, and early history of Colorado's aboriginal cultures, this site is recommended as eligible for placement on the National Register of Historic Places (NRHP). Protection and preservation of these resources is paramount.

Site **5RB530** is an open architectural site consisting of two wickiups, a utility pole, and an apparent firewood pile (Figure 15). It is located on a northwest-southeast trending ridge line to the northwest of Stake Springs Draw at an elevation of 6870 feet (Figures 1 and A-5). The vegetation consists of piñon/juniper forest with an understory of sagebrush, prickly pear cactus, rabbitbrush, snakeweed, serviceberry, mountain mahogany, ricegrass and other sparse bunch grasses. The soil is light gray gravelly clay loam and light brown loam of undetermined depth. The site measures 180m by 160m.

The site was originally recorded in 1975 by Alan Olsen of the University of Denver (who mentions an "original report" of undetermined origin). The original site form mentions "a scatter of some 14 artifacts including a knife", which were apparently collected and a large corner-notched Elko projectile point. No wooden features were mentioned in this report. Steve

Singleton re-evaluated the site in 1984, relocating it on the USGS map approximately 0.9km to the northeast, and describing one flake and two collapsed wickiups (Wickiups "A" and "B"). The DARG revisit relocated the site approximately 50m to the northwest of Singleton's location. The CWP located the two aforementioned wooden features, and, preserving their original designations, have recorded them as Features A and B, and found two additional wooden features; Features C and D. Feature A has been reinterpreted as an apparent firewood pile. Each of the features were photographed, measured, placed on the USGS map with the aid of a Trimble GeoXT GPS unit, and recorded on an Aboriginal Wooden Feature Component Form (Appendix H). In addition, the remains of six apparent thermal features were noted on the site surface (Figure 15) consisting of concentrations of ash, charcoal, and/or fire-cracked rock (FCR).

INSERT FIGURE 15 HERE: SITE MAP OF 5RB530

Table 4 presents a summary of all of the cultural features at the site, and the descriptions of Features A through D follow.

Table 4: List of Features at 5RB530

5RB530	
Designation	**Description**
Feature A	Apparent conical firewood pile
Feature B	Collapsed freestanding wickiup
Feature C	Partially collapsed leaner wickiup
Feature D	Standing Utility Pole
Thermal Feature 1	50cm diameter concentration of ash and FCR
Thermal Feature 2	1m diameter concentration of ash and charcoal
Thermal Feature 3	1m diameter concentration of ash and charcoal plus 1 flake
Thermal Feature 4	50cm diameter concentration of FCR and minute flecks of charcoal
Thermal Feature 5	35cm diameter concentration of FCR and two flakes
Thermal Feature 6	80cm diameter concentration of 13-15 fragments of oxidized sandstone

A metal detector was utilized to scan a majority of the site area with special emphasis within and surrounding each of the wooden features. No metal artifacts were found however the crew located a fragment of thin plate glass (FS09-4) similar to the apparent mirror fragments found at the Ute Hunters' Camp (5RB563). This specimen, unlike any from 5RB563, appears to have one, and possibly two, finished, straight edges that meet at a right angle.

Another enigmatic specimen was collected (FS14) that consists of a small, round, rust-colored disk measuring 1.5cm in diameter and 0.36cm in thickness. A round "stem" in the center of the disk surrounded by a raised square "platform" suggested to the crew that the item is a snap fastener or "press stud" similar to those used in place of buttons to fasten clothing, however, magnets and the metal detector indicate that it is not made of metal. Consequently, it is possibly a natural concretion. Several fragments of burnt and unburnt large mammal bone were also collected. These specimens, and their UTM coordinates are provided on a Field Specimen list in Table B-2 in Appendix B.

Feature A consists of a small, partially collapsed conical arrangement of piñon and juniper sticks beneath a live juniper tree. Five of the 13 sticks are still standing, supported by an overhanging limb. It is very like a miniature wickiup, and it is understandable why it had been previously interpreted as one by Singleton, however, its interior "headroom" is a mere 35cm and the diameter of the "floor" is only 80cm. As a result of its small size, this project has re-interpreted the feature as a firewood pile; leaned up against the juniper tree limb in order to keep the sticks off of the damp ground surface. Similar conical firewood piles can be seen in early historic photographs of Native American camps. A second, yet unlikely possibility, is that the feature is, indeed, a miniature wickiup, similar to the one recorded as Feature 18C at Rader's Wickiup Village (5RB2624) as an apparent child's "play house" or doll house (Martin, Ott, and Darnell 2006).

Feature B consists of a collapsed wickiup with 11 partially limbed piñon and juniper poles resting on the ground surface beneath the canopy of a large live juniper tree. It is possible that the poles had been supported by one or more of the overhanging juniper branches, however it appears as if the structure had been freestanding. Three trowel tests among the collapsed poles produced a significant amount of apparently naturally-occurring juniper bark, but no evidence of subsurface ash or charcoal.

A 50cm diameter concentration of FCR and minute flecks of charcoal, Thermal Feature 4, is located 6.2m to the east of Feature B. A trowel test among these rocks also failed to produce any ash or charcoal.

Feature C is a partially collapsed wickiup beneath the canopy of a live piñon tree approximately 17m to the northwest of Feature B. It consists of six collapsed poles and three standing forked poles supported by each other. Despite the fact that these three poles are freestanding, it is apparent that the structure, when fully standing, was most likely supported by the low overhanging limbs of the canopy tree. A significant amount of juniper bark is present beneath the cultural poles; possibly indicative of an underlying bark mat.

A 50cm diameter concentration of darkened soil and FCR, Thermal Feature 1, is located approximately 50cm to the northeast of Feature C. Several burnt bone fragments, FS13, were collected from within the thermal feature.

Feature D is a single, 4.1m long, un-limbed juniper branch that has been leaned against the west-southwest side of the trunk of a live juniper support tree. As no other cultural poles or artifacts were found in direct association, the pole has been interpreted as a "utility" pole of undetermined purpose.

Evaluation and Management Recommendation

Due to the fragile and ephemeral nature of aboriginal wooden structures, the relative lack of detailed documentation and study of such resources, and their significant potential to yield valuable information regarding the prehistory, protohistory, and early history of Colorado's aboriginal cultures, this site is recommended as eligible for placement on the National Register of Historic Places (NRHP). Protection and preservation of these resources is paramount.

Site **5RB568,** originally recorded by Alan Olson of the University of Denver in 1975**,** was thoroughly documented by the CWP during Phase IV of the project (Martin and Ott 2009). The site consists of five aboriginal wooden features, thermal features, several flakes, and a metate. During the current phase of work a field crew returned to the site for the purpose of collecting tree-ring samples from the wooden features for dating purposes. During the investigations a previously unrecorded cluster of six to eight pieces of wood, 4m to the south-southeast of Feature 1, was recorded as a firewood cache and assigned Feature #5. One of these pieces had an apparently metal ax-cut butt, which was collected as Dendro Sample #8 as described below.

Nine samples were collected, all from juniper cultural elements, and the results of the dendrochronological analysis by the Laboratory of Tree Ring Research are discussed below, and presented fully in Appendix C. Descriptions of the samples, and the features from which they were collected are as follows:

> Dendro Samples 1, 2, and 3 are from Feature 2, a collapsed freestanding wickiup. Sample 1 is *possibly* metal ax-cut.
>
> Dendro Sample 4 is from a metal ax-cut juniper stump near Feature 1.
>
> Dendro Samples 5, 6, and 7 are from Feature 1, a collapsed leaner wickiup. All three samples are metal ax-cut.

Dendro Sample 8 is *apparently* an ax-cut butt from one of the pieces from Feature 5, a firewood cache.

Dendro Sample 9 is from Feature 3, another firewood pile. This piece of wood had an ax-cut notch on one side.

The nine samples yielded eight dates, two were actual cutting dates and the rest were missing an unknown number of outer rings. The two cutting dates (Dendro Samples 4 and 7) clearly indicate that Feature 1 was constructed in AD1877 and that the juniper tree near it was chopped down in the same year. The fact that Sample 7, from Feature 1, has an incomplete terminal ring and Sample 4, from the juniper trunk, has a complete terminal ring indicates that these trees were cut near the end of the juniper growing season in 1877, probably in the early fall.

The remaining samples from the site produced non-cutting dates ranging from 1771 to 1875 but are missing undetermined numbers of outer rings and, therefore, merely indicate that they were cut, or died, at some time earlier than the outer ring date, and that the features were created at some time after the year indicated. It is possible that these ax-cut wooden elements were all collected in 1877, however two of the dates, Sample 9 at AD1771 and Sample 6 at 1793 potentially suggest an earlier occupation, as discussed in the Discussion and Synthesis section of this report. These specimens, and their UTM coordinates are provided on a Field Specimen list in Table B-2 in Appendix B.

Site **5RB2624, Rader's Wickiup Village**, was originally recorded by Penny McPherson, Martin Weimer, and Vern Rader of the Vermillion Chapter of the Colorado Archaeological Society 1984 and 1986. The site was thoroughly documented by the CWP during Phase III of the project (Martin, Ott, and Darnell 2006). The site consists of a large village of aboriginal wooden features including wickiups, single- and double-pole utility poles, pole caches, and horizontal beams in trees.

Uncompahgre Brown Ware sherds had been recorded by the CWP at Feature 20, a partially collapsed leaner wickiup, and during the current phase of work a field crew returned to the site for the purpose of collecting a luminescent dating sample. Three sherds and a surrounding soil sample were collected from the surface of the floor of Feature 20 and from one meter to the west of the wickiup. One sherd was retained by DARG for typology analysis and curation (FS09-4A), and two sherds (FS09-4B) were sent to the Institute for Integrated Research in Materials Environments and Society (IIRMES) at California State University Long Beach. The results have not yet been received. UTM coordinates are provided for the sherds on a Field Specimen list in Table B-2 in Appendix B. Additional sherds are present at the apparent pot-drop location and remain uncollected.

The retained sherd measures 2.3cm by 2.5cm by 0.4cm in thickness and is characterized by a grayish-brown exterior surface and a brown exterior. Scrape marks are most noticeable on the exterior, but are present on the interior surface as well. No other forms of surface alteration are present on the sherds. Temper consists of quartz sand.

Site **5RB4543, the Dancing Cows Wickiup Village**, is an open village of 12 aboriginal wooden features including wickiups, utility racks, pole caches, and a firewood pile (Figure 16). The village is located in a saddle near the south end of a ridge overlooking Black Sulphur Creek to the south. It is at an elevation of 6510 feet (Figures 1 and A-6). The vegetation is primarily juniper forest with some piñon trees. The understory consists of fairly dense ricegrass along with sagebrush, prickly pear cactus, bunch grasses, and forbs. The soil consists of shaley, rocky, brown to dark brown sandy loam of an unknown, but apparently quite significant depth.

At the time of the CWP field work, a freshly-flagged apparent seismic route passed through the site trending north-south. Fresh Vibram-soled boot prints were visible throughout the site, and a great deal of seismic-affiliated helicopter activity occurred in the area during the two days of recordation.

The site was originally recorded by Jeff Brown and Brian Mueller of the White River BLM office in 2002 who provided the interesting site name, which most likely comes with a fascinating story. Their site forms, which, it should be noted, are notably observant, incisive, and detailed for such subtle features, describe seven collapsed wickiups, three hearths, two firewood caches, "stone ax cut" stumps and feature poles, "possible pits", a pole cache, "multiple projectile points of the Formative and Ute eras", flakes, drills, scrapers, bifaces, cores, and manos. They also mention "evidence of metal axes" but provide no other descriptions of the nature of this evidence.

No descriptions of the projectile points were made available to the CWP, however they are currently listed on the Office of Archaeology and Historic Preservation (OAHP) Compass website as four Late Prehistoric style points. A single small, triangular biface (FS16) was collected by the current project and has been interpreted as a Late Prehistoric to Protohistoric Cottonwood Triangular projectile point. In addition to the lithic tools noted on the site map, a total of approximately 12 to 15 flakes were noted on the site surface.

INSERT FIGURE 16: SITE MAP OF 5RB4543 HERE

A simple sketch map of the site was provided showing the rough locations of "Structures" 1 through 7 (wickiups) and "Features" 1 through 8 (hearths, firewood caches, stone ax cut stumps, possible pits, and a pole cache/structure). Their system of nomenclature has been

retained by the current project. Using this map as a guide, the DARG field crew was able to locate what appears to be all of the seven Structures; Features 3, 4, 5, and 8; and several of the lithic flakes and tools. Of the seven Structures that were originally recorded as collapsed wickiups, one (Structure 3) has been reinterpreted as a 2-pole utility rack. In addition, two previously unrecorded wooden features, a wickiup (referred to as Structure 4-A) and a pole cache (Structure 5-A), were newly identified and described, as was two metates, one in direct association with Structure 4.

Although three apparent thermal features were recorded by the CWP, only Feature 3 could be definitely correlated to the hearths as described in 2002. Neither Feature 1, shown on the original sketch map as being between Structures 3 and 6, nor Feature 2, near Structures 3 and 4, could be located. Feature 3, originally described as a 2m diameter hearth, is shown on the current project's site map (Figure 16) and consists primarily of a concentration of burnt bone.

No evidence of the so-called "pits" (Feature 7) could be found, nor could any apparent stone ax cut tree stumps (Feature 6). The CWP observed three ax cut stumps in the areas shown on the map to contain such features; two of which were definitely the results of metal axes and the other was too highly deteriorated to ascertain its origin.

All of the wooden features were photographed, measured, documented on an Aboriginal Wooden Feature Component Form (Appendix H), and placed on the USGS map with the aid of a Trimble GeoXT GPS unit. No evidence of Protohistoric trade goods was found on the site, despite thorough metal detection within and surrounding all wooden features, with the exception of a single incidence of a metal ax cut notch in the trunk of an uprooted dead piñon tree. A dendrochronological core from this tree failed to produce a tree-ring date, and it is assumed that the ax marks are not associated with the aboriginal occupation at 5RB4543.

The rebar datum stake from 2002 was located. The wire from the original write-on aluminum tag remained in place, however the tag itself showed evidence of having been chewed on by an animal and had been reduced to small, crumpled fragment on the ground nearby. The current project replaced the tag with a heavier gauge tag reading "5RB4543 BLM 2002 & DARG 2008". During Phase IV of the CWP the site size was increased to 190m northeast-southwest by 100m northwest-southeast as a result of more accurate mapping techniques. The cultural affiliation of the site is apparently Protohistoric to Early Historic Numic (probably Ute however possibly Shoshone), dating from approximately AD1750 to 1920 based on the condition of the wooden cultural elements. Due to an apparent lack of trade wares, and the presence of lithic tools and debitage, it is possible that the site is from the earlier, pre-1800 portion of this date range. The collected specimens, and their UTM coordinates, are provided on a Field Specimen list in Table B-2 in Appendix B.

Table 5 presents a summary of all of the cultural wooden features at the site, and descriptions of each feature follow.

Table 5: List of Wooden Features at 5RB4543, The Dancing Cows Wickiup Village

DANCING COWS WICKIUP VILLAGE (5RB4543)	
Designation	**Description**
Structure 1	Collapsed Leaner (?) Wickiup
Structure 2	Partially Collapsed Leaner Wickiup
Structure 3	Partially Collapsed Utility Rack
Structure 4	Partially Collapsed Leaner Wickiup
Structure 4-A	Possible Collapsed Leaner (?) Wickiup
Structure 5	Collapsed Freestanding (?) Wickiup
Structure 5-A	Pole Cache
Structure 6	Collapsed Freestanding (?) Wickiup
Structure 7	Collapsed Leaner Wickiup
Feature 4	Possible Firewood Pile
Feature 5	Firewood Pile
Feature 8	Pole Cache

Structure 1, near the northeast side of the site, is a collapsed wickiup consisting of a concentration of piñon or juniper poles resting on the ground surface beneath the east side of the canopy of a live juniper tree. Seven of the poles are definitely of cultural origin and three possible additional poles are located downslope to the west (Figure 17). It is possible that the canopy tree had originally served as a support tree for the structure when it was still standing.

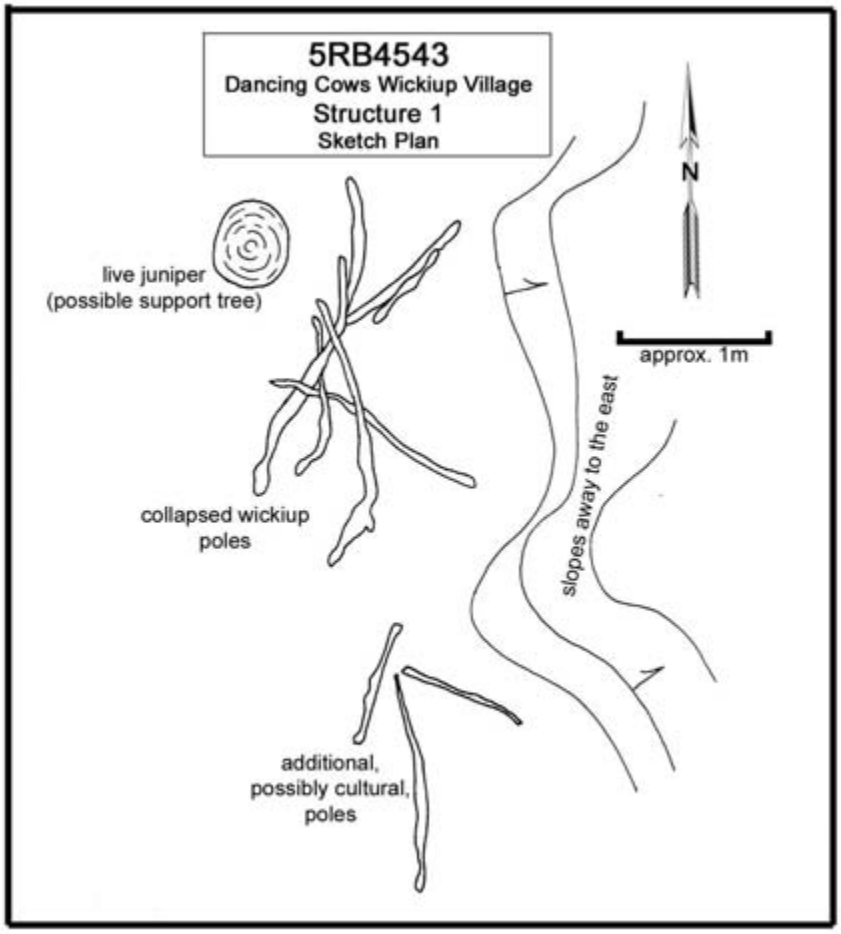

Figure 17. Sketch Plan of Structure 1 at 5RB4543

Structure 2, consists of a partially collapsed leaner wickiup near the north end of the site. One feature pole remains standing, leaned against a limb and north side of the trunk of a live standing juniper support tree. Another seven possible collapsed feature poles lie among the sagebrush to the west and southwest of the tree (Figure 18 and Plate 4). Although it is difficult to definitely ascertain how many, if any, of these branches were once part of the feature, they most likely consist of the collapsed remains of a wickiup that had been supported by the juniper.

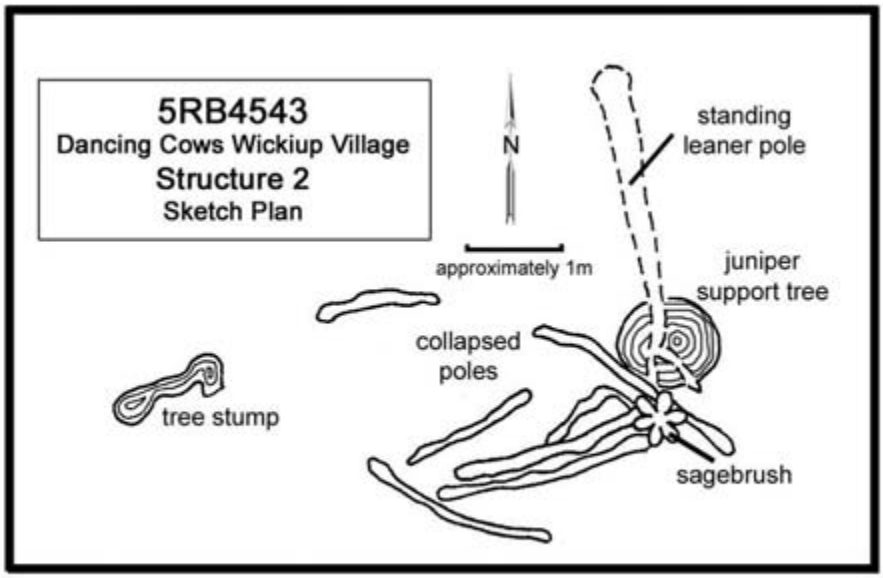

Figure 18. Sketch Plan of Structure 2 at 5RB4543

Structure 3 was originally recorded as a partially collapsed wickiup, this project has reinterpreted the two cultural poles as an apparent utility rack. One of the poles remains standing; leaning into the branches of a live standing juniper support tree (Figure 19) and a second possibly cultural pole rests on the ground surface beneath the standing pole. Several large trunks laying on ground near the base of the leaner, and to the southwest, do not appear to be cultural. Several burnt bone fragments and two co-joined biface fragments (FS17) were found immediately to the east of the feature poles. Additionally, a small fragment of a unifacially ground metate was recorded approximately 9m to the north.

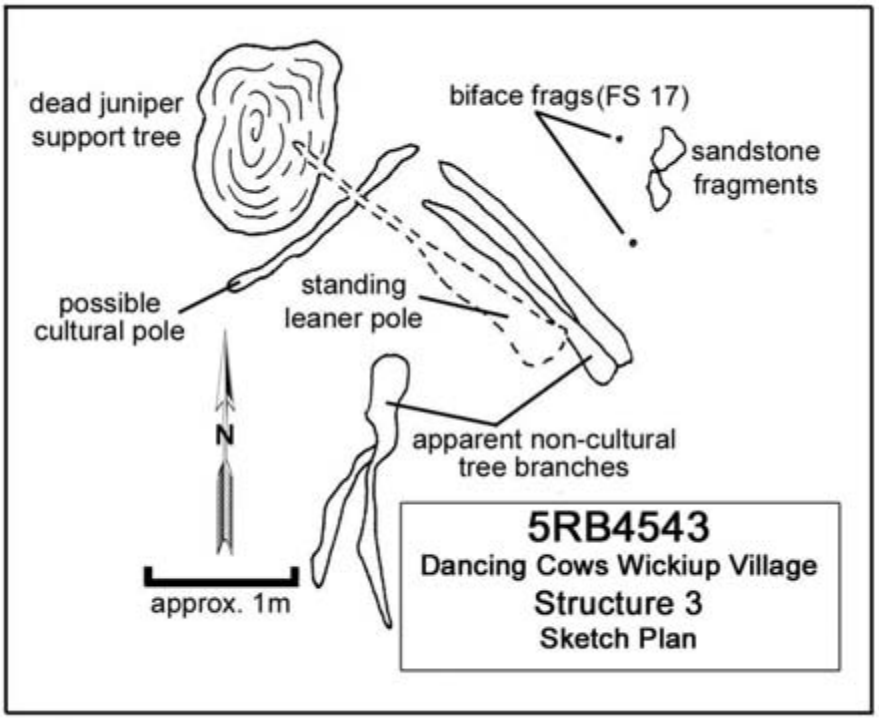

Figure 19. Sketch Plan of Structure 3 at 5RB4543

Structure 4 consists of a partially collapsed leaner wickiup near the center of the site. Three of the feature poles remain standing, five are collapsed, and one is completely suspended in the branches of the tree (Figure 20). The structure is on the east-northeast side of a live juniper support tree. One of the standing poles is leaned against the limbs and trunk of the tree and the other two are "pull-down" elements (branches of the support tree that have been intentionally snapped near their juncture with the main body of the trunk and bent down to form part of the wickiup framework). The collapsed feature poles lie on the ground near the ground contacts of the leaner and pull-down poles. One of these pull-downs is possibly simply a non-cultural broken branch.

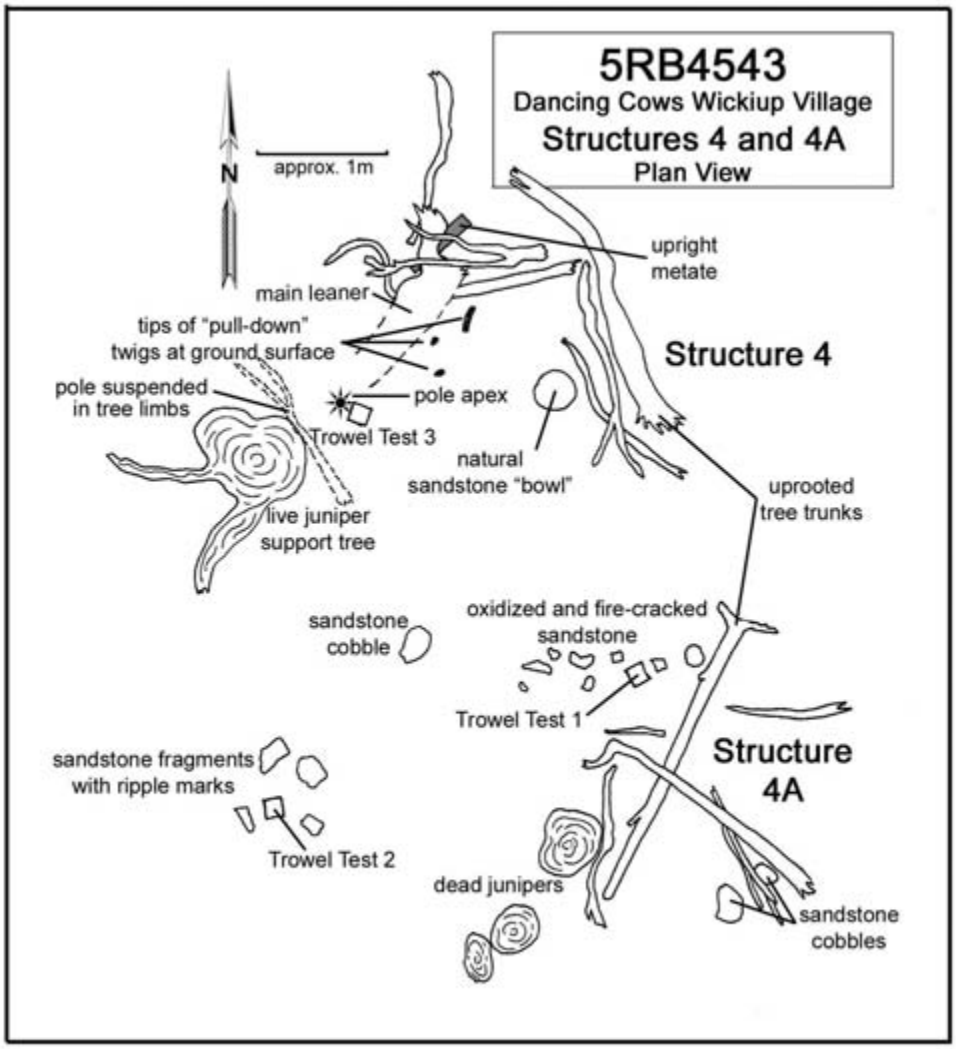

Figure 20. Sketch Plan of Structures 4 and 4A at 5RB4543

An interesting aspect of this feature is a large unifacially-ground sandstone metate that has been wedged, upright on one edge, into a fork of the root system at the base of the largest leaner pole; apparently as a support element to keep the leaner pole from sliding outwards away from the support tree (Plate 5). Additionally, a natural, unmodified sandstone spall in the shape of a bowl was found on what would have been the interior floor of Feature 4 (Plate 5). Although it retains no readily apparent evidence of use, its unusual shape and presence in the shelter suggest that it likely was utilized as a container for foodstuffs or other materials. This apparent man-u-port measures 27cm long by 23cm wide and has a "bowl" depth of approximately 5cm.

A single trowel test (Trowel Test 3 on Figure 20) was conducted below the apex of the standing poles of Feature 4. No ash or charcoal was encountered, however, a great deal of juniper bark was noted in the upper few centimeters of fill suggesting the possibility of an intact

bark mat. Below the duff layer the fill consisted of soft, highly organic soil containing additional duff. Sandstone fragments were encountered at 16 cm below the present ground surface and the test was terminated.

Structure 4-A, a newly-described wooden feature, is situated 3m to the south-southeast of Feature 4. It consists of three piñon or juniper branches resting on the ground to the northeast of a series of three dead junipers that possibly had served as a support tree (Figure 20). The CWP has interpreted the feature as a possible collapsed leaner wickiup.

Immediately north of the possible cultural poles is a concentration of nine oxidized and fire-cracked sandstone fragments in an area measuring 50cm by 150cm. Trowel Test 1 was excavated within this sandstone concentration and Trowel Test 2 within a concentration of unmodified sandstone fragments 3m to the west. No ash or charcoal was encountered at either test location and, although the oxidized rocks possibly indicate the presence of a hearth associated with Features 4 and 4-A, its location and condition remain undetermined.

Structure 5, to the east of Structures 4 and 4-A, is a collapsed wickiup consisting of a concentration of seven juniper or piñon poles resting on the ground surface beneath the east side of the canopy of a live juniper tree (Figure 21). It is possible that the canopy tree had originally served as a support tree for the structure when it was still standing, however the CWP crew has interpreted the feature as a freestanding wickiup.

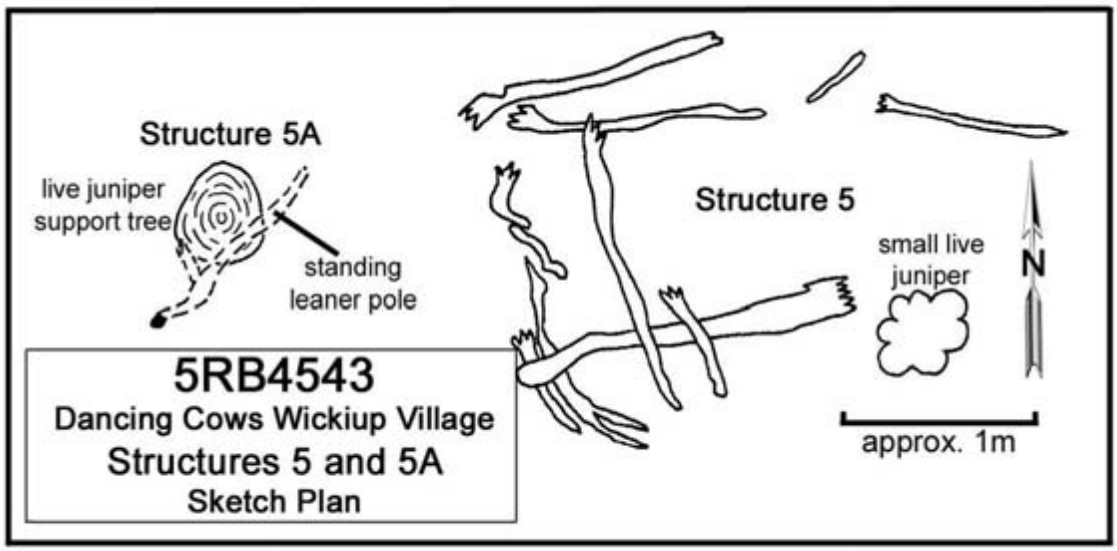

Figure 21. Sketch Plan of Structures 5 and 5A at 5RB4543

Structure 5-A is a newly-described single, 2.0m long, forked and partially burned juniper or pinyon branch that has been leaned against the branches and south-southwest side of the trunk of a live juniper support tree (Figure 21). As no other cultural poles or artifacts were found in direct association, the pole has been interpreted as cached pole based on the extremely

steep angle of repose and closeness of the pole to the trunk of the support tree that would make in ineffectual as any type of utility pole.

Structure 6, near the south side of the site, is a collapsed freestanding wickiup consisting of a concentration of nine piñon or juniper poles resting on the ground surface (Figure 22). The poles, all of them completely free of forks or limbs, range from 1.6m to 3.1m in length and from 6cm to 16cm in mid-pole diameter.

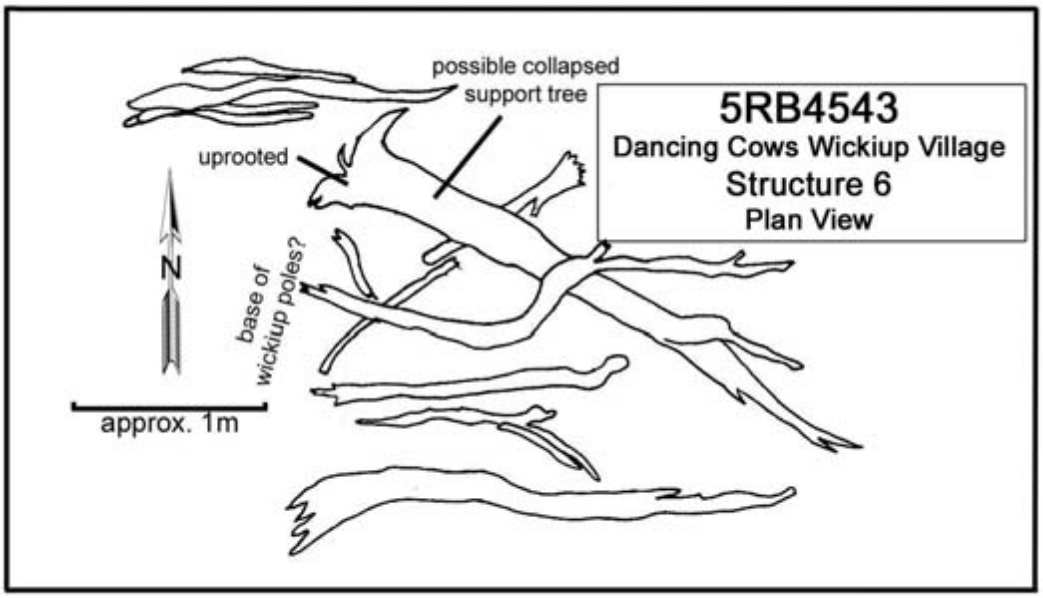

Figure 22. Sketch Plan of Structure 6 at 5RB4543

Structure 7, at the extreme southeast corner of the site, is a collapsed leaner wickiup consisting of a concentration of nine juniper or pinyon poles (one was definitely identified as juniper) resting on the ground surface (Figure 23). The partially limbed poles range from 1.27m to 1.38m in length and from 5cm to 14cm in mid-pole diameter with the exception of one large, possibly natural, branch that measures 3.63m in length and 12cm in diameter. It is possible that this element had served as an associated utility pole. The collapsed poles are situated to the south-southeast of a live juniper tree whose overhanging branches had likely served as a support for the wickiup while standing.

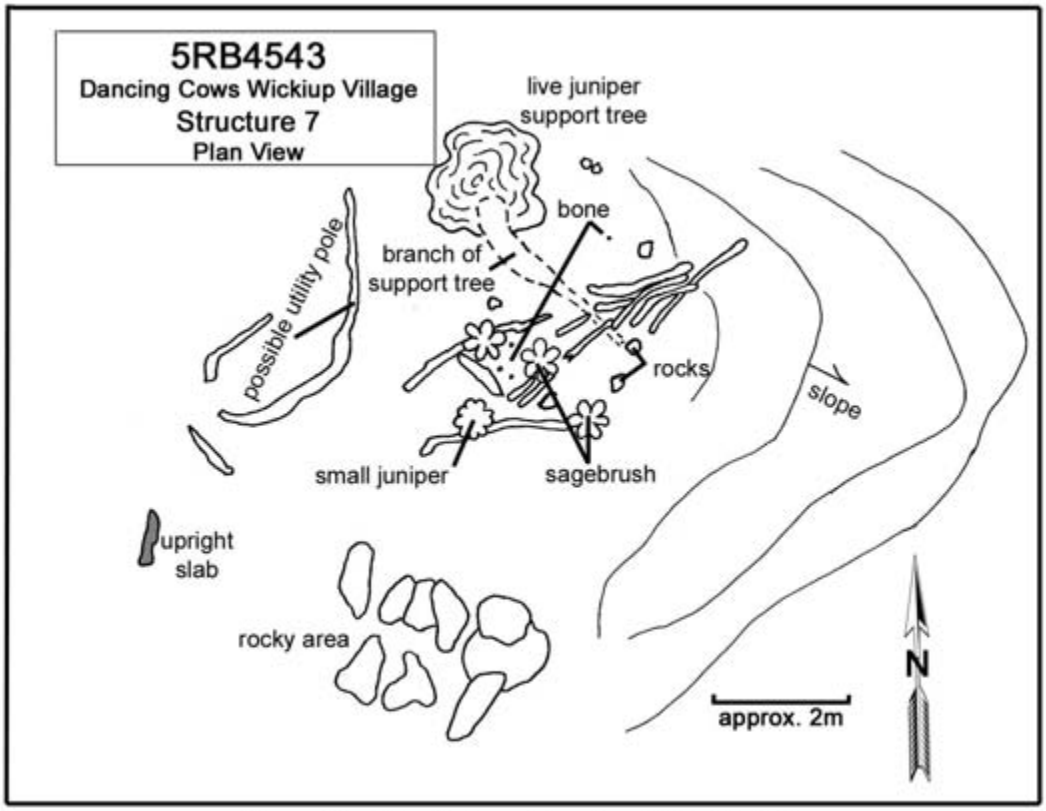

Figure 23. Sketch Plan of Structure 7 at 5RB4543

Feature 4 is an apparent firewood pile located at the western edge of the site. It consists of a 3m diameter concentration of seven to nine pieces of juniper or pinyon wood that range in length from 65cm to 1.3m and in diameter from 5cm to 22cm. The crooked and varied nature of the individual pieces of wood suggests that they were not structural elements of any type. There is also the possibility that Feature 4 is merely a concentration of non-cultural wood.

Feature 5 is a firewood pile located to the northeast of Structure 6. It consists of four pieces of juniper or pinyon wood that range in length from 94cm to 1.3m and in diameter from 5cm to 25cm. The crooked and varied nature of the individual pieces of wood suggests that they were not structural elements of any type.

Feature 8 is a cache of cultural poles resting on the ground to the northeast of a live juniper tree near the site datum. It consists of a 1.5m by 2.0m diameter concentration of four pieces of juniper or pinyon wood that range in length from 1.34m to 1.95m and in diameter from 6cm to 8cm. The poles are straight and similar in many ways to structural poles, however the parallel manner in which they are arranged on the ground suggests that they are not a collapsed wickiup or other structure (Figure 24). On the other hand, they are longer than what is typically found in firewood caches.

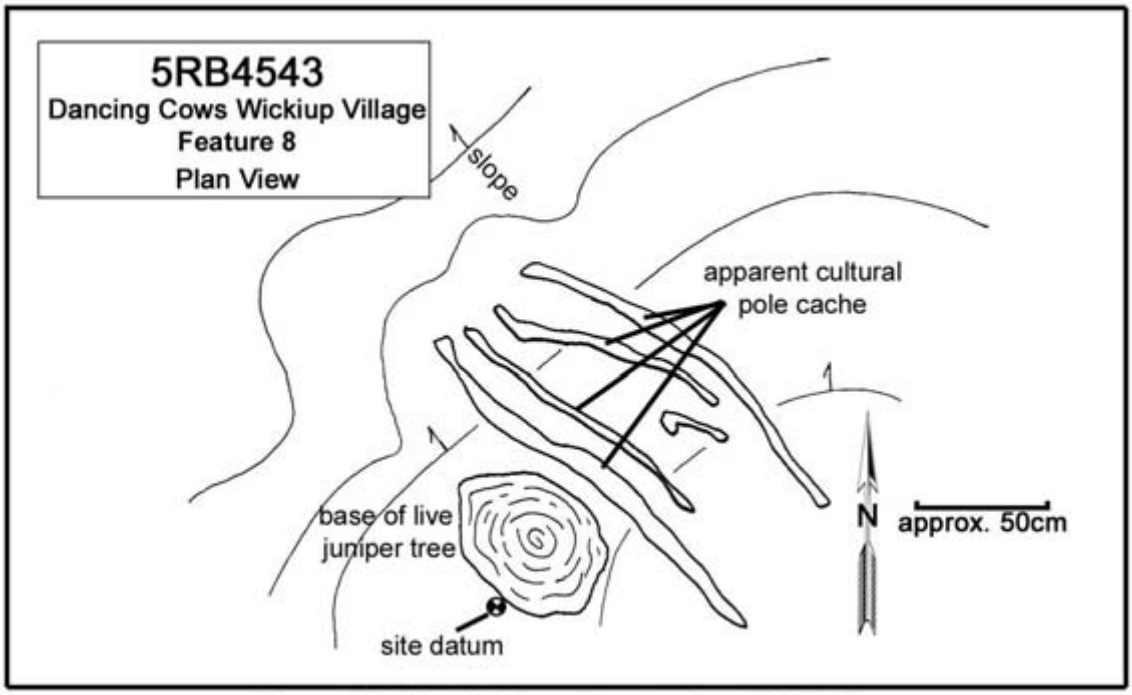

Figure 24. Sketch Plan of Feature 8 at 5RB4543

Evaluation and Management Recommendation

The Dancing Cows Wickiup Village site is listed by the OAHP as officially eligible for inclusion on the National Register of Historic Places. The documentation by the Colorado Wickiup Project has substantiated this interpretation. Avoidance and preservation are strongly recommended.

Pertinent Sites from Ancillary Projects

Four aboriginal wooden feature sites that were independently investigated by Martin and DARG associates in 2008 and 2009, and not part of the CWP itself, are discussed here: 5ME974; 5ME16097, the Horsethief Creek Structural Clearing site; 5MF6511, the Yampa Valley Overlook site; and 5RB509, the Perforated Can Site. Each of these sites produced information of import to the Colorado Wickiup Project and our studies of aboriginal wooden features as summarized below.

Information from these sites has also been included in the compilation of wooden feature data for the project (Table 7).

Site **5ME974** is a multi-component site consisting of a prehistoric open camp with a Protohistoric/Early Historic aboriginal component. It was originally recorded as an isolated find by Carl Conner and Sally Crum of Grand River Institute (GRI) in April of 1979. The site is located on a ridge and within an adjacent drainage approximately one half mile southeast of Shire Gulch at an elevation of 6080 feet. The vegetation is pinyon/juniper forest with sagebrush and little other understory. Soils are light tan and sandy.

The site was revisited by GRI in 2007, when it was re-designated as a site (Conner and Davenport 2007), and again in 2009 when a field crew from GRI conducted intensive surface mapping and test excavations at the site (Conner et al 2010). At this time the site boundaries were expanded to approximately 120m in diameter. Numerous chipped stone tools and debitage, groundstone items, and hearths were recorded. A projectile point was collected which consists of a small eclectic double side-notched arrow point with a basal notch.

Additionally, historic brown, green, and purple glass fragments; crockery fragments; lead solder-sealed cans; metal strips with punched holes; wire nails; bullet leads, and ammunition cartridges were recorded. Ten of the bottle glass fragments show evidence of having been retouched and/or utilized as "flake" tools. The presence of purple glass indicates a time period of earlier than approximately 1917, which is when manganese ceased being used in the manufacturing process. The ammunition cartridge is a copper, center-fire type, .32-40 with a protected primer, which was used in a Model 94 Winchester rifle. This style of case was in production from 1895 until ca. 1904 (Phil Born, personal communication). Based on these finds, it is likely that the site was occupied by the Utes in the early 1900's.

In addition, during the excavation phase of investigations at the site, the senior author of this report documented a brush windbreak (feature WF-2) adjacent to a type of wooden feature new to the CWP; a culturally bark-peeled piñon tree (Feature WF-1) (Conner et al 2010). An Aboriginal Wooden Feature form was completed for both features—which is included in Appendix H of this report, and data from these two features has been added to the tabulations presented in Table 7.

Wooden Feature WF-1 consists of a large, live piñon tree that has three distinct cultural bark peels on the west-northwest side of the trunk—facing downslope toward an unnamed intermittent drainage and the rest of site 5ME974. The bark peels have been designated as Features WF-1A, 1B, and 1C, arranged from the lowest to the highest scar (Plate 6). Additionally, the end of a metal ax-cut root of the same tree is at the base of the trunk on the southwest side of the tree and has been designated Feature WF1-D.

Feature WF-1A, the largest and lowest of the bark peels, is 31cm wide at the horizontally metal ax-cut base of the scar (it was undoubtedly somewhat wider prior to the post-peel outer ring growth that has partially obscured the edges of the scar). The peel is 20cm wide at the top where it coalesces into the bottom of peel Feature 1B. The scar is 36cm tall to the

point where it meshes with 1B. A ledge, or shelf, exists at the base of 1A as a result of a series of horizontal ax cuts. Approximately ten to twelve cut marks are visible, creating a ledge up to 10cm deep at the middle. The vertical back face of the peel has been axed vertically for the lower 17cm of the scar. Above that it is unmodified peeled surface.

Dendrochronological Sample 7 was taken as a core from within the scar face at the extreme north edge of the scar at the base, just above the ledge. Dendro Sample 8 consists of a segment of the outer rings and bark that have grown since the peel was made, and Dendro Sample 9 was a core taken from the face of the shallowest portion of the upper part of the 1A peel where no rings had been removed by the vertical ax cuts.

Feature WF-1B consists of the scar left by additional horizontal ax cuts at the upper end of Feature 1A and the peel above them. This scar is 20cm wide at the base and tapers to a point at the top. The peel is 35cm tall. The combined scar resulting from bark peels 1A and 1B is 71cm in height. Several ax marks on the vertical back face of the 1B scar attest to the fact that it too, as with Feature 1A, was severed from the trunk by chopping downwards with a metal ax. No distinct ledge was created at the base of 1B, however the four or more vertical cuts are up to 4cm in depth behind the upper face of the 1A scar.

Feature WF-1C was also created by a series of seven to ten horizontal metal ax cuts at the base of the peel and vertical downward cuts on the face above the resultant 7cm deep ledge. Unlike Features 1A and 1B, there is an area of peeled bark below the shelf at 1C, as well as above it. This area measure 6.5cm below the ledge, and it is here that Dendro Sample 10 was cored. The entire scar, including the area below the ledge, measures 29.5cm tall and 17cm wide at the base.

The maximum thickness of the "post-peel" new growth is 2.0cm at the top of 1A, 3.0cm in the 1B scar, and 7cm within 1C. The heights of the tops and bottoms of the scars above the present ground surface are 27-63cm for 1A, 63-98cm for 1B, and 1.59-1.89cm for 1C.

Feature WF-1D consists of one of the roots of the Feature 1 tree that has a metal ax cut situated at the present ground surface. This cut face measures 10cm horizontally and 9cm vertically.

Wooden Feature WF-2 consists of a linear brush alignment that was apparently constructed as a windbreak on the southwest side of a partially sheltered, level "camp site" area approximately 7m to the north of the Feature 1 piñon tree. The potential camp area is protected on the southeast side by a 1.1m high vertical outcrop of sandstone bedrock, on the northeast by two medium-to-large sized boulders, and on the southwest by the windbreak. The northwest edge of the level "camp area" is bounded by a natural alignment of sandstone boulders that have trapped the sediments up slope, creating a somewhat level terrace that measures 3.6m southwest-northeast by 2.5m northwest-southeast. A chert flake, a chalcedony flake, and a wire bucket bale were found in association with WF-2.

WF-2 consists of 17 mainly juniper (possibly a few piñon) branches. Eight of the butt ends of the branches show clear evidence of having been metal ax-cut, two others are possibly ax-cut, and the remainder appear to have been broken from their sources as dead limbs. Numerous additional smaller twigs and branches were either intentionally incorporated into the construction, or have since fallen and broken off of the larger limbs. The uppermost, east-southeast, branch rests between the bases of two sub-trunks of one of the "canopy" junipers that also partially shelter the site from the southwest. The lower, west-northwest, end of the brush wall rests at the base of a dead juniper stump. The windbreak measures 4.7m west-northwest by east-southeast and 2.0m by east-southeast by west-northwest and remains standing to a height of 40cm. Test excavations within the "camp area" were negative.

One additional feature was noted several meters to the northwest of the culturally peeled tree in the form of two wire nails driven into the northeast side of a dead sub-trunk of a small live juniper tree. It remains unclear as to whether these nails are associated with Feature WF-1 and WF-2.

Dendrochronological core samples were procured from the bark peels of WF-1 as described above. The most pertinent result from the dating analysis of these samples is that from the shallow portion of the WF-1A scar which produced a date of AD1896 (Dendro Sample 9). The sample from within the vertical ax cuts of the same peel (Sample 7) dated to 1885. Sample 10 from the area of peeled bark below the bottom ledge of the 1C scar dated to 1932, indicating that this bark was removed significantly later than the actual bark peels themselves. Tree ring samples from the ax-cut branches of Feature WF-2, the wind break, failed to result in dates.

Site 5ME974 was field evaluated as eligible due to the visible evidence of thermal features and the results of the test excavations (Conner, Davenport, and Smith in progress).

Site **5ME16097, the Horsethief Creek Structural Clearing site**. In 2008 Grand River Institute (GRI) under the direction of Curtis Martin undertook excavations at archaeological site 5ME16097, the Horsethief Creek Structural Clearing site, for purposes of evaluation and data recovery (Martin, Conner, Ott, and Davenport 2009). The site is an open camp located on USFS lands approximately four miles southeast of the town of DeBeque in Mesa County, Colorado. It was originally recorded by GRI in 2007 as part of a Class III cultural resource inventory of the proposed Collbran Pipeline Project for Encana (Conner and Davenport 2007) and was subsequently evaluated as eligible for listing on the National Register of Historic Places (NRHP).

As a result of the excavations, four features were identified: a fire-altered cobble concentration, a cluster of basalt fire-cracked rock, upright slabs, and a thermal feature. Surrounding the cobble concentration and thermal feature was an area cleared of basalt rocks

indicating an activity area or floor of a wickiup structure. A C^{14} sample recovered from the hearth feature within the apparent structure's floor produced a conventional radiocarbon date of 370±40 BP (AD 1440-1640 at 2-sigma; Beta-248418). This date, along with recovered diagnostic projectile point fragments and a concentration of Uncompahgre Brown Ware sherds, suggest a single-component, prehistoric Ute occupation of the site that occurred during the Late Pre-Contact period (Canalla Phase).

A total of 34 square meters and one trowel test were excavated at the site. The grid square excavations ranged in depth from a minimum of 4cm to a maximum of 55cm. The cultural resources were limited vertically to the upper few centimeters of fill. Due to the failure of the investigations to produce any artifactual remains in the deposits below the shallow, loose overburden (Levels 1 and 2), much of the research was confined to these upper layers. One of the most important conclusions of this study is that the general context of these types of sites is profoundly important to their interpretation. Also, this research supports cultural resource management's break from the "lithic scatter archaeology" of the past and its movement toward the search for structural features in hunter-gatherer sites.

Surface inspection of the site relocated Features 1 and 2 as noted on the original site map (a concentration of possibly heat-fractured basalt cobbles and a concentration of heat-altered river cobbles respectively). The excavations at the site unearthed one additional thermal feature, Feature 4, within the Feature 2 Locus, and numerous specimens of lithic debitage, chipped and ground stone tools, and ceramic sherds.

From among the general surface artifacts, 32 field specimens (FSs) were collected–some of which represent more than one artifact—that represent 100% of the prehistoric artifacts and a sampling of temporally diagnostic historic specimens from a historic trash dump on the site that dated to the 1910s to 1930s.

During the intensive mapping portion of the investigations 35 flakes, a projectile point fragment, a ceramic sherd, a chopper, a polishing stone, a uniface, and a tested cobble were recorded and collected.

In addition to the general surface artifacts, 104 pieces of lithic debitage, three projectile point fragments, a biface tip, a uniface, a chopper, three hammerstones, and three ceramic sherds were recovered from Levels 1 and 2 during the excavation phase of the project, bringing the total *prehistoric* artifact count for the site to 156.

The projectile point fragments, FS 4 from the surface collections, and FS 151 and FS 168-A from excavated contexts. FS4 is a very well made, unnotched triangular projectile point with a concave basal edge. Points of this style have been referred to as Cottonwood Triangular arrow points of the Late Prehistoric and Protohistoric Ute, AD850-1880s (Holmer 1986, pp. 106-8 and O'Neil 1993, p.309); Formative/Protohistoric Era points (Reed and Metcalf 1999, p.114); and Uncompahgre Complex Type 10 points from the Escalante Phase (Ute), AD1500-1880 (Buckles 1971, pp.1185, 1220). A Cottonwood Triangular point has also been found in

association with Protohistoric or Early Historic trade goods on site 5RB509, The Perforated Can Site (Martin and Conner 2008), and 5RB18, the Two Tall Pole Wickiup Village (Martin and Ott 2009). This latter site has produced Protohistoric age dendrochronological dates on wooden structural elements of AD 1844 and AD 1915/1916. Points of this style have also been analyzed as preforms for Desert Side-notched arrow points.

Field Specimen 151 is a basal fragment of a stemmed knife, or corner-notched projectile point. It appears that the base may have been intentionally indented. It is made of gray chert and measures 2.3+cm in length by 1.5+cm in width by 0.5cm in thickness. It was recovered from Level 2 in grid 18S7E at the southern end of the Feature 2 Locus.

Although too fragmentary for definitive identification, the hafting element and overall workmanship of the artifact suggests an Archaic Era origin for the point. Based upon the nature of the other diagnostic artifacts at 5ME16097, the results of the radiocarbon analysis, and the fragmentary and probably reworked nature of the point itself, it is considered to represent a case of re-use of an older, curated artifact by the site's occupants, and probably utilized as a knife.

Field Specimen 168-A consists of the extreme basal edge of a small, side-notched projectile point with a straight base. It is made of mottled red and gray chert and measures 0.5+cm in length by 1.0+cm in width by 0.1cm in thickness. This specimen was excavated from Levels 1/2 of grid square 13N15W in the Feature 1 Locus. Although all that is left of the fragment is the basal edge and the proximal edges of the two side notches, small, side-notched points found in western Colorado are typically analyzed as Desert Side-notched points attributed to Late Prehistoric and Protohistoric Numic (Ute and Shoshone) manufacture (or possibly Formative Era: Reed and Metcalf 1999, p.114) dating from approximately AD1150-1800s (Holmer 1986, pp. 106-8 and O'Neil 1993, pp309, 310) or Uncompahgre Complex Type 2, Coal Creek and Escalante Phase (Ute), AD700-1300 and AD1500-1880 respectively (Buckles 1971, pp.1185, 1220).

Desert Side-notched points have also been found in association with Protohistoric or Early Historic trade goods on sites 5RB509, The Perforated Can Site (Martin and Conner 2008), 5RB18, the Two Tall Pole Wickiup Village (Martin and Ott 2009), and 5RB2624, Rader's Wickiup Village (Martin, Ott, and Darnell 2006). These latter two sites have produced dendrochronological dates on wooden structural elements of AD1844, AD1915/1916, and AD1883/1884.

Four ceramic sherds were recovered at the site, all presumably from the same vessel. A single specimen (FS18) was found on the surface and three additional sherds were found two to three meters to the northeast in the upper 5cm fill. Luminescent analysis of one of these sherds produced a date of AD1460±60 years. The results of this analysis, and other luminescent dates are discussed in the Discussion and Synthesis section of this report.

The sherds compare well with descriptions of Uncompahgre Brown Ware that is common to the area and is attributed to Ute manufacture. These ceramics appeared in the region

as early as AD 1100 (Reed and Metcalf 1999:155) and continued to be made by the Utes throughout the Protohistoric and into Early Historic times. Similarities between ceramics made by the Ute, the Southern Paiute, Apache, Navajo, and Yavapai make them nearly indistinguishable (Buckles 1971:505). During the 1600s, the Navajo were victims of a Ute-dominated slave trade which provided slaves to trade for Spanish horses and possibly provided pottery-making wives to Ute warriors as well. By the late 1700s, the Utes had established friendly relations with the Apache and Navajo, and Uncompahgre Brown Ware developed additional Athapascan ceramic characteristics (ibid:533). Perhaps by the 1800s, the Utes were doing more trading than manufacturing; however, northern Utes are recorded as both making and trading pottery (Smith 1974:83-89,252).

Two general types of this ware, Plain and Fingertip-impressed, have been recognized. Initial investigations appear to suggest that the Plain type is more typical in the eastern and southern portions of the Ute homeland in Colorado, and the Fingertip-impressed type dominates in the northwest part of the state (Reed and Metcalf 1999:156), although additional research will be needed to confirm this. The sherds from this site range in diameter from 2.1cm x 1.5cm up to 3.9cm x 2.9cm and from 0.36cm to 0.79cm in thickness. All are plain (no surface treatment in the form of fingertip or fingernail impressions or other forms of manipulation) and none of the recovered specimens are rim sherds. The sherds are smooth on the exteriors and scraped on the interiors. Surface color varies from black to gray to pale reddish-brown. Temper consists of quartz sand and angular fragments of black rock (rhyolite?).

Feature descriptions

Feature 1 was described in the original site description as "a rock filled hearth". During the excavation phase, the cluster of angular basalt fragments was determined to be fire-cracked in nature, but no evidence of associated ash, charcoal, or heat-altered soil was found.

However, the excavation at the Feature 1 locus proved valuable in that two flakes, two Uncompahgre Brown Ware sherds, and a basal fragment of a side-notched projectile point were recovered from the sub-surface deposits. The sherds are presumably from the same vessel as those from the Sherd Locus a few meters to the southwest.

Feature 2 was originally described as "a small concentration of twelve fire-reddened river cobbles and a few heat fractured cobble chunks [that]...may represent the location of a possible sweat lodge." A total of twenty-nine contiguous square meters were excavated at the location in the southeast corner of the site. Feature 2 itself, upon excavation, was found to consist of a total of 17 porcellanite (siltstone), heat-reddened river cobbles and cobble fragments concentrated in an area measuring 1.45m north-south by 70cm east-west. The cobbles are clearly water worn and have been transported to the ridge top, and their current location, by humans. The bases of the stones rested at various levels from the present ground surface to 4 or 5cm below pgs within Levels 1 and 2. There was no ash, charcoal, or evidence of *in situ* thermal activity such as reddened sediment in direct association with the Feature 2 rocks, and it is apparent that they had been heated in a fire elsewhere (quite likely at nearby Feature 4) and

subsequently concentrated at their current location. It is likely that these thermally-altered cobbles were utilized as boiling stones, as discussed below.

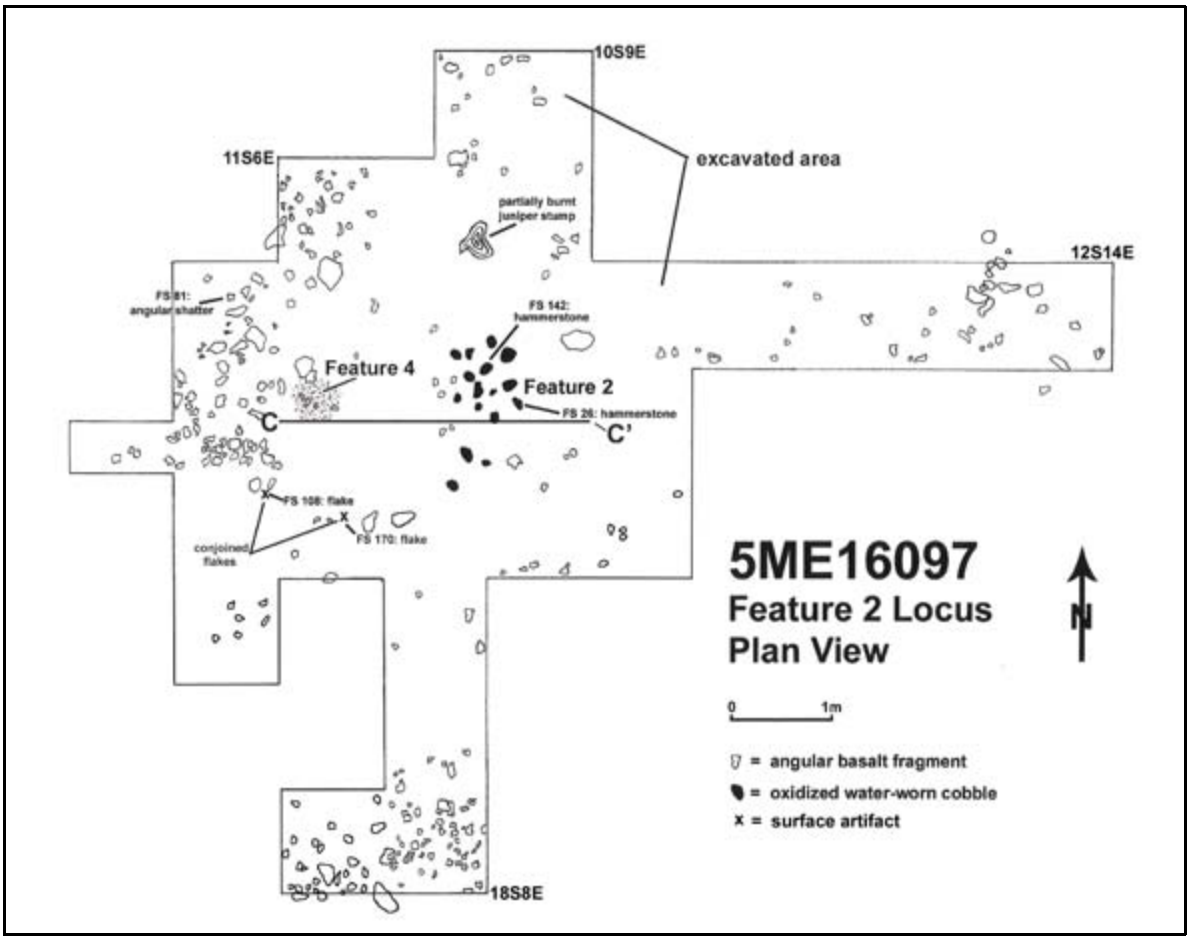

Figure 25. Excavations at the Feature 2 Locus of 5ME16097.

Another intriguing cultural manifestation at the Feature 2 Locus consists of a notably rock-free area that encircles Feature 2, nearby thermal Feature 4, and the partially burnt trunk of a juniper tree (Figure 25). The entire ridge top, and the area in general, is characterized by a dense scattering of naturally occurring cobble-to-boulder sized basalt fragments. A roughly circular area measuring approximately 6m in diameter appears to have been cleared of these sharply angular and shattered fragments. Concentrations of these, apparently "thrown aside" rocks are particularly in evidence to the west and south of the two features. It is the opinion of the GRI researchers that this area probably represents one that was cleared to provide space for the floor of a wooden structure such as a wickiup, but it could have been cleared simply to provide a rock-free campsite. Similar "structural clearings" or "sleeping circles" have been described, both ethnographically on Apache wickiup sites and in archaeological contexts, by Seymour (2009).

It is possible that the juniper tree whose burnt trunk remained *in situ* approximately 1m to the north of Feature 2 served as a support tree for the poles of a "leaner style" wickiup, however, this hypothesis remains unproven. A tree ring sample from this trunk, with the outer ring and bark intact, produced a dendrochronological date of AD1846 for the demise of the tree. Its relationship to the interpretation of the locus or the actual date of the site's occupation remains ambiguous, however, it is well within the realm of the potential occupation for the site, and the presumed shelter represented at the Feature 2 Locus. This date can easily be considered as compatible with two of the three recovered projectile points from the site, the Uncompahgre Brown Ware sherds, and the results of the radiocarbon analysis from nearby Feature 4 (when the old wood factor is taken into consideration).

If the tree, indeed, had served as a support for wickiup or tipi poles at the locus, then it is implicit that the tree burned during the time of occupation, or at some later date. The possibility remains, however, that the tree had died and burned prior to the inhabitation and was simply present at the locus, at that time, as a dead standing tree, or even burnt stump.

Also, it was noted that, of the nine basalt cobbles at the locus that were over 25cm in diameter (an arbitrary number), eight of them formed an approximately 3m in diameter, roughly circular arrangement surrounding the two cultural features and the tree stump. It is possible, once again, that these stones represent artifacts associated with a conical wooden shelter; perhaps as anchor supports for the bases of the wooden structure poles, or as weights to hold down the bottom of a brush, hide, or canvas covering. If, indeed, a leaner wickiup had been constructed on the southwestern side of the presumptive support tree, these rocks would be in a plausible arrangement for either of these purposes, with the hearth and heat-providing river cobbles within the interior of the shelter. The lithic debitage and tools recovered from this locus were not random in distribution, and appear to indicate one or more apparent work stations associated with the cleared camp area and the Feature 4 hearth.

The initial assessment of the Feature 2 cobbles as potential heating stones in a sweat lodge is, however, not unwarranted. Smith (1974:43) describes the use of heated stones in sweat lodges:

> The sweat lodge was about 8 to 10 feet [2.6-3.3m] in diameter, and not quite tall enough to stand up in, that is, usually between 4 and 5 feet [1.6m] high. It could accommodate four to five people. A hole 1 foot [30cm] deep and 1½ feet [45cm] in diameter was dug in the center to hold the hot stones. A fire was made outside the lodge, near the doorway, in which three of four stones were heated. When they were considered sufficiently hot, they were pushed with sticks into the pit in the lodge, and the men would enter.

In addition, larger cobbles, over 15cm, that exhibit heat discoloration, have been found in wickiups without interior thermal features. Conner (personal communication 2008) specifically noted having found large cobbles within a wickiup under one end of a juniper mat

that were apparently used simply as heat sources for the shelter's occupants.

Numerous similar wickiup structures of this size and type are well documented in the Northern Colorado Plateau (O'Neil et al. 2004, Martin, Conner, and Darnell 2005, Martin and Conner 2008, and Martin and Ott 2009) and in the Great Basin (Simms 1989). O'Neil et al. (2004:57) indicates:

> The vast majority, 44 of the structural features identified at 5GF308, are multi-pole, lean-to wickiups. As noted previously, there is little ethnographic data available regarding the construction of these lean-to structural features, although Scott (1988:47) provides a general description based upon the Huschers' (1939) work. These structures are made of 4 to 10 irregularly shaped and variably sized branches or limbs which have been cut or gathered. These "poles" are laid up against and around one side of a standing tree, rarely encompassing more than one-half of the tree. The door is usually to the northeast. Presumably, the structures were then covered with brush, hide, or both.....Based on our survey results and the limited excavation data available, 19 (43 percent) of the multi-pole lean-to structures have hearths associated with them. Seven (16 percent) were judged as having interior hearths, nine (20 percent) were judged to have exterior hearths, and three (7 percent) were judged as having both an interior and exterior hearths. Based on these data, it seems that interior hearths are not as rare as hypothesized by Scott (1988).

Feature 4 was newly discovered beneath the sediment within the Feature 2 Locus, situated 1.5m to the west of Feature 2 itself. Level 1 and Level 2 sediment was removed exposing Feature 4 as an indistinct, roughly circular, 30cm in diameter, very light ash stain. Within an area measuring 30cm to the east, north, and west of the ash stain, a concentrated (relative to the rest of the fill at the locus) scatter of charcoal fragments was discovered. Although there was no distinct evidence of a formal feature, such as a basin-shaped hearth or *in situ* oxidation of the surrounding sediment, Feature 4 has been interpreted as the apparent base of a completely deflated hearth.

A sample of the charcoal from Feature 4 was sent to Beta Analytic, Inc. which produced a conventional radiocarbon date of 370 ± 40BP; a date consistent with two of the three projectile point fragments from the site, as well as the Ute-manufactured Uncompahgre Brown Ware ceramics, even taking into account an old wood factor.

Cultural Affiliation and Age

Cultural affiliation and age were derived from radiometric analysis from the thermal feature and a comparative analysis of the recovered diagnostic artifacts at 5ME16097. The sole radiometric result from the site of 370±40 BP (AD 1440-1640 at 2-sigma; Beta-248418) was

produced by Feature 4. The Uncompahgre Brown Ware ceramic sherds dating results of AD1460±60, and two of the projectile points, FS 4, a Cottonwood Triangular style and FS 168-A, a Desert Side-Notched point, corroborate the interpretation of what appears to have been a single component occupation: that of a Ute campsite.

At face value the radiocarbon date places the occupation within the Late Pre-contact Canalla Phase for the Eastern Ute (pre-AD1540), however, old wood issues (the number of years that the wood had been dead prior to its use as hearth wood) could subtract as many as several hundred years from the date, resulting in an occupation in a subsequent phase: the Early Contact Rivera (AD1540 to 1820), Middle Contact Robideau (ca. AD1820 to 1860), or even later.

Although the C^{14} date and collected diagnostics apparently provide a likely and reliable estimate of the time of occupation of the site, the "old wood problem" creates important ramifications for dating Numic sites and in estimating the Ute's arrival in western Colorado. To that end, additional dating methods are being tapped for comparison.

The tree-ring sample produced a date of AD1846, which is compatible with the Ute diagnostics. If this date is, indeed, associated with the cultural manifestations of the site (which it may or may not be, as discussed earlier), it would place the occupation within the Middle Contact Robideau Phase (ca. AD1820 to 1860). The fact that no trade goods were found during the investigations, however, possibly suggests an earlier time frame; in the Early Contact Rivera Phase (ca. AD1540 to 1820) or the aforementioned Canalla Phase.

Seasonality

Smith (1974:34-36) indicates, the diameter (and floor area) of structures is relative to the length of time and season during which it was occupied and/or the size of the resident group. Winter shelters tended to be larger (4-5m in diameter) and could sleep up to 12 people. Accordingly, if the cleared area around Features 2 and 4 represents the floor of a ~3m diameter wickiup structure with an interior hearth, it likely served as a cold weather period habitation for a nuclear family or limited extended family.

Site **5MF6511**. At the request of the Little Snake Field Office of the BLM, a crew of archaeologists from DARG under the direction of Curtis Martin, conducted a revisit and re-evaluation of site 5MF6511, "Jackie's Yampa Valley Overlook Site," near the Yampa River on BLM administered lands in Moffat County, Colorado. The purpose of the project was to perform an assessment and thorough recordation of a series of wooden features that had initially been recorded as wickiups or expedient brush shelters.

The original recording was done by Robyn Watkins Morris, Jackie Hovis, and Jennifer Maiolo of the Little Snake Field Office of the Bureau of Land Management (BLM) in 2007.

The site is located on the talus below the north rim of a section of the Yampa River and ranges in elevation from 6280 to 6680 feet. The vegetation consists of piñon/juniper forest, with prickly pear, snakeweed, sagebrush, forbes and bunch grasses as an understory. The soil consists of shallow, light brown to reddish brown, very rocky, sandy loam colluvium.

As opposed to a possible prehistoric wickiup village, as originally recorded, the revisit to the site by DARG reinterpreted it as a multi-component prehistoric open camp, historic fence post cutting, and mining prospect pit. The original site boundary was expanded to 380m northwest-southeast by 170m northeast-southwest. Although the wooden features were reinterpreted as historic fence post caches rather than aboriginal brush shelters or wickiups, the investigation provided a valuable learning opportunity regarding the means of differentiating between these two wooden feature types, as outlined below.

The revisit to the site located all ten of the wooden features noted in the original *Prehistoric Archaeological Component Form* (Features 1 through 5, 9 through 10, and 12 through 14) and discovered five previously unrecorded caches of juniper logs supported by standing juniper trees (Features 15 through 19). All of the non-wooden prehistoric features (Features 6 through 8) and the excavated pit (Feature 11) were also located.

The 15 wooden features have been reinterpreted as historic caches of juniper fence posts (known in the vernacular as "cedar posts") rather than aboriginal wickiups or brush shelters for a variety of reasons. Among these reasons are:

1) the large diameter of the posts in general (compared to wickiup poles),
2) the presence of numerous saw cuts on the posts (including chain saw cuts in some instances),
3) the fact that a majority of the features consist of posts piled atop each other and/or are situated on only one side of the support trees rather than fanned out in order to provide a framework for a brush, hide, or canvas cover,
4) the low-to-the-ground placement/extremely low "headroom" of several of the features,
5) the placement of several of the caches over vertical bedrock outcrop faces or on very steep slopes that would provide unsuitable floors for human shelters,
6) the fact that 100% of those posts that are identifiable as to species are juniper (wickiups typically employ *some* piñon poles in their construction).
7) hundreds of instances of ax and saw-cut tree stumps throughout the site area and the talus between the site and the canyon rim to the north.

It is notable that of the 138 total cultural posts recorded, all of the 129 that could be positively identified by bark remnants as to species, are juniper. It is assumed that all of the posts are of this species, rather than piñon, as is typical of fence-post production sites. Additionally, 100% of the support trees are juniper; all but one remain alive. Three dendrochronological samples were procured from the post caches; one each from Features 5, 10, and 15. These samples have been submitted to the Laboratory of Tree-ring Research for

analysis and the results are forthcoming.

The small, prehistoric open camp and activity area immediately west of wooden Feature 5, was originally recorded as Features 6 (the lithic concentration), 7 (four mano fragments), and 8 (a concentration of ash and charcoal). In the area, the DARG project identified upwards of 150 lithic flakes (including a high percentage of angular shatter) of chert, quartzite, and quartz. In addition, a core, a biface thinning flake, two biface fragments, four mano fragments, two choppers (one of quartz), a possible metate, and approximately 20 to 30 apparent man-u-port cobbles (some of which showed evidence of having been tested and/or heat-altered) were recorded,. Much of the tool-stone, as well as the granitic cobbles, appear to be oxidized and crazed. Occasional, but rare, flakes were also noted in the area surrounding the site.

It is possible that many of the water-worn granitic and sandstone cobbles on the site had been utilized, however four of the fragments are obviously manos; including one "loaf-shaped" specimen that is highly deteriorated and crumbling, but retains evidence of bifacially pecked and ground faces and shaped edges. At the south end of the prehistoric component is a rectangular slab of sandstone that has a slight concave surface. Although no evidence of a ground surface remains, it is the opinion of the field crew that the specimen was likely to have been a metate, or was transported to the site for that purpose.

Near the center of the prehistoric activity area, which measures 24m north-south by 14m east-west, is an anthill that rests atop a dense ash concentration (presumably the Feature 8 from the original recordation). This concentration is visible on the surface in an area measuring approximately 2m by 1m. A 10cm diameter trowel test was conducted into the ash which produced dense ash, but virtually no charcoal, to a depth of 13cm where small, oxidized sandstone fragments hindered further testing.

The final aspect of site 5MF6511 consists of Feature 11, a large, 15m diameter pit in the southwest corner of the site. A notable amount of sandstone rubble and bedrock were removed and piled on all sides of the roughly circular excavation. Although no direct evidence exists, it is assumed that the pit represents a miner's prospect. Two short sections of bedrock are exposed in the bottom of the pit that give the appearance of coursed, dry-laid masonry, however, these have been interpreted as naturally-deposited sandstone layers. This feature appears to represent a third component on the site, along with the prehistoric and historic "cedar post" procurement components.

The entirety of the area that encompasses wooden Features 5, 10, and 15, as well as the prehistoric open camp, and the prospect pit (Feature 11) were metal detected in search of metal trade artifacts that are common on wickiup sites in western Colorado, with negative results. Some interference was encountered by the presence of "hot" (mineralized) rocks, especially within the miner's pit.

Due to the presence of the undisturbed prehistoric open camp, including an apparently *in situ* thermal feature of notable depth, the DARG researchers concurred with the initial

interpretation of 5MF6511 as eligible for inclusion in the National Register of Historic Places (NRHP).

Site **5RB509, the Perforated Can Site**. In response to a request by Shell Frontier Oil & Gas Inc. (Shell) and the State of Colorado Department of Natural Resources-Division of Wildlife (DOW), site 5RB509, an open, Late Prehistoric, Protohistoric, or Early Historic aboriginal campsite with extant wooden features, was test excavated and evaluated by archaeologists from Grand River Institute (GRI) in 2008 under the direction of Curtis Martin (Martin and Conner 2008). The site is located on the northwestern rim of Stake Springs Draw in the Piceance Basin area of Rio Blanco County, Colorado; within the proposed Yellow Creek Archaeological District where much of the field work for the CWP Phases III and IV took place.

The GRI archaeologists conducted intensive surface mapping, shovel and trowel excavations, shovel tests, dendrochronological sample procurement, and metal detection on the site. The purpose of this project was to further evaluate the site and establish the vertical and horizontal extent of the cultural deposits, to further evaluate the site's eligibility for listing on the National Register of Historic Places (NRHP), and possibly to provide sufficient mitigation of the resource to enable the proposed property transfer to proceed.

As a result of the test excavations, evidence indicates that the cultural deposits at the site are very shallow (three centimeters or less in most locations). Cultural manifestations and artifacts present consist of three aboriginal wooden features and a sparse chipped and ground stone scatter of tools and debitage. No distinct evidence was found during the subsurface investigations of any *in situ* thermal features. However, based on the diagnostic artifacts it appears possible that two occupations are represented at the site: a Late Prehistoric and a Protohistoric/Early Historic Numic.

Based on the excavations, the site's previous recommendation as eligible for inclusion on the National Register of Historic Places (NRHP) has been upheld and substantiated. Also, the testing provided sufficient mitigation of the resource that no further archaeological investigations were deemed necessary.

The site was originally recorded by A. Olson of the University of Denver in 1975. In July of 2006 SWCA Environmental Consultants conducted a Class III cultural resource inventory in the area on lands administered by the State of Colorado Department of Natural Resources–Division of Wildlife (DOW) as part of a proposed property exchange. As part of the inventory site 5RB509 was reevaluated. As a result of these investigations, which included the excavation of four subsurface test units, the site was recommended as eligible for inclusion on the National Register of Historic Places (NRHP). In 2008 DARG was contracted to further test the site.

Site 5RB509 was described in the SWCA report (Hays, Phillips, and Slessman 2006) as a prehistoric open camp measuring 124m by 53m. The archaeological crew noted chipped stone debitage, an apparent drill fragment, two bifaces, a chopper, a retouched flake, three ground stone manos, a burnt bone scatter, two metal cans (including a culturally altered rusted can of potentially early historic age), a shell casing, and an apparent aboriginal wooden shelter ("possibly a wickiup or lean-to structure").

The wooden feature was described as: "...a hand hewn juniper log leaning against a natural Y branch on a living juniper tree. The juniper log has been stripped of its branches and the base of the log is buried 6cm in duff. The post is approximately 7 ft long [2.1m] and has a maximum diameter of 4 in [10.2cm]. Two small burnt bones, potentially rodent, were observed within the duff around the feature. A flattened metal can was observed 9 m northwest of the feature. This can was purposely flattened and the cuts were placed along the edge. A hole was punched in the center of the can..."(ibid:46).

Four shovel tests were conducted by the SWCA crew at selected locations throughout the site, including one within the confines of a surface scatter of burnt faunal bone, and one to the southwest of the wooden feature. The tests resulted in the discovery of a single artifactual flake and additional burnt faunal remains in the upper 5cm of the subsurface fill. Testing was discontinued at this point; the existence of buried cultural deposits having been demonstrated. No thermal features, ash-stained soil, or charcoal were encountered, however, this is not surprising considering the limited extent of the tests.

The DARG excavations at 5RB509 were conducted with trowels, brushes, and whisk brooms in the shallow layers of brown sandy loam that comprised Levels 1 and 2; the only deposits at the site that produced cultural remains. Shovels were also utilized, when necessary, for the removal of the more densely-packed layers below Level 2, in the form of sub-sterile tests, and in a series of shovel tests. A total of 13.75 square meters was excavated in the form of one-meter by one-meter square units or fractions thereof. Additionally, a series of 11 shovel tests were conducted in search of subsurface thermal features in an unforested clearing east of Feature 3, a possible wickiup structure.

The excavations ranged in depth from a minimum of four centimeters to a maximum of 27 centimeters. Although a majority of the cultural materials were found in the upper 3cm of sediment, some flakes were recovered at up to 17cm below the present ground surface (pgs) in one location.

The "back", or northwest end of the site, was designated as the "Wooden Feature Locality", where the three aboriginal wooden features are situated, along with a large surface scatter of charcoal and burnt bone and two metal ax-cut tree stumps. It is also here that two metal artifacts were recovered; a metal projectile point and a flattened food can with a hole punched in it. To the southeast, near the end of the prominence, is the "Prominence Locality" where a majority of the lithic debitage and tools were found, including the site's two stone projectile points. A low saddle, which is relatively devoid of surface artifacts, separates the two

localities.

Excavations at the site were conducted at ten separate locations, which were selected on the basis of surface manifestations such as wooden features; concentrations of ash, charcoal, or fire-altered rock; diagnostic artifacts; or flake concentrations. It is the investigations at the locations of the wooden features that are pertinent to this report, as described below.

The Wooden Feature Locality

The Feature 1 Locus: Feature 1 is a single metal ax-cut and limbed juniper pole leaned against the trunk and branches of a live juniper tree. In the original site report it was recorded as "possibly a wickiup or lean-to structure" (Hays, Phillips, and Slessman 2006). It is situated at the northeast end of the site, within a wooded area of piñons and junipers. As there are no other poles in association, the pole has been reinterpreted as a "utility pole", or possibly simply a pole cache–for use by the site's occupants at a later date.

The cultural pole at Feature 1 measures 2.84m in length but only 5cm in diameter near its mid-point. At least five limbs have been cleanly removed from it with metal ax cuts, others possibly were simply broken off. At approximately its mid-point, and 1.2m above the ground surface, the pole is also supported by a fork in a short sub-trunk of the live juniper support tree. The pole rests at an angle of 55°, relative to the ground, and its base is 1.0m to the north-northwest of the trunk of the support tree.

At Feature 1, a total of 4¼ square meters were excavated around the base of the standing pole, beneath it, and around the base of its support tree. With the exception of a single artifactual flake in the 3-6cm level, the only other possible cultural remains at this locus consisted of occasional small fragments of charcoal and burnt and unburnt bone. Within 15m to the northwest of Feature 1, however, were recorded Feature 8 (an additional single-leaner utility pole), a flattened food can that has been perforated (FS 8), and a metal projectile point (FS 22) (Plate 14).

Feature 8, newly discovered by the DARG excavation project, is situated 13m to the northwest of Feature 1 and consists of another apparent single-pole leaner, albeit a much less obvious cultural element. It is supported by a low, horizontal branch of a live juniper support tree; at a much lower angle than the pole at Feature 1. Although there are no apparent ax cuts or other cultural modifications on the pole, the upper, butt end of the pole is interlocked among three limbs of the support branch in a manner that highly suggests human intervention, and it has been interpreted as another possible utility pole.

This pole measures 2.4m in length and 10cm in diameter near its mid-point. It appears to have been intentionally and completely limbed. The pole rests at a low angle of 30°, relative to the ground, and its base is 1.6m to the north-northwest of the trunk of the support tree. The upper end of the pole is only 90cm above the ground level. No excavations were conducted at this feature.

The Feature 3 Locus: Seventeen meters to the northeast of Feature 1 is the third aboriginal wooden feature on the Perforated Can Site; Feature 3. It is an apparent "pull-down" style wickiup, or brush shelter. It consists of two branches, one still partially attached to the support or "mother" tree, beneath the overhanging canopy on the northeast side of a live juniper support tree. The two apparent pull-down branches are arranged roughly parallel to each other.

Pull-down wickiups, although infrequent in the archaeological record and difficult to recognize in the field, are known in western Colorado. Typically, two or more branches are simply snapped and bent down from where they attach to a tree. These hanging limbs are then used as a framework from which to suspend brush, hides, or canvas to create an expedient shelter from the elements.

A single 1m x 1m grid unit was opened within the apparent floor area of Feature 3. The subsurface findings were similar to those at the Feature 1 Locus: a single artifactual flake was found beneath the duff at the upper contact with Level 1, the highly organic silty loam. A few minute fragments of charcoal and one unburnt, probably recent, bone fragment were found within Level 2, at depths of from 3 to 12cm below pgs (including duff and moss).

The branch that is no longer attached to the mother tree of Feature 3, designated Branch #2, is the one that provides the most distinct evidence of being cultural in nature. The upper, or butt, end of this branch (the northern-most of the two) rests in a crook of the support tree trunk. The scar on the trunk of the mother tree, from where it was pulled (or fell), is situated from one to two meters above the present location of the upper end of Branch #2 and there are two overhanging live branches growing from the tree below the scar, which make it highly unlikely that Branch #2 could have simply fallen to its present position.

A flake and a biface tip were found on the surface within 3m of the feature, and a series of 11 shovel tests were conducted on a grid pattern in a clearing to the east of Feature 3 in search of additional artifacts and subsurface indications of hearths or other thermal features associated with the apparent shelter. No cultural evidence was encountered in these tests.

Three diagnostic projectile points were recovered from the Perforated Can Site: a Desert Side-notched, a Cottonwood Triangular, and the cut metal point. All three of these artifacts suggest a Ute, or possibly Shoshone, occupation the site. The cultural materials at 5RB509 are possibly the result of a single Protohistoric occupation dating from ca. AD1800 to 1920; based on the metal artifacts, the condition of the wooden elements, and the metal ax-cut marks at Feature 1 and on two tree trunks, or possibly two occupations are represented. Although it is known that lithic tools continued to be manufactured after trade goods were adopted into the material culture of native communities, stone projectile points rather quickly fell into disuse in favor of metal points.

Field Specimen 22 (FS 22) is a complete metal arrow point (Plate 14). It has a triangular blade, rounded shoulders, and a barbed, contracting stem. It is constructed of sheet iron and is of a shape and style to suggest that it was possibly aboriginal-made (hand-cut), as opposed to

mass-produced by Europeans or Euro-Americans for trade to the Native peoples (Frison 1991, pp.123-125). The specimen is well-made, very close to being symmetrical, and, although rusted, is complete and intact. The specimen measures 5.7cm (2.2") in length, 2.0cm (0.8") in width, and 0.1cm (0.04") in thickness.

Although rusted, remnants of the beveled edges are still visible where the blade was filed to sharpen. Two to three small barbs were cut into each edge of the stem for securing the haft element onto the wooden shaft. These barbs appear to have been made by cutting into the metal edge of the stem at an angle with a knife, and then prying outwards to create the barbs.

Field Specimen 8 (FS 8) is a unique metal artifact consisting of a flattened metal food can that has been pried apart at the seams and flattened. Both of the round ends of the can are missing. One of the ends of the specimen retains remnants of the metal strip crimping that was lapped over the edge by the can manufacturers. This crimping is notably crude and irregular–on the interior face of the can it actually appears to have been cut by hand; attesting to the antiquity of its manufacture. Five short cuts have been made perpendicularly through this crimped edge and from 0.9cm (0.4") to 1.5cm (0.6") into the wall of the can, apparently with a sharp tool such as a knife, either before or after the can had been flattened.

Near the center of the can a lenticular-shaped hole has been perforated or punched through. This "eye-shaped" hole measures 1.5cm (0.6") by 0.8cm (0.3"). The piece of metal that was pushed through the can wall when the hole was made remains attached and extends perpendicularly into what was originally the interior of the can. An oval depression in this "flap" of metal, and the clean bi-pointed shape of the hole itself, attest to the shape of the object that was used to punch the hole through the can, which apparently was a dull object of metal, wood, bone, or antler (the butt end of one of the handles on a pair of pliers or tin snips would fit the hole precisely, as would a metal file with a lenticular cross-section).

The can, in its flattened state, measures 20.3cm (8.0") x 11.8cm (4⅝") by 0.04cm (0.02"). Although Protohistoric Native Americans are known to have utilized scrap pieces of tin cans and other metal objects for a variety of purposes ranging from cutting tools and projectile points to decorative items, no purpose for the perforation in this specimen can be determined.

Both metal artifacts, the ax-cut trees, and all three wooden features (their presence implying a somewhat "recent" occupation as these deteriorate rather rapidly) are clustered within the Wooden Feature Locality at the northwest end of the site, whereas the two stone arrow points were found in the Prominence Locality. This, supported by the hiatus of cultural materials in the saddle between the localities and the lack of metal artifacts in the Prominence, possibly suggests that this latter area represents a Late Prehistoric occupation several hundred years earlier than the Protohistoric occupation in the Wooden Feature Locality.

Four dendrochronological samples were secured at the site; one from the upright pole at Feature 1 and the others from two metal ax-cut sub-trunks of standing juniper trees, also within the Wooden Feature Locality. Although the dates that resulted from the juniper trees proved to

be from the 1910s and 1920s, and most likely later than the aboriginal occupation of the site, the sample from Feature 1 produced a date of 1857vv for its outer ring, establishing the cutting of the pole at some time after that date, most likely within a few years.

PART IV: DISCUSSION AND SYNTHESIS

Discussion and Interpretation of Findings

As a continuation of the previous four years of research and data collection, Phase V of the Colorado Wickiup Project has served to elucidate the final decades of the sovereign Ute occupation of western Colorado. As with Phase IV, this phase of our studies in the northern Piceance Basin and the proposed Yellow Creek Archaeological District has given rise to new understandings and insights regarding the continued occupation, or reoccupation, of the traditional homelands by the Northern Ute peoples—the White River (Yampa and Grand Valley or Parusanuch), Uncompahgre or Tabeguache, and Uintah bands—during the Late Contact Post-Removal and Recent Contact Phases and after the removal of a majority of their tribal members to the Uintah and Ouray reservations in northern Utah in 1881, or 1882 in the case of many of the northern White River band (Steve Baker, personal communication and Baker et al 2007).

As demonstrated by the results of our research, slightly over half of the sites recorded thus far by the CWP produced evidence of trade goods and, of those that produced accurate tree-ring "cutting" dates, exactly half (6 of 12) were occupied during post-"removal" times, i.e. after 1881.

As in previous years, the CWP's fifth year of research has proven to be not only highly productive in terms of additions to the database relating to the aboriginal wooden features of the state, but also new insights have been gained into the nature and variety of these structures, the seasonality of their manufacture and use, and the utilization of the landscape by the peoples who produced them. A type of aboriginal wooden feature previously unrecorded by the CWP was recognized for the first time by the researchers on an ancillary project—a bark-peeled piñon tree—and the landmark site first recorded during the Phase IV research, the Ute Hunters' Camp, was test excavated and produced a numerous and varied collection of Protohistoric/Early Historic trade goods of metal and glass.

Additional insights regarding the age of wooden features, and of Numic occupation itself, were also made. One of the sites previously visited by the project, 5RB53, produced evidence of trade goods on the site for the first time. Another revisited site, 5RB568, yielded tree-ring dates for the first time, and site 5RB563 produced a firm post-removal dendrochronological date where previously the site was considered to date to 1879. As in the past, only those wooden elements that exhibited the signs of having been harvested live with metal axes have been sampled and dated, in order to avoid old wood confusion.

The percentage of sites thus far investigated by the CWP that show evidence of axes or other historic trade goods has risen from 46% through Phase IV to 51% through the Phase V investigations (including sites from pertinent ancillary projects) as is demonstrated in Table 7.

Another factor regarding the wooden elements of the cultural features that was addressed

during Phase V concerns the relative percentage of cultural wooden elements that consist of juniper wood as opposed to piñon. As was revealed during the Phase IV investigations, and discussed in that report, after a certain point in the deterioration of dead piñon and juniper wood, they often both appear, visually, to consist of juniper. "Blind tests" with dead limbs collected from both species of trees showed at that time that a majority of experienced field personnel mistakenly identified the bulk of the piñon samples as juniper. As a result, it was pointed out in the Phase IV report that it could be considered a certainty that the huge percentage of cultural elements that had been identified up to that point by the CWP (and others in the field) as juniper (98.5%) was exaggerated.

Field tests conducted in 2009 showed that, although the odors of the vapors from the drilling or cutting of the internal portions of long-dead wood such as that in the cultural poles are distinctly recognizable as "pine" (piñon) or "cedar" (juniper), the same is not nearly so from the dried surfaces. Attempts to heat up the outer surfaces of feature poles with flameless butane cigarette lighters proved inconclusive and was abandoned as a technique.

To rectify this problem (within the piñon/juniper habitat), from the commencement of the Phase V field work, the CWP crews have been recording wooden feature elements as simply "unidentified piñon/juniper" unless definite indications of one or the other species (or a different species) can be ascertained via the presence of bark or the distinct smell from the heat generated by drill cores or saws during the collection of tree-ring samples. Additional identifications are sometimes secured when dendrochronological samples are processed by the University of Arizona Laboratory of Tree-Ring Research, as species identification is a normal part of their analysis. In order to mitigate the obvious exaggeration of previous mis-identifications of juniper wood, all P/J species counts prior to the 2009 season have been eliminated from the project's tabulations (Table 7) and we have simply started over with new figures. The Phase V studies (including the new data from 5RB53) identified a total of 39 juniper elements (30%) and 4 piñon elements (3%). The remaining 89 poles were recorded as "unidentified piñon/juniper" (67%).

Despite the recognized overestimation of the importance of juniper wood in the fabrication of wickiups and other wooden features, the intentional selection of that species over piñon as the construction wood of choice by the Numic architects remains undisputed, as does their selection of junipers over piñons as canopy and support trees for wickiups and other features (87% of the time within the P/J habitat).

Concepts discussed in earlier volumes of the CWP included our approaches to validating the cultural origins of wooden features, potential dating methods and the attendant problems associated with each (such as the ineffectiveness of using dead-collected old wood for radiocarbon or dendrochronological dating on sites this recent in the archaeological record), and the inferred functions of aboriginal wooden features. These topics will not be reiterated here, but rather the reader is referred to these previous documents.

Phase V activities produced additional refinements to the field methodology and

analytical understanding of ephemeral aboriginal wooden features, particularly in regards to metal detection techniques as outlined in the description of the test excavations at 5RB563. A new category of wooden feature was reported, in the form of a culturally peeled piñon tree at site 5ME974, and new categories of trade goods were encountered including melted sprues resulting from the smelting of bullet leads, a grommet from a wall tent or other piece of canvas sheeting, new types of clothing buttons, Berdan type cartridge primers, an apparent shoe or boot lace aglet, fragments of a small glass vial, micro seed beads, sharpened sticks, and possible clothing fibers. In response to these findings, field techniques and recording protocols were once again refined and the Aboriginal Wooden Feature Component Form has been adapted to facilitate the recording of these new data types in the future.

Synthesis of Findings

With the completion of Phase V, the Colorado Wickiup Project (including ancillary studies) has documented in detail a total of 53 aboriginal wooden feature sites and 317 individual features. A summary of some of the quantifiable aspects from the CWP data is presented below in Table 7. The compilation includes the findings from all phases of the project to date, and new findings at three previously recorded sites—5RB53. 5RB563, and 5RB568—have been added to the tabulations from those resources. In addition, data from site 5MF2631, the Sand Wash Wickiup site, which was visited by the CWP in 2007, has been added to the table.

Also, five new columns have been added to this table since it was last presented in the Phase IV report (as Table 9) in order to quantify new categories of data of interest to the project. Three of these columns pertain to the presence, or absence, of stone artifacts on the sites: "Lithics (chipped or groundstone)", "Cottonwood Triangular and/or Desert Side-notched" projectile points, and "Archaic Projectile Points". This latter category has become of interest to the CWP research due to the fact that larger, corner and low side-notched projectile points of apparent Archaic-age affiliation, particularly specimens comparable to Elko series points, have been noted on a significant percentage (13%) of our Protohistoric and Early Historic sites. In comparison, only 19% of the sites have produced the smaller unnotched and side-notched arrow points generally attributed to Numic manufacture in western Colorado. As with lithics in general, typically flakes, it is difficult or impossible to definitely associate their presence on a post-contact site to the protohistoric or historic occupation. Inevitably, even on apparently "single-component" Ute sites, prehistoric debitage and tools will occasionally be present from previous occupations.

The other two newly presented columns, "Uncompahgre Brown Ware" and "Luminescent Dates" (from the analysis of these sherds) concern the presence of ceramic sherds on the sites.

In this tabulation, whenever a range of possible cultural poles or beams was recorded (e.g.: "9 to 11 poles"), the larger number was used. The number and species of tree branches that were utilized in the construction of brush fences and the larger corrals or animal pens do

not appear in the totals. The same is true for the non-structural wood recorded as firewood piles.

Several observations are apparent from the data in Table 7. Of the 317 features, 181 (57%) are wickiups—including the three structures listed as "possibly tipi" frames. Only a third (32%) of these wickiups are categorized as freestanding, rather than leaners or pull-downs. Taking into consideration the variety of factors outlined in Phase III (Martin, Ott, and Darnell 2006), primarily the additional reinforcement offered by support trees that forestall collapse, it remains the contention of the CWP that freestanding wickiups may have originally been as prevalent as leaner wickiups on Ute sites, perhaps even more so. The dominant use of juniper trees rather than piñons both for the structure poles themselves and feature support/canopy trees is discussed above.

Twenty-seven of the 53 sites (51%) provide evidence of post-contact trade goods (mostly in the form of metal-ax scars) and six of the eleven sites (55%) that have produced tree-ring dates demonstrate post-"removal" occupation (after the fall of 1881). If the questionable date of AD1815 from the wickiup pole at 5RB4331 is removed from the equation this percentage increases to 60%. It is surmised that even more of the sites date to post-contact times based on the overall condition of the feature wood and the assumption that a percentage of post-contact sites simply have not yet produced evidence of trade wares. Similarly, it can be assumed that a higher percentage of the tree-ring dated sites are post-1881, but cannot be demonstrated due to the absence of an unknown number of outer rings on the dendrochronological samples due to natural or cultural attrition.

TABLE 7: Quantifiable Aspects from the Colorado Wickiup Project (2004 - 2009)

[Graphic missing — available from the author.]

A Review of the Protohistoric and Historic Eras in Western Colorado: Definitions

As was discussed at length in Volume I of the Colorado Wickiup Project's series of reports (Martin, Ott, and Darnell 2005) the task of defining the Protohistoric era is not a simple one. Not only do the determining factors of what defines the concept vary from one researcher to another, but, irregardless of the definition selected to apply to one culture area, it will be ill suited, or unsuited, for application in another culture area or part of the state. Distinct factors were involved in different geographic areas that produced the changes used to define the beginning and end of the era, and at different times on the Christian calendar. In certain regions of the state internal changes occurred within the indigenous cultures themselves that define the Protohistoric period, irrespective of the European contacts that had taken place, or were soon to take place. In other areas it was the effects of these contacts themselves that define the beginning and end of the era.

Webster's Dictionary defines the prefix "proto-" as meaning "first", "foremost", or "earliest form of". It follows then that the Protohistoric Era would refer to cultures and events that existed during the foremost or earliest times of the historic contact period in a region—after the prehistoric but prior to the truly "historic" period when written and illustrative descriptions of human behavior and lifestyles were being recorded *for a specific cultural group or area*.

A summation of the regional approach that has been applied to the culture history of the upper Colorado River basin—northwest and west central Colorado—is presented in *Colorado Prehistory: A Context for the Northern Colorado River Basin* published by the Colorado Council of Professional Archaeologists (Reed and Metcalf 1999). This is a pertinent definition not only for west central and northwest Colorado but for the state and region as a whole because of the high percentage of Colorado's relevant sites that exist within this portion of the state.

Reed and Metcalf (ibid. p.146) define the Protohistoric era in terms of the "aboriginal occupation of western Colorado between the end of horticultural-based subsistence practices of the Formative era and the final expulsion of the Ute to reservations in AD1881." They acknowledge that the establishment of a beginning date for the era is somewhat problematical in that the Anasazi migrated to areas that are now in New Mexico and Arizona by AD1300, approximately at the same time that the archaeological record of the Gateway tradition peoples to the north becomes undefinable. The Fremont tradition, however, "began to contract geographically at approximately AD1250, but evidently endured until approximately AD1500 in areas peripheral to the Fremont homeland, such as in northwestern Colorado" (ibid.) The ending date of 1881 is also problematical in that, as demonstrated by recent findings of the Colorado Wickiup Project (Martin, Conner, and Darnell 2005; Martin, Ott, and Darnell 2006; and Martin and Ott 2009), numerous Native American sites remain as archaeological manifestations in the state that date to after the "final removal" of the Ute and well into the Twentieth Century.

Reed and Metcalf use AD1300 (or AD1100; see below) as the beginning date for the era because of the lack of evidence for horticultural life ways between that date and AD1500 and the

evidence of the immigration of a new hunting and gathering group at or shortly before that date: the Utes (Reed 1994). The Utes remained by far the primary occupants of the study area until their expulsion by Euro-Americans, however there are references in the literature to incursions by Shoshone and Commanche into the area, as discussed in the sections pertaining to those peoples.

Reed and Metcalf propose dividing the Protohistoric era into two phases—the Canella and the Antero. The Canella phase begins at about AD1100 when Uncompahgre Brown Ware ceramics appear along with arrow points of the Desert Side-notched and Cottonwood Triangular types. Wickiups and other brush structures were often utilized. Toward the end of the Canella Phase European trade goods may appear in limited quantities. The Antero phase dates from about AD1650 to 1881 and represents the shift to a fully equestrian lifestyle and the addition of Euro-American trade goods such as metal knives and axes, metal projectile points, glass beads, cone tinklers, guns and cartridges, tin cans, and horse tack. Desert Side-notched and Cottonwood Triangular projectile points continued to be used but were increasingly replaced by metal projectile points and firearms. Similarly, Uncompahgre Brown Ware continued to be manufactured, although quickly replaced by iron cookware.

Baker et al (2007) presents a more complex model in which the Protohistoric and Historic occupation of the Eastern Ute is divided into five phases: Phase I—the Late Precontact Canella Phase (up to AD1540); Phase II—the Early Contact Rivera Phase (1540 to 1820); Phase III—the Middle Contact Robideau Phase (1820 to 1860); Phase IV—the Late Contact Pre-Removal Pre-1881 Chief Ouray, Chief Douglas, and Chief Ignacio Phases (1860 to 1881) and the Post-Removal Fort Duschene Phase (1881 to 1900); and Phase V—the Recent Contact Phase which was presented as "not appropriate for archaeological study" (1900 to present). Each phase is defined by a series of cultural attributes and archaeological "hallmarks" reflecting the changing physical, economic, and social life of the Utes during this period. Recent investigations in western Colorado by the Colorado Wickiup Project (Martin, Conner, and Darnell 2005; Martin, Ott, Darnell 2006; Martin and Ott 2009; and Martin, Brown, and Conner in progress) have led to a reappraisal of the Recent Contact phase of the Baker Model by Martin, and the addition of what he has named Phase "V-A"—the Ungacochoop Phase (ca. 1900 to 1924). This reappraisal is discussed more fully in the "Reappraisal of the Baker Model of Ute Culture History" section of the CWP Phase IV report, and will not be reproduced here.

O'Neil et al (2004) feel that, given the present state of the Protohistoric and Early Historic Era database, the archaeological record is best divided into pre- and post-contact phases or periods, as Buckles (1971) and O'Neil (1993) have done. These two periods reflect important differences in both aboriginal life ways and the material constituents of archaeological sites. A similar approach was adhered to by the senior author of this report in his chapter entitled "Historic Native Americans" in a recent Class I synthesis of the cultural resources within the BLM's Grand Junction Field Office resource area; referring to aboriginal sites in west central Colorado that date from prior to AD1550 as "Late Prehistoric", those from AD1550 to 1750 as "Early Historic", and those from post-1750 as "Historic" (Conner et al 2009).

New categories of trade goods were also encountered during the excavation of the Ute Hunters' Camp, 5RB563. The results of these tests has led to a possible re-interpretation of this site from that of a hunting camp to a potential warriors' camp. It is notable that the Milk Creek (Thornburgh) Battle and the Meeker Incident took place a relatively short distance away from the site, and within several months of its occupation.

Artifact Analysis and Interpretation

Several types of artifacts were recovered during the field work for Phase V that were previously unknown to the Colorado Wickiup Project, as discussed below. In addition, expanded research and interpretation have been conducted on artifact classes previously recorded by the project.

Seed beads. A total of 211 glass beads from the Phase III through Phase V collections of the CWP were shipped to Roderick Sprague, trade bead analyst and recently retired Director of the Laboratory of Anthropology at the University of Idaho, for analysis. Specifically, the project was interested in whatever insights Mr. Sprague might be able to provide regarding the age and place of manufacture for the specimens. The results of Sprague's analysis were recently received and they substantiate our temporal interpretations of the sites from which the beads (almost exclusively drawn seed beads) were collected. In general, the small size of many of the beads and their variation in color suggest manufacturing dates after AD1870, and post-1900 in some cases. The overall quality of the seed beads, especially the very small ones, suggests to Sprague that Venice, Italy is likely the origin for much of our collection.

Glass trade beads were used by the Ute and other Native American peoples as necklaces and other forms of jewelry, as well as having been sewn into decorative, embroidered patterns on clothing, moccasins, cradle boards, horse tack, gun scabbards, and numerous other artifacts. Further discussion and an analysis of the beads from Phases II through V of the CWP by Sprague is presented in Appendix F.

Drawn glass beads such as these (as well as larger wound beads) had been manufactured for centuries in Europe, primarily Venice/Murano, Bohemia/Moravia (present day Czechoslovakia), and Holland, and shipped to eastern North America as early as AD1492 by the Spanish, English, Dutch, and French, and traded by the millions to the Native Americans. It is estimated that Venice alone shipped six million *pounds* of beads *yearly* to the United States during the 1880s (Dubin 1987). A list of goods from 1863 "for the Cheyenne and Arapahoe Indians of the Upper Arkansas" lists 100 pounds of seed beads (Greene and Scott 2004).

Chinese and European glass beads were also brought into the northwest coast by Russian traders from approximately AD1780 to 1800 and traded inland (ibid). Sprague expressed his belief that "considering the quality of the beads, especially the very small ones, I would make an educated guess of Venice as the origin" for a majority of the CWP beads (Sprague: personal communication 10/16/09).

Beads of a size previously undocumented by the CWP, known in the literature as micro beads, were recovered during the excavation of site 5RB563. Very tiny glass beads such as these were manufactured in Venice from approximately 1880 to 1910 and were used by Native Americans in the production of intricately-embroidered items (Barking Rock Farm.com 2009). They are of size "18" or smaller (approximately 40 or more beads per linear inch when strung side-by-side) and even the smallest of beading needles will often not pass through the minute holes. As a result, the beads had to be individually pushed onto the finest of threads or beading wire and stitched one at a time onto cloth or leather, or strung end-to-end and then the thread or wire was spot stitched in place (ibid).

Ammunition. Significant progress has been made regarding the analysis of the ordnance and ammunition-related artifacts from both Phase V and the on-going Phase VI. A total of 63 specimens of bullet leads, brass cases, primers, etc. from Phase V's 5RB563 (Ute Hunters' Camp), and Phase VI's 5MF5216 (Disappointment Draw Lodge) and 5ME469 (Decker's Big Tank Wickiup Village) have been loaned to crime scene reconstruction agents Sam Marso and Wayne Bryant of the Colorado Bureau of Investigation (CBI), and Phil Born, Assistant Curator of the Museum of the West, for identification and microscopic analysis. In addition to descriptions of the ammunition components (including identification of manufacturers, calibers, dates of manufacture, etc.), it is anticipated that accurate counts of the numbers and types of individual weapons represented by the artifacts will be attained.

Twenty-six additional pieces of spent ammunition were borrowed by the CWP from amateur historian Brad Edwards which were collected at the nearby 1879 Milk Creek (Thornburgh) Battle site, and also loaned to the CBI for analysis. It is conceivable that individual weapon "signatures" obtained from our 1879-1881 Ute Hunters' Camp ammunition (as well as other northwestern Colorado sites) will match the signatures from spent ammunition at the Milk Creek Battle site. At the least, it will be informative to compare the weaponry and ammunition represented by the Ute collections with those from the U.S. Cavalry at the same point in history and same general area.

Decorative brass tacks. A total of 25 decorative brass tacks and tack fragments were found during the metal detection activities at the Ute Hunters' Camp. A quote attributed to one of William (?) Bent's children in 1917, regarding his father's trading post at Bent's Fort (1833-1849) in southeastern Colorado mentions these brass tacks:

> Some old Indian rifles [had] brass head tacks drove in the stock. This was a common thing for Indians to do. They thought this made the gun look fancy. My father used to sell lots of these brass tacks to all the Indians, to ornament saddles, looking glasses, belts, or anything of that kind (Frank 2005).

Although no actual references have been found, oral traditions suggest that the patterns that were constructed with these tacks were often more than mere decorative elements, and that a certain amount of personal "medicine" or power is imbued with the designs or symbols. It can be assumed that this was particularly relevant with weaponry. With this in mind, and the

condition of the specimens from 5RB563, it can be surmised that previous design elements were being removed from articles (and new ones being applied?). Based on the large number of ammunition components found on the site, it can be suggested that gun stock designs were being re-worked; a reasonable conjecture at a site associated either with hunting or warfare activities; however, this remains only speculation. It is also conceivable that designs "belonging" to other individuals were being removed from weapons that had recently been obtained through trade, war, or raiding.

Vessel glass. Seven small fragments of thin-walled, curved glass, presumably from the same small, cylindrical or tubular vial or bottle were recovered from the excavations at Feature 6, the wall tent, at site 5RB563. The function of this vessel remains undetermined, however, modern seed beads are sometimes sold in glass or plastic vials or tubes and examples of "vintage" or "antique" beads in glass vials with cork stoppers are available for purchase on the internet. Although seed beads were typically available at the agencies and trading posts as strings or "chains" (strung on loops of linen or cotton thread), it is possible that some of the beads at the site were obtained from traders contained within vials, particularly in the case of the micro beads because the very fine threads necessary to pass through their holes made the strings fragile and prone to breakage.

Plate glass. As mentioned in the description of the materials recovered from the excavations at the Ute Hunters' Camp, 100 fragments or sherds of thin plate glass were found at this site, at least one of which retains a metallic-appearing residue on one face. These sherds have been interpreted as possible fragments of a mirror. Mirrors were popular among Natives both for signaling and as "vanity" mirrors or "looking glasses" for reflecting one's own visage; such as the wooden or metal-framed and brass-studded specimen shown in the hands of a Shoshone Indian in the historic photograph shown in Plate 10. In an 1862 list of "goods and presents for the Arapahoes and Cheyenne" requested by the Upper Arkansas Agency (Colorado), one of the items listed is for 20 dozen mirrors, however no other description is provided (Greene and Scott 2004). A similar list of goods from 1863 "for the Cheyenne and Arapahoe Indians of the Upper Arkansas" lists 20 dozen "fancy mirrors with chains" (ibid).

According to Reyer (2007:33), mirrors available for trade to the Utes at Fort Uncompahgre near present day Delta, Colorado, were "usually three inches in diameter, came in folding leather or metal cases and were backed with a mixture of tin and mercury. They were especially popular among Ute warriors who customarily wore a certain amount of face paint year around." It is apparent, however, considering the number and size of fragments found, that the mirror(s) from this site would have been somewhat larger.

Metal arrow points. Metal arrow points, such as the one recovered from the test excavation of site 5RB509 (Plate 14), become increasingly common in the archaeological record of the western United States after AD1600 and especially after AD1750 (BLM n.d.). Upon the introduction of metal, they quickly began to replace stone arrow points, especially among peoples who had frequent contact with the early Spanish and other Europeans who provided not

only pre-made points but also sources of raw strip metal in the form of barrel hoops, box bands, cans, spoons, knives, wagon wheel hoops, and other items of flat iron.

By the middle of the Nineteenth Century "Apache, Navajo, Comanche, Ute and other mobile horse-mounted fighters were using chisels and tin snips to cut out arrow points" for hunting and raiding weapons (ibid.) and were most commonly used in the interior west between the years of 1820 and the first few decades of the 20th Century. Both European metal trade points and hand-made iron points were common surface finds a few decades ago but most have now rusted away (Frison 1991:123).

Culturally Peeled Tree—A Wooden Feature Type New to the CWP: A thorough review of the various types of aboriginal wooden features found in archaeological contexts in the state was provided in Volume I of the CWP (Martin, Ott, and Darnell 2005), and will not be reproduced here. Periodically, during Phases II through IV of the CWP, previously undocumented types of wooden features (new to the CWP sites) have been found and recorded—as presented in those reports. This has held true for Phase V as well in that a culturally peeled piñon tree is reported from ancillary investigations at site 5ME974. Not only have no bark-peeled trees such as this been discovered during CWP field work, but it is also highly unusual to find this type of feature on a piñon tree; typically scars of this nature in the western U. S. are found on the trunks of Ponderosa pine trees.

Crum (1996:136) references Northern Ute informant Clifford Duncan in describing the ethnographic activity of peeling slabs of bark from ponderosa pine trees in order to obtain the inner bark, or cambium, as a foodstuff. Ponderosas were apparently "the favorite [species of tree] for utilization" (Gilmore et al 1999:332), however other species such as cottonwood, fir, and larch have reportedly been peeled for their bark (Martorano et al 1999:155). The sap from aspen trees was also considered a delicacy by the Utes and was collected in bark or wooden containers via a hollow bone inserted into a 10"-long cut made in the tree bark (Smith 1974:66-67). The scars on culturally peeled trees are commonly around 1.5 meters long by 60 to 90 centimeters in width and frequently exhibit cut marks on one edge, often the lower margin (Martorano 1988), although significantly smaller scars are also reported (Gilmore et al 1999:332). The repeated use of certain stands of trees appears to have been a normal practice (ibid) and, as a result, it is commonplace to find sites consisting of several associated peeled trees.

Duncan also mentions that the inner bark was utilized in flavoring meat and as a medicine for stomach disorders and a list of other ailments. The tree sap was used as an adhesive and as a water-proofing substance for baskets (Gilmore et al 1999:323). The outer bark of trees was also used as a building material for basketry, trays, and cradleboards (Martorano 1988, Martorano et al 1999, and Blackburn 2005). Historic and ethnographic accounts are common regarding Ute collection of bark resulting in "peeled" or "scarred" tree trunks (ibid), to the point that, archaeologically, the phenomenon is typically attributed to Utes. "Bark utilization was a well-established cultural pattern among Utes, and was practiced over

centuries" (Gilmore et al 1999:323). Reputedly, the only other group in the region that is documented ethnographically to have used bark is the Shoshone (ibid:324).

Archaeologically, culturally peeled trees present a unique problem in that a majority of field workers are either not trained to recognize them when encountered, or tend to overlook them. Cultural tree scars are frequently mistaken for porcupine or lightning scars *or vice versa*, and, indeed, it is sometimes difficult or impossible to differentiate between the three. Similar tree scars have been recorded within pinyon/juniper forests, however, due to the above mentioned problems, it is sometimes difficult, without obvious ax scars, to assign them a cultural origin. A number of "stripped" juniper trees were recorded at the Schmidt and Simpson wickiup sites on the Uncompahgre Plateau (Reed and Gebauer 2004:101, 103) and on the Coyote Skull and Brush Corral sites (Martin, Conner, and Darnell 2005), and numerous uses for the *outer* bark of juniper trees are well documented in the literature, from kindling and sleeping mats, to cordage and basketry, to diapers and menstual pads, to wickiup coverings. In addition to large "peel" scars, the authors of this report have recorded steel-ax marks on juniper trees in wickiup village sites, that apparently represent scars from bark collecting. Towner, Sesler, and Havezak (n.d.:197) report that "there is no evidence, neither archaeological nor ethnographic, that ... junipers were used as ... food resources, as were the peeled ponderosas."

As documented in this report, and all previous reports of the CWP, culturally modified trees are also reported on numerous sites as a result of removing wood to construct various structures such as wickiups, tree platforms, and so forth.

Supplemental samples. With the exception of the dendrochronological and luminescence samples discussed elsewhere, faunal, pollen, soil, macrobotanical, and bark mat samples were also collected during the Phase V investigations. Due to the inordinate number of diagnostic artifacts recovered during this phase of the work, particularly at 5RB563, resources have been dedicated to the analysis of these, primarily metal, specimens. Although no pollen or soil samples are being processed for micro- or macrobotanical evidence at this time, the collected materials are being archived for potential examination in the future.

Settlement Patterns and Site Selection

Historic Native American sites are dispersed throughout the state and Ute sites are found in all elevation zones. A variety of factors are undoubtedly involved in the fact that the density and overall number of wooden feature sites is significantly higher in the piñon/juniper ecotone when compared to the pine/fir/spruce/aspen zones. This is partially due to the fact that archaeological sites in general are more numerous in these mid-level elevations. Also, the inhabitants tended to winter here, during the months when the construction of more substantial shelters, and shelters in general, was more imperative. Another suggestion is simply that the wickiups and other features that were constructed with juniper poles—as opposed to pine or aspen—have remained on the landscape longer due to a combination of the wood's natural resistance to decay (recognized historically by fence-post reliant cattle ranchers), and the drier, less inclement conditions prevalent in the pinyon/juniper forest compared to those at higher

elevations. Reed and Metcalf (1999:153) suggest that another factor in this discrepancy may be unequal cultural resource inventory coverage.

A subtle shift in settlement patterns and subsistence strategies has been indicated in the archaeological record at the end of the Archaic. It is suggested that later, historic, peoples followed a "forager" and seasonal transhumance subsistence strategy with a relatively high residential mobility compared to their earlier counterparts who employed a "collector" strategy (Reed and Metcalf 1999, Binford 1980, Dial 1989, and Baker 1993). Archaic pit house sites such as the Kewclaw Site (5GF126) are examples of long-term, presumably winter habitations to which foodstuffs would be brought from widespread procurement sites (Conner and Langdon 1987). The less labor intensive makeshift shelters (wickiups), on the other hand, suggest a seasonally-dictated residential mobility with the family groupings moving from one locale and elevation zone to another, following the migrating game animals and ripening berries, seeds, and roots.

During the winter months, when snows were deep at the higher elevations, the people were widely dispersed into extended family groups that followed the deer and elk herds to lower ranges. The piñon/juniper forests (roughly between the elevations of 5000 and 6500 feet) appear to have been particularly attractive for winter habitation. In the spring the riparian habitats in the river bottoms were exploited and larger groups, or bands, would aggregate. Then, as summer arrived, the groups would again disperse, only now to the higher elevations to continue to exploit the game herds and maturing floral resources until fall when they would return to the piñon/juniper ecotone.

Sanfilippo's (1998:366-368) Colorado wickiup studies have shown that the highest frequency (35%) of wickiups occurs between 6234-6561 feet in elevation, 75% of her sites have a permanent water source within 2.2 kilometers, and 99% are on elevated locations to maximize or minimize breezes, to avoid the cold air drainage in the river valleys and canyon bottoms, and to provide visibility for viewing the movements of game and people. All of Sanfilippo's wickiup sites occurred on slopes of 30 degrees or less, with 76% on slopes of eight degrees or less. As could be expected—in order to maximize the warmth of the sun and for purposes of shelter from the weather—the aspect or orientation of the sites ranged in all directions other than north. Similarly, the CWP has shown that individual wickiups, including entryways when discernable, are oriented in virtually all compass directions.

Results of the Colorado Wickiup Project's initial statewide analysis of those sites that had relevant information regarding the number of wooden structures, elevation, etc. showed that approximately 81% of all ephemeral wooden feature sites have been recorded between the elevations of 5000 and 8000 feet; again, primarily in the piñon/juniper forest habitat.

Models used to predict the general locations of archaeological sites in western Colorado have suggested the importance of several geographic and environmental variables. In general, they have pointed to strong correlations between site locations and/or site types and vegetational communities, elevation, distance to water, and topographic setting such as site slope and aspect.

One of the first predictive models in the region and one pertinent to this project was developed by Grady (1980). His study, conducted in the Piceance Basin, emphasized an ecological approach that focused on the spatial relationships between human occupations, plant communities, and mule deer populations. Grady set up a series of ten testable hypotheses that correlated distance to water, slope, aspect, distribution of soils, and the nature and distribution of the vegetation communities to the subsistence requirements of both humans and mule deer. The variables were then examined on three levels: a point-pattern analysis, an analysis of the correlation between site location and specific factors within the immediate environment, and a site catchment analysis.

An upland study area and a lowland study area were identified. In the upland area the majority of sites were found in the big sage-grassland vegetation community, followed by the grassland and the mixed mountain shrubland communities, respectively. In the lowland area of the Piceance Basin, the majority of the sites were found in the pinyon-juniper vegetation community followed by the big sage-grasslands and the riparian communities, respectively. The site catchment analysis in the upland area indicated that sites were located to maximize access to the summer range of the mule deer, while a similar analysis in the lowland area indicated that sites were located to maximize access to the pinyon nuts and berry resources while still maintaining contact with the mule deer during the fall and winter. Both of these analyses underscore the importance of a knowledge of the behavioral habits and migration routes of the mule deer population.

In short, Grady found that variables such as water, slope, and aspect are important predictive variables in the upland settings, while pinyon-juniper, water, slope and aspect are important predictive variables in lowland situations. The upland catchment analysis indicates a 2:1 site location preference for areas with high mule deer forage values (which further suggests the presence of prehistoric hunting and processing sites), while the lowland catchment analysis suggests that site locations are predicted by foodstuffs that are directly exploitable by humans (which further predicts the presence of gathering and processing sites). Soils did not appear to be a factor in either the upland or lowland situations.

Grady then compared his data to ethnographic accounts (e.g. Smith 1974) of hunting situations, hunting techniques, butchering and meat processing techniques, and pinyon nut harvest and preparation. According to Grady (1980:242), camp location decisions were based upon the location of the most profitable resources at a given time of the year, proximity to water, proximity to neighbors, slope, aspect and topography.

Another model posited by McDonald and Horn (1987) demonstrated that the location of sites was influenced by features of the natural environment and provided some base line data on both a synchronic and diachronic level. Their investigations involved an examination of site function, cultural affiliation and chronology, and settlement/subsistence shifts relative to elevation, proximity to water, and vegetation zone. Their results for the Archaic life-way generally parallel those of Grady (1980) and, importantly, they suggest that ecotones (edges between pinyon-juniper, sagebrush/ grassland communities and drainage basins, and other

micro-environments within larger vegetative communities) be modeled. The overwhelming majority of the Archaic sites were associated with the pinyon-juniper community followed by the mountain shrub community and then by conifer/aspen or saltbush/greasewood communities, respectively.

Camps located at lower elevations near the corridors of the main drainages were supported by the exploitation of a variety of environmental zones and the diverse biotopes within the surrounding ten or more kilometers. The riparian in canyons along the main creeks and the Colorado River, the sagebrush grasslands, the pinyon-juniper forest, and the berry-producing shrub communities situated on the slopes of the higher elevations would have provided a wide range of seasonal and year-round resources.

A study by O'Neil (1993:241) also showed that the highest frequency of prehistoric/ protohistoric open camps in the region occur in the pinyon-juniper zone. During the winter months, their establishment at the lowest extent of the forest but above valley bottoms may have been to alleviate the effects of winter cold air inversions. The strongest expression of this phenomenon occurs from mid-December through January, although the frequency of temperature inversions is dynamic and highly variable based on yearly snow and cloud cover. Importantly, when the cold air gets trapped in valleys, there is a layer above it that can be several hundred feet thick where air temperatures can be up to 30° F warmer. Especially during the Little Ice Age (approximately AD1450 to 1850), this factor was likely an important consideration of the Utes in their settlement pattern.

O'Neil (1993) also reports that the lower elevation camps show a strong tendency to locate around the edges of the elk and mule deer winter ranges. In support of this, Grady's (1980) assessment of the settlement patterns in the Piceance Basin appear to be applicable to the subsistence patterns of a majority of the mountain-oriented cultures of the region. In the lowland area of the Piceance Basin, the majority of the sites are situated in the pinyon-juniper vegetation community, followed by the big sage-grasslands and the riparian communities respectively, and were located to maintain contact with aggregating herds of large mammals during the fall and winter. Wickiup villages have been recorded in the lower elevations in areas of large mammal critical winter habitat (O'Neil et al. 2004). The summer camps were established to maximize access to the summer range of the large mammals that were spreading out across the higher terrain and likely the reason for the dispersal of the bands into nuclear and extended family groups. Results from previous studies at the Rifle Wickiup Village (O'Neil et al. 2004), Simpson Wickiup Site (Greubel, 2001), and at the Schmidt Site (Greubel and Cater, 2001), have suggested a heavy dietary reliance on fauna.

Jorgensen (1965:16-17) supports this by stating:

> The Ute, since their earliest contacts, were, presumably, generally located in the area in which they resided just prior to being located upon reservations. Roughly their boundaries encompassed an area which extended from a point which is now about 100 miles east of Pueblo, Colorado, to Sevier Lake in western Utah; and

> from what is now the northern border of Colorado to the San Juan River in New Mexico. Much of this territory, particularly much of the territory in Utah, is an alkaline desert. The latter areas were only periodically traversed and hunted in by the Ute. The bulk of the population was distributed throughout the valleys and parks in and adjacent to the Rocky and Wasatch Mountains. The Ute bands were rather closely associated with the distribution of the coniferous forests, and the large game animals and horses which these forested areas supported.

Archaeological evidence from Protohistoric Era sites throughout the Basin/Plateau indicate that the availability of floral resources including grass and forb seeds, berries, and pinyon nuts also influenced the establishment of short-term camps (Simms 1989). The types of plants exploited by the Utes are listed by Lewis (1994:28-29):

> Ute women gathered and utilized many edible seeds, plants, and roots in their physical environment. Pine nuts were a staple, parched in baskets with hot coals and stored whole or as ground meal for winter use. The women mixed the meal with water to form small meal balls or boiled it into mush. Women gathered wheat grass (Agropyron), bentgrass (Agrostis), bluegrass (Poa), needle grass (Stipa), and June grass (Koeleria), and seeds from lamb's-quarter (Chenopodium), sunflowers, and amaranth, among others, which they stored whole or parched and ground into flour. The people ate raspberries, strawberries, gooseberries, serviceberries, currants, buffalo berries, rose and juniper berries in season or dried and cached them in baskets underground. Chokecherries (Prunus), molded and dried into round cakes for winter use, were a particularly important fruit resource. Women gathered numerous roots, including yampa (Perideridia), camas (Camassia), sego lily (Calochortus), tule, valerian, and yucca, as well as seasonal greens and thistles, cactus leaves and fruit, and some acorns. Women also collected and processed vegetal fibers for baskets, cordage, and clothing. Ute men gathered native tobacco (Nicotiana) and numerous other plants valued for their medicinal or ceremonial power.

That the Utes were exploiting these plant resources in this region is attested to by the September 1776 record of the Dominguez-Escalante Expedition. While traveling near the present day town of Plateau City located on Plateau Creek (south of the Sunnyside area, about 2.0 miles west of Collbran), the group:

> "...passed through a section of piñon growth, and came upon a sagebrush stretch where three Yuta women with a child were preparing the small fruits they had picked for their sustenance in the arroyos and rivulets hereabouts. We went over to talk to them, and right away they offered us their fruits, which were chokecherry, gooseberry, lemita, and some of this year's piñon nuts. The gooseberry which grows in these parts is very sour on the bush, but when already exposed to the sun, as these Yuta women had it, it has a very delicious sweet-sour taste" (Chavez and Warner 1976:43-44).

Although the findings of the Colorado Wickiup Project thus far tend to generally support the models and premises of site location discussed above, it can be confidently speculated that the substantial cultural impacts that were taking place in the lives of the Ute and other Natives in western Colorado and elsewhere during early contact times (the Protohistoric and Early Historic) were reflected in their settlement and migratory practices. The acquisition of the horse, alone, caused immense and immediate changes in the lifestyles of formerly pedestrian cultures. By the middle of the Nineteenth Century, bands of Utes often traveled with herds of hundreds, and sometimes, thousands of horses. These animals rapidly increased the range of the indigenous peoples and the speed at which a group could travel from one locale or environmental zone to another, as external economic, social, or climatic factors dictated.

Upon the establishment of regional agencies and trading posts the Ute's economic foundation rapidly evolved; from one of hunting and gathering to one at least partially based upon trade—for the newly-available, and, in many cases, highly desirable European goods. Hunting practices, particularly those associated with mule deer and elk, shifted from one of sustenance to one oriented towards the wholesale harvesting of animals for the procurement of hides (and meat) so highly prized by the Euro-American traders.

Particularly after 1881, when the Ute's presence off-reservation became progressively unacceptable to the White settlers and government, those individuals and groups who did remain in, or return to, western Colorado found it increasingly necessary to travel and camp away from the well-used trails, valleys, waterways, and Euro-American settlements in order to avoid unwanted encounters. On the other hand, the presence of the agencies and trading posts, with their attendant supply of trade goods, processed foods, and rations (including livestock), made seasonal migrations that much less necessary and attractive. It is well documented how significant percentages of the Native populations would congregate for days, weeks, or months at a time in the vicinity of White settlements, particularly Indian agencies such as the White River Agency near the present day community of Meeker.

Additional documentation of post-contact, off-reservation, Numic sites, such as those providing the majority of the data under study by the Colorado Wickiup Project, will help to elucidate the manner in which these rapidly changing and evolving aspects of protohistoric life are reflected in the archaeological record of the western portion of the state.

Site Structure and Intra-site Spacial Analysis

> Protohistoric Era sites are uniquely suited for providing insight into intra-site patterning of activity areas at earlier open artifact scatters, especially if ephemeral brush structures are present. Since such structures tend to disappear without a trace with the passage of time, it is likely that most of the early hunting and gathering campsites once had ephemeral brush structures. Therefore, Protohistoric Era sites with brush structures often provide insight into the relationships between

> artifact distribution patterns and feature distributions as they relate to these structures. Thus, they can aid in the interpretation of many sites where such structures have disappeared (O'Neil et al 2004:11).

Despite the inherent accuracy of the above statement, attempts to interpret activity areas and intra-site structure and functionality, and, subsequently, early historic aboriginal life-ways in general, are made complex by problems that are intricate and many. As in all archaeological situations, this is especially true for multi-component sites such as the Rifle Wickiup Village (5GF308) dealt with in O'Neil et al (2004). In addition to the problems of intra-site spacial analysis intrinsic at all multi-component sites, historic aboriginal sites present particular issues due to the fact that all of the occupations of concern are within a relatively short time span—a few hundred rather than several thousands of years. Because of the old wood issue, the determination of contemporaneity between individual thermal features and structures often proves to be inconclusive, and therefore impossible to use in the determination of intra-site activity areas.

Greubel (2005) discusses evidence that some Numic (Ute and Shoshone) groups tended to revisit the same localities repeatedly and to construct new wickiups during each visit rather than re-occupying previously constructed shelters. He suggests that, particularly on the larger sites with numerous structures, this practice could tend to lead researchers to exaggerated estimates of population size and length of occupation. Two of the wickiup villages that have been recorded by the CWP in the Piceance Basin, 5RB18 and 5RB568, produced tree-ring dates suggesting at least two separate Ute (or Shoshone) occupations.

Artifacts recorded on Ute sites indicate activities related to lithic and metal processing and tool-making, hunting and gathering of foodstuffs, warfare and defense, floral and faunal processing, processing of trade-item foodstuffs, camping, tending horses, and disposal of the dead. The camps were supported by the exploitation of a variety of environmental zones and the diverse biotopes within the surrounding region—including the riparian in canyons along the main creeks and rivers, the sagebrush grasslands, the piñon-juniper forest, and the berry-producing shrub communities situated on the slopes of the higher elevations—that would have provided a wide range of seasonal and year-round resources. The work of the Colorado Wickiup Project appears to demonstrate that similar patterns of aboriginal land use and settlement continued into Historic times in western Colorado, however, with notable exceptions as noted above.

Dating Protohistoric and Historic Native American Sites

Regarding the presence of trade goods on historic aboriginal sites, observations from the CWP (Table 7) include the fact that 27 of the 53 sites documented (51%) produced evidence of post-contact trade goods (including evidence of metal-ax scars). It can be assumed that even more of the sites date to post-contact times based solely on the well preserved condition of the wooden feature elements. Although horses, and metal and glass trade wares, were entering parts of Colorado from the south as early as 1650, the west central and northwest part of the state was

relatively late in acquiring such artifacts. It is reported that a "limited amount of trade goods had reached the northern Utes as early as 1776, but even by 1825 such commerce was limited" (Reyer 2007: 28).

Fort Uncompahgre (aka Fort Robideau) in the Delta area, and its associated trading post, weren't established until around 1828 and, although goods had arrived in limited numbers prior to that date, metal and glass weren't commonplace until at least that time in the west central part of the state. Similarly, other trading posts were established at Fort Robideau (aka Fort Uintah) on the Green River in northeastern Utah by around 1832, at Fort Davy Crocket in extreme northwestern Colorado in 1836, and the White River Ute Agency (formerly the Middle Park Agency) near the present day town of Meeker between 1862 and 1869.

Accurate chronometric dating of protohistoric and historic aboriginal sites is critically important in regards to a number of research topics including inter- and intra-site comparisons, regional population migrations, and so forth, yet remains one of the key problems . Dendrochronological dates from wickiup poles, and radiocarbon samples from the same and associated hearths, have been analyzed in Colorado for decades. Unfortunately the radiocarbon samples frequently provide date ranges of several decades; not a significant problem for archaeological contexts that are several thousand years old, but certainly one for the more recent contexts. Tree-ring and radiocarbon dates also share a particular problem in these recent sites; the "old wood problem".

These aspects pertaining to the absolute dating of late Native American sites is discussed in previous CWP reports. In short, until the acquisition of metal axes by the Native peoples (mid-1600s at the very earliest, becoming much more common in the study area after the 1820s), wood cutting was a highly labor intensive activity. For both fuel wood and shelter poles, long dead wood that could be easily gathered or brought down without tools, and stripped of its branches if necessary, was far more appealing than living trees.

Tree-ring Dating

Reed and Gebauer (2004:101-104) discuss the inherent limitations of dendrochronology and other chronometric techniques with the existing database of Protohistoric/Historic dates, which they consider too imprecise for adequate investigations into current research questions:

> The primary limitations of the traditional dating approaches stem from use of long-dead wood for fuel and for habitation structures. As Reed et al (2001) argue, based on ethnographic and archaeological evidence, regional Protohistoric-era peoples lacked an effective technology for cutting large pieces of wood. The Utes had bone wedges and chopping tools that could cut wood (Smith 1974), but such tools required great amounts of labor to topple living trees (see also Mills 1993). Because Protohistoric populations were highly mobile and had low demand for large beams, they probably simply toppled long-dead standing trees

> when needed. They may have even purposefully killed living trees for future use (Greubel and Cater 2001). Pinyon and juniper trees–which are most often represented as wood fuels and as primary structural elements of wickiups–are small enough to be pushed over by an individual if the bases are rotted. Dead trees may stand between 100 and 244 [sic] years in the Southwest before becoming capable of toppling by people (Hobler and Hobler 1978).

Although Baker (1993) suggests adding 300 years to account for the difference between the date of a tree's death and the use of its wood for fuel or construction, this author agrees with Reed and Metcalf (1999) who suggest that too many variables are involved to rely on an arbitrary constant, for example the disparate decay rates of different species of wood in different environments.

After the introduction of metal axes, however, it became more routine for the architects of wickiups and other features to cut down live trees and tree branches. These ax-scarred cultural poles can often provide archaeologists with dates within a few years of the cutting year—if the outer ring is present, the actual cut date—and sometimes even the "growing" (summer) or "non-growing" (winter) season of the year.

On-going investigations by the Colorado Wickiup Project, Centuries Research of Montrose, and The Laboratory of Tree-Ring Research in Tucson (Baker 2004 and Baker, Dean, and Towner 2007 and 2008) are working toward the establishment of a database correlating dates from known old wood (from such sources as hearth charcoal) with dates from known green wood (from such sources as metal ax-cut wickiup poles) from the same features or sites. Hopefully, when a sufficient number of such pairs of correlative dating samples have been processed, a bracket, or calibration curve, of ages can be established regarding the number of years that wood (in particular juniper) has been dead prior to its being utilized by Numic peoples as fuel wood (and, by extrapolation, to pre-metal ax wickiup poles and other architectural wood that had been collected as dead wood). Ideally, individual features and sites will produce opportunities for correlative dating between live-cut dendrochronological, dead-gathered dendrochronological, radiocarbon or bone collagen, *and* luminescent samples.

The dendrochronological dating results from the Colorado Wickiup Project investigations to date are discussed in Appendix C and summarized in Table C-1. The potential end dates for the occupations of Ute sites proves particularly interesting. The year 1881 is commonly listed for the "final expulsion" of the Ute peoples from western Colorado to the reservations. However, it is known (Stewart, unpublished comments at the Symposium of the Archaeology of the Eastern Ute, Grand Junction, Colorado, 1988; Mehls 1988; Simmons 2000; and period newspaper articles) that some Utes remained in western Colorado for decades after this date. Furthermore, as demonstrated by the results of our dendrochronological research, half (6 out of 12) of the sites with evidence of trade goods that have produced tree-ring dates were occupied during post-"removal" times; after the fall of 1881.

Some of the post-1881 sites were undoubtedly occupied by Utes who never actually made the trek to Utah. In that year there was estimated to be approximately 2,700 Uncompahgre, White River, and Uintah Utes to be removed from Colorado (Baker, Carrillo, and Spath 2007). In 1882 the agent at the Uintah Valley Agency at Whiterocks reported that approximately 250 of the White River Utes who were on the records to be escorted to the reservation did not show up for the initial census (Kessley LaRose, Sr., Northern Ute, personal communication 12/14/09). Further, it was reported that this census could account for only 275 White River Utes (Simmons 2000). In addition, many others obviously returned to Colorado on periodic hunting trips after having initially moved to the reservations, or with aspirations of more permanent residency in their traditional homelands after finding life on the reservations intolerable. The tree-ring dates from Ute sites, particularly in the Piceance Basin, reflect and substantiate this and illustrate that significant numbers of White River Utes were living off reservation in Colorado, at least as late as 1916.

Luminescent Dating

In addition to tree-ring dating, a small number of ceramic sherds from western Colorado have been subjected to thermoluminescent dating by the CWP. The results of these analyses are summarized in Table 6 and the report from James Feathers of the Luminescence Dating Laboratory at the University of Washington in Seattle is presented in its entirety in Appendix D.

Several points are notable regarding the sites from which these sherds were recovered. In contrast to a majority of the wooden feature sites that the project has been led to by previous site reports or anecdotal accounts relating to the presence of wickiups or other aboriginal wooden features, these four sites are characterized by:

1) a paucity, or complete absence of, easily recognizable extant wooden features,
2) the presence of chipped stone debitage and/or tools (in three cases), and (in two cases) groundstone, and
3) a complete lack of evidence of metal axes or other trade wares.

These factors are not surprising, yet they graphically substantiate how readily the Ute abandoned lithic technology and the creation of traditional ceramics once trade goods such as metal projectile points, firearms, and iron cookware became available, and also how rapidly the ephemeral wooden features have deteriorated and vanished from the surface of these, quite apparently, earlier sites. All of the resultant luminescent dates are somewhat early for Ute ceramics, however well within the reported date range (Reed and Metcalf 1999). Three of the dates indicate occupations in the early range of what has traditionally been considered the presence of Numic speakers in Colorado, and one (AD930) is significantly earlier. It is likely, therefore, that the sherds represented at 5MF3737—crude, thick, undecorated and unslipped brown ware—is of Fremont origin. Further analysis is planned for these latter sherds.

Table 6: Luminescence Results from Phases IV and V of the Colorado Wickiup Project and Ancillary Studies

Site	Sample Description and Specimen Number	Results (calendar date "AD")
Phase IV		
5MF3737	FS 6: Unslipped brown ware sherd Possibly Fremont ware? (found on surface)	930 ± 90
5RB144	FS 10: Uncompahgre Brown Ware sherd (found on surface)	1550 ± 40
5RB2929	FS 4: Uncompahgre Brown Ware sherd (found on surface)	1500 ± 30
Phase V		
5ME16097 Horsethief Canyon Structural Clearing	FS 171: Uncompahgre Brown Ware sherd (Levels 1/2, 0-5cm below PGS)	1460 ± 60

Seasonality

Evidence concerning the seasonality of occupations at protohistoric/historic Ute sites is scant, other than through actual historic documentation, ethnographic analogy, and several dendrochronological samples as outline above. However, a majority of these aboriginal sites identified in the western portion of the state were most likely occupied seasonally during the late fall to early spring at least during the pre-1881 years when the Ute had substantially more political autonomy and sovereignty. Creeks and rivers, both permanent and ephemeral, were the focal points of these occupations and their migrations to and from the higher and lower elevations as attested to by the surface archaeological materials located on the ridges above the drainages and the benches within their canyons.

With the exception of 5ME14071 (the Singing Wickiup site), at 8450', the elevations represented by the wickiup sites are well within the range of those that were typically occupied, at least prehistorically, during the fall, winter, and spring months and during migrations between higher and lower elevations. As discussed elsewhere, for the prehistoric people of the region who followed a seasonal hunter-gatherer life way, the family bands in all likelihood moved to the elevations below 6500 feet (piñon and juniper habitat) above the rivers and streams in the winter to take advantage of comparatively warmer winter temperatures, minimal snow depths, and access to the winter habitat of the deer and elk populations on the mesa tops or open canyon

bottoms. In the spring they would move back up toward the higher elevations to take advantage of the emerging floral resources and to follow the retreat of the large game animals.

Although logic suggests that shelters such as wickiups would be more likely constructed during the colder months, when protection from the elements was crucial, this is not necessarily borne out in the archaeological, or ethnographic, records. As discussed in earlier CWP reports, it has been demonstrated that mobile, foraging peoples construct some form of shelter virtually every time they halt to camp, regardless of the weather or planned duration of stay. Additionally, several of the tree-ring samples from within the piñon/juniper habitat that were procured by the CWP indicate that the cultural wooden elements were cut during the growing season for piñon and juniper (i.e. late spring to early fall) (see Table C-1). However, in post-contact times, and obviously during the reservation period (when a number of the dated sites from the CWP were occupied), the mobility of the aboriginal peoples was significantly disrupted and limited and, inherently, some lower elevation sites likely became long-term or year-round habitations.

Determinations of Effect and Management Recommendations

In general, with several notable exceptions, the archaeological documentation and analysis of Colorado wickiups and other ephemeral wooden features have been far from adequate in the past, and continue to be unacceptable. This is especially of concern considering the rare and transitory nature of the resource. An additional problem is that, even in areas that have been surveyed for cultural resources in the past, a great many such structures have, in all likelihood, been overlooked even by seasoned archaeologists. This is particularly true of collapsed features, utility poles, and pole caches. In areas of high likelihood for such structures, cultural resource area managers should not assume that all, or even most, such structures have been located and recorded in previously surveyed areas.

Potential negative impacts on aboriginal wooden feature sites can occur as a result of both natural and human causes. Resultant adverse effects on the integrity of these cultural resources range from loss of feature- and structure-specific data, to loss of site context and, in some instances, virtually total loss of the resource and its environmental context.

Natural processes such as wildfires and the inevitable deterioration, collapse, and disappearance of aboriginal wooden structures due to wind, moisture, and decay are ubiquitous threats. Judiciously applied, BLM's fire mitigation and fuels management programs may provide wooden feature sites some degree of protection from wildfires, however, careful implementation of fuel reduction and other vegetation management activities is critically important. We have observed at least one instance of inadvertent damage to the integrity of aboriginal wooden features resulting from tree cutting and dead wood removal which was intended to mitigate the wildfire threat to a wickiup site. The CWP has also documented, within the last four years, four cases of wickiups that have partially collapsed as a result of natural causes.

Also, as reported in the CWP Phase II report (Martin, Conner, and Darnell 2005), no references have been found regarding *in situ* stabilization or reconstruction attempts for aboriginal wooden features similar to the ephemeral resources discussed herein. Wood preservation techniques have been used on wooden architectural components found in more substantial cultural resources throughout the world, however, again, similar mitigation approaches as applied to fragile features such as wickiups remain unstudied.

Further, it is acknowledged that attempts to shore up or preserve aboriginal wooden structures in the field can be only a temporary solution, at best. The value of stabilization and *in situ* preservation efforts on features such as these are debatable, and ethical factors may also apply in sensitive cases such as at burial platform sites.

Similarly, only two cases in Colorado are known to the CWP of attempts for the outright collection of ephemeral aboriginal wooden features for curation and preservation within curatorial facilities—the Elk Track War Lodge (Martorano et al 1999) and 5GF519 a hunting blind tree scaffold (Gooding 1981). The former is an aspen-pole wickiup that was collected by the Colorado Historical Museum that is currently on display as an interpretive exhibit at the Ute Indian Museum in Montrose. The latter describes a tree platform constructed of juniper poles among the branches of a living juniper near DeBeque. The entire structure, including the 20'-tall living tree in which it was constructed, was dismantled and collected in 1981 and moved to the Denver Museum of Nature and Science (DNMS) for preservation and potential exhibition. Each of the 15 platform poles were measured and the junctures or points of contact of each pole with each other or the tree branches was marked and mapped prior to disassembly. After removal of the platform the tree was sawed off near ground level and collected as well (Gooding 2005: personal communication). Numerous photographs and drawings were made to aid in the accurate reconstruction of the feature should such an opportunity arise. A note in the site files at CDOT mentions that, although the poles are apparently still in storage, the tree was "inadvertently discarded" several years ago at the DMNS (OD Hand 2005: personal communication).

One of the goals of DARG research associates, and the Colorado Wickiup Project in a future grant, is to consult with members of the Ute tribes, museums, and the BLM about their thoughts and concerns regarding similar wholesale collection of one or more structures, wickiups in particular, for preservation, interpretation and/or display in indoor facilities such as the Museum of the West in Grand Junction and the Southern Ute Indian Cultural Center and Museum currently under expansion on the Southern Ute Reservation in Ignacio.

Human activities such as OHV recreation, artifact pilfering, livestock grazing, and a variety of other impacts due to increased visitation to the site areas by recreationists and people involved in energy exploration, increasingly threaten aboriginal wooden feature sites. There are well-known instances of aboriginal wooden features having been inadvertently dismantled by modern visitors for use as fire wood or even fence posts.

As discussed in *Archaeological Assessment of the Rifle Wickiup Village* (O'Neil et al. 2004), it is difficult to determine the best means of protecting ephemeral wooden features from modern visitors. We continue to recommend that, in currently undisturbed and little-visited areas, sites and structures remain unfenced and unmarked. However, in areas where negative visitation impacts have begun to occur—from innocent and uninformed individuals, or vandals alike—a program of public education and protection should be implemented as soon as possible.

Therefore, our management recommendations include continued comprehensive documentation of known but incompletely studied wooden feature sites, additional Class III surveys in the areas surrounding these sites, periodic monitoring of specific resources, the creation of fire breaks and fuel reduction programs, archaeological testing and excavation of selected sites and features that target gaps in the current data, additional dendrochronological, bone collagen, and luminescent sampling, and the consideration of district stewardship programs in cooperation with local land owners, museums, and amateur archaeological associations.

The findings of the current phase of investigations by the Colorado Wickiup Project, as reported herein, have added significantly to the database of the proposed Yellow Creek archaeological or thematic district, which was outlined in the Phase IV report. Recent advances have been made regarding the creation of district and negotiations are currently under way between DARG, the White River BLM Field Office, and the state archaeologist to proceed with the nomination and establishment of this protective designation.

Public and Professional Outreach

As a part of the on-going public and professional outreach program of the Colorado Wickiup Project, Principal Investigator Curtis Martin and Project Coordinator Richard Ott have produced and delivered numerous lectures and PowerPoint presentations regarding the Ute Indians of Colorado and the findings of the CWP to both the professional archaeological community and the public at large as outlined below. Martin also continues to educate a new generation of archaeologists in regards to aboriginal wooden features and the protohistoric archaeology of western Colorado as part of his Field Techniques in Archaeology classes at Mesa State College in Grand Junction.

<u>Presentations by Curtis Martin</u>

- Big Meeting at Crow Canyon (Big MACC), Cortez, 2/25/05
- Colorado Council of Professional Archaeologists (CCPA), Grand Junction, 3/5/05
- Colorado Archaeological Society (CAS) Chipeta Chapter, Montrose, 11/16/05
- Colorado Preservation, Inc.'s Historical Preservation Conference, Denver, 2/9/06
- Museum of the West, Grand Junction, 5/19/06
- Colorado Council of Professional Archaeologists (CCPA), Glenwood Springs, 3/31/07

- Ute Ethnohistory Meeting with BLM (GSFO, GJFO, and UFO), Grand Junction, 3/12/08
- Colorado Council of Professional Archaeologists (CCPA), Fort Collins, 4/12/08
- The Old Spanish Trail Re-dedication, Grand Junction, 5/8/08
- Lunchtime Lecture Series, Frisco Historic Park and Museum, Frisco, 7/2/08
- Colorado Preservation, Inc.'s Saving Places "On the Road" lecture series, Glenwood Springs, 9/14/08
- Colorado Council of Professional Archaeologists (CCPA), Alamosa, 4/3/09
- Denver Chapter of the Colorado Archaeological Society (CAS), Denver, 7/13/09
- Dedication of the Ute Ethnobotany Learning Garden, Grand Junction, 9/18/09
- Native American Heritage Month (NAHM), Montrose, 11/14/09
- Native American Heritage Month NAHM, Montrose, 11/28/09
- Horizon Sunrise Rotary Club, Grand Junction, 12/10/09

Presentations by Richard Ott

- Ute Ethnohistory Project, 2008
- Western Colorado Congress Public Lands Committee, 2008
- Colorado Preservation, Inc.'s Saving Places "On the Road" lecture series, Glenwood Springs, 9/14/08
- Ute Ethnohistory Meeting with BLM (GSFO, GJFO, and UFO), Grand Junction, 3/12/08
- Men's Fellowship, First Baptist Church, Grand Junction, 5/2009
- Native American Heritage Month NAHM, Montrose, 11/28/09

Future Directions and Current and Proposed Field Work

We feel that the Colorado Wickiup Project's strategy of "preservation through documentation" deserves continued, accelerated and expanded effort and commitment of resources. The knowledge we have gained thus far about Colorado's aboriginal wooden structures has further deepened our appreciation of these fragile archaeological resources in and of themselves and confirmed our original assessment of their immeasurable value, not only to Ute/Numic archaeology, but to the archaeology of the earlier Formative, Archaic and PaleoIndian inhabitants as well, and to the living descendants of the people who created them. We have also come to recognize that we can leverage the results of our efforts by expanding the scope of our studies to include a wider geographic range and broader scope of research questions and preservation challenges related to aboriginal wooden feature sites in Colorado.

The Colorado Wickiup Project's Phase VI is well underway. This on-going phase of the CWP is concerned with the documentation and reevaluation of four previously recorded and one newly recorded sites in western Colorado containing aboriginal wooden features on BLM and USFS administered lands. These sites (in Delta, Eagle, Mesa, Moffat, and Saguache Counties) were selected as some of the premier examples of intact ephemeral wooden shelters left standing, or partially standing, in the state. Fieldwork on sites 5EA2740, 5ME469, 5MF5216, and 5SH3788 was completed in the summer and fall of 2009. The proposed test excavation of 5DT222 has been scheduled for spring of 2010, as has a revisit to site 5EA2749 for completion of the metal detection and wooden feature recording activities that began last fall.

In addition to wickiups, this phase of the CWP has recorded tipi frames, brush enclosures, utility poles and racks, horizontal tree beams, pole caches, animal containment pens, fire wood piles, and a lean-to. The ramada at 5DT222 is the only example of an extant prehistoric flat-roofed shelter known to the CWP in the archaeological record of Colorado.

The number of wooden features and diagnostic metal artifacts at three of these sites greatly exceeded what was anticipated based upon preliminary reports and informal accounts of the sites. This has provided the CWP with a wealth of data above and beyond our expectations in regards to the wooden features themselves, the extent and variety of trade goods recovered, and insights into the land use, social organization, and external relations patterns of the early historic, off-reservation Native occupants of western Colorado.

Within the four sites thus far visited as Phase VI field work, the field crew completed the "mitigation level" documentation of 41 aboriginal wooden features and collected over 180 diagnostic artifacts either as surface finds or as a result of the metal detection activities. The artifacts include metal projectile points, glass seed beads, metal tinklers, bridle jingles, buttons (including a brass Civil War era military button), spent ammunition, leather and boot fragments, tacks, nails, screws, wire, a knife blade, bottle glass, metal punches, bucket bails, food cans, and lithic artifacts such as a projectile point and polishing stone. Ancillary collections in the form of bone, soil samples, and dendrochronological samples were also made.

Based on the unique and comprehensive information gained from the Phase VI investigations thus far, the Colorado Wickiup Project hopes to continue the re-visits to, and intensive recording of, similar premier and prototypical sites, selected in collaboration with BLM Field Office archaeologists. Not only have these sites, which were selected on the basis of their numerous and/or pristine wooden features, produced new and unique data in regards to the wickiups and other features, but also regarding the large and varied historic aboriginal artifact inventory. This approach has also provided the CWP with the opportunity to investigate sites from a wide geographical landscape throughout central and western Colorado, as well as from wide-ranging elevation and vegetation zones as well.

The project recommends that our on-going efforts to mitigate the threat to Colorado's aboriginal wooden features by thoroughly recording all known wooden feature sites, collecting materials for chronometric analysis, and conducting extensive data recovery, including excavation of selected sites, be continued. Long-range goals of the project include the continuation of our development of a dedicated aboriginal wooden feature knowledge base and facilitation of collaborative research and education through information sharing and professional and public outreach.

Among the sites that have been targeted for investigation in 2010, as part of a proposed Phase VII, is the highly unique Bella Site (5ME901) within the McInnis Canyons National Conservation Area of Mesa County. This site, originally recorded by Grand River Institute in 1978, provides the CWP with the opportunity to document, for the first time, an undisturbed ephemeral aboriginal wooden feature site within a sheltered overhang. Also, a window of opportunity has recently opened for the CWP to collaborate with National Park Service archaeologists in their investigations of high-altitude wickiups in Rocky Mountain National Park—the furthest east known wickiups in the state.

In addition to continued surface mapping, metal detection, and feature documentation, additional excavations are recommended at a select number of sites previously recorded by the CWP. The success of the metal detection and sub-surface investigations at 5RB563, the Ute Hunters' Camp, during the current project serves as an indication of the tremendous potential of these Protohistoric and Early Historic Ute sites to produce data and insights into the insufficiently documented final chapter of the free-roaming, off-reservation, Numic occupations in Colorado in the late Nineteenth and early Twentieth Centuries.

Several of the sites that appear to offer the greatest potential for valuable sub-surface information regarding this relatively little understood period include:

- 5ME901, the Bella Site
- 5RB53, Duck Creek Wickiup Village
- 5MF5216, Disappointment Draw Lodge
- 5ME469, Decker's Big Tank Wickiup Village, and,
- 5EA2740, Pisgah Mountain Wickiup Village

Dominquez Archaeological Research Group will be applying for an additional State Historic Fund grant this spring as a proposal to continue our investigations with the Colorado Wickiup Project. The scope of work under this grant application would constitute Phase VII of the CWP.

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Appendix A: Site Summary, Location Information, and Site Maps

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix B: Collected Specimens with Location Data

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix C: Dendrochronological Analysis

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix D: Luminescence Analysis

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix E: Ammunition Analysis

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix F: Trade Bead Analysis

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)

Appendix G: Photographic Plates

Feature and Historic Photographs

Plate 1

Site 5RB563, Ute Hunters' Camp, Feature 1. Test Trench 7 running beneath the 3-pole utility rack, looking east. The trench is excavated to 10 cm depth except on west end (outside feature) where bedrock was encountered at 9 cm.

Plate 2

The top photo is of a Ute encampment with tipis and a wall tent at the Los Pinos Agency around 1875-1881. The bottom photo shows the interior of a Ute leaner tipi with a wall tent in the background likely similar to that which apparently stood at the location of Feature 6 at 5RB563.

Plate 3

Site 5RB563. The top photo shows pin flags marking the location of metal artifacts prior to the excavation of Feature 6, looking southeast. Bottom photo is a view across the "Field of Dreams", looking east. Feature 2, wood pile, is in foreground; Feature 1, utility rack, at center left; Feature 6 is behind figure; Feature 7, possible wall tent location is in center right, behind buckets.

Plate 4

Top Photo is of Feature 13 at 5RB53, partially collapsed wickiup, looking northwest. The long leaning pole on left is probably a utility pole or naturally fallen tree. Bottom photo is Structure 2 at 5RB4543, partially collapsed wickiup, looking northeast (note additional collapsed poles to right of tree) with natural gas drill rig in background.

Plate 5

Details of artifacts at Structure 4 on 5RB4543, a pull-down/leaner wickiup. Top photo shows upright sandstone metate wedged into a fork at the base of the largest standing wickiup pole, looking north-northwest. Bottom photo is of an unmodified, naturally formed sandstone"bowl"found partially buried in needle duff at periphery of Structure 4.

Plate 6

Site 5ME974, Wooden Feature 1, barked peeled piñon tree looking northeast. In top photo scale near top rests on Feature 1C, small peel. Features. 1A, at bottom, and 1B are near base of tree. Feature 1D, ax-cut root, is visible at bottom right in photo. Bottom photos show details of Feature 1A/1B (on left) and Feature 1C (on right).

Artifact Photographs

Plate 7: Ammunition from 5RB563, the Ute Hunters' Camp

Top photo: on left is a selection of the Boxer primers from Feature 6, in center are two spent bullet leads, and on right is .44-40 caliber cartridge case. Bottom left photo: details of Boxer primers showing spent and unspent primers on left and two distinct styles of anvils on right. Bottom right photo: the sole newly-cast bullet lead found at the site, *in situ*.

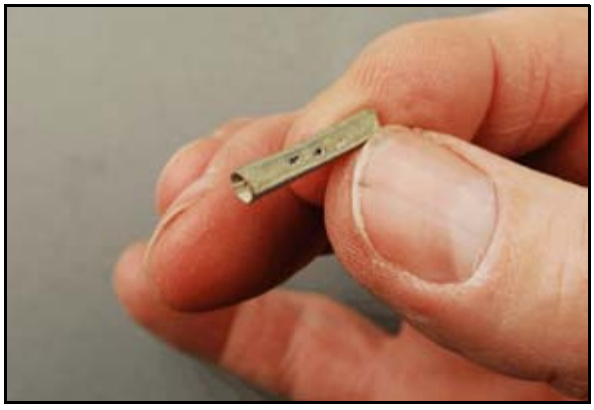


Plate 8: Miscellaneous Metal Artifacts from 5RB563, the Ute Hunters' Camp

Top photo: **a**: FS197 cut iron fragment (possible metal arrowhead production—note "rounded shoulder and stem" outline on right edge of metal). **b**: FS8 bridle jingle fragment. **c**: FS280 apparent shoelace or cordage aglet. **d**: FS81 grommet fragment. **e**: FS301 screw (possibly from a firearm). **f**: FS337 bent wire. Bottom left photo is aglet, FS280, and bottom right photo shows FS81 grommet fragment from several meters east of Feature 6, wall tent, and a modern grommet that became detached from a rain tarp at our excavation camp.

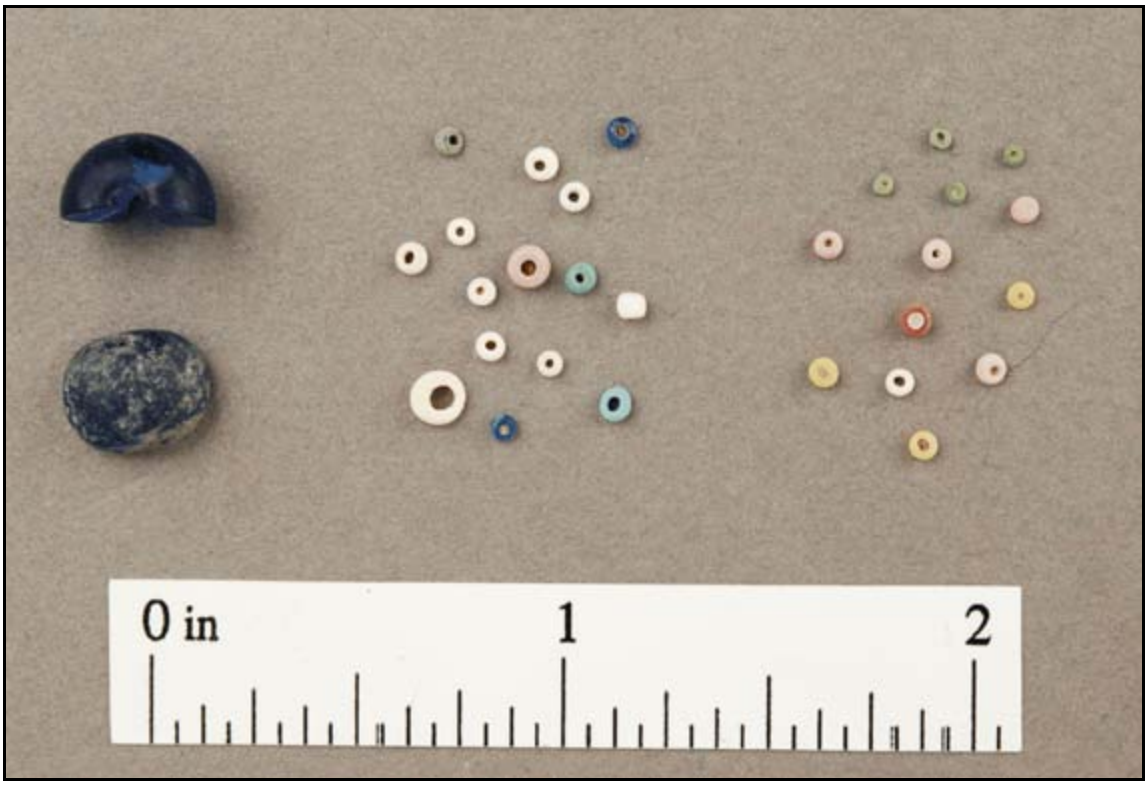
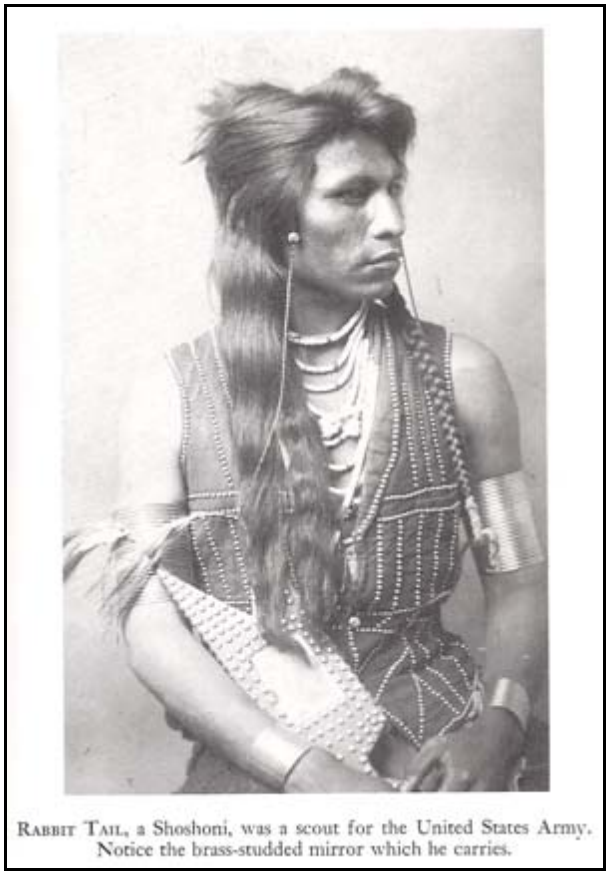


Plate 9: Glass Artifacts from the Colorado Wickiup Project

Top photo shows a selection of glass beads. At left are both halves of a wound "Pony" bead from 5RB4338; center are seed beads from 5RB4338; at right are seed beads from Feature 6, the wall tent, at 5RB563 (FS153). Note the four green "micro" beads at the top.

Bottom photo shows fragments of the thin plate glass from 5RB563 (apparent mirror fragments)on left, and fragments of the glass vial or tube from Feature 6 at 5RB563 on the right.



RABBIT TAIL, a Shoshoni, was a scout for the United States Army. Notice the brass-studded mirror which he carries.

Plate 10: Tacks and Nails from 5RB563, the Ute Hunters' Camp

Top photo shows examples of decorative brass tacks (note the bent shanks), tack heads with shanks missing, and shanks. On the right are two additional types of tacks or small nails found on the site. In the historic photo, note the brass-tack studded mirror carried by this Shoshone.

Plate 11: Metal Punches and Awls from 5RB563, the Ute Hunters' Camp

Top photo, left to right: FS76, FS19, FS13, FS172, FS22. Bottom left photo: Metal awl or leather punch (FS19) found stuck vertically in ground against interior edge of Feature 6 wooden element. Bottom right photo: metal awl (FS22), also from the interior of Feature 6, wall tent.

Plate 12: Buttons from 5RB563, the Ute Hunters' Camp

Left to right: FS229 brass/bronze disk w/ loop shank (plain disk on obverse), FS144 pressed metal, FS35 hard rubber, FS18 2-piece ball with loop shank "shoe" button, FS6 ceramic Prosser or "Little China".

Plate 13: Gun Powder Can and Strip Metal from 5RB563, the Ute Hunters' Camp

Top photo: FS24, on the left is a gun powder can. FS41, found elsewhere on the site, consists of half of the can lid was has been cut away and re-fashioned into a scoop for measuring powder into cartridge cases during re-loading activities.
Bottom photo: fragments of decorative and functional strip metal. From left to right: FS54, FS16, FS4, FS15 (decorative brass/bronze rolled into tight roll), and FS10. Note the stamped designs on FSs 4 and 10 and holes punched in FSs 16, 4, and 10.

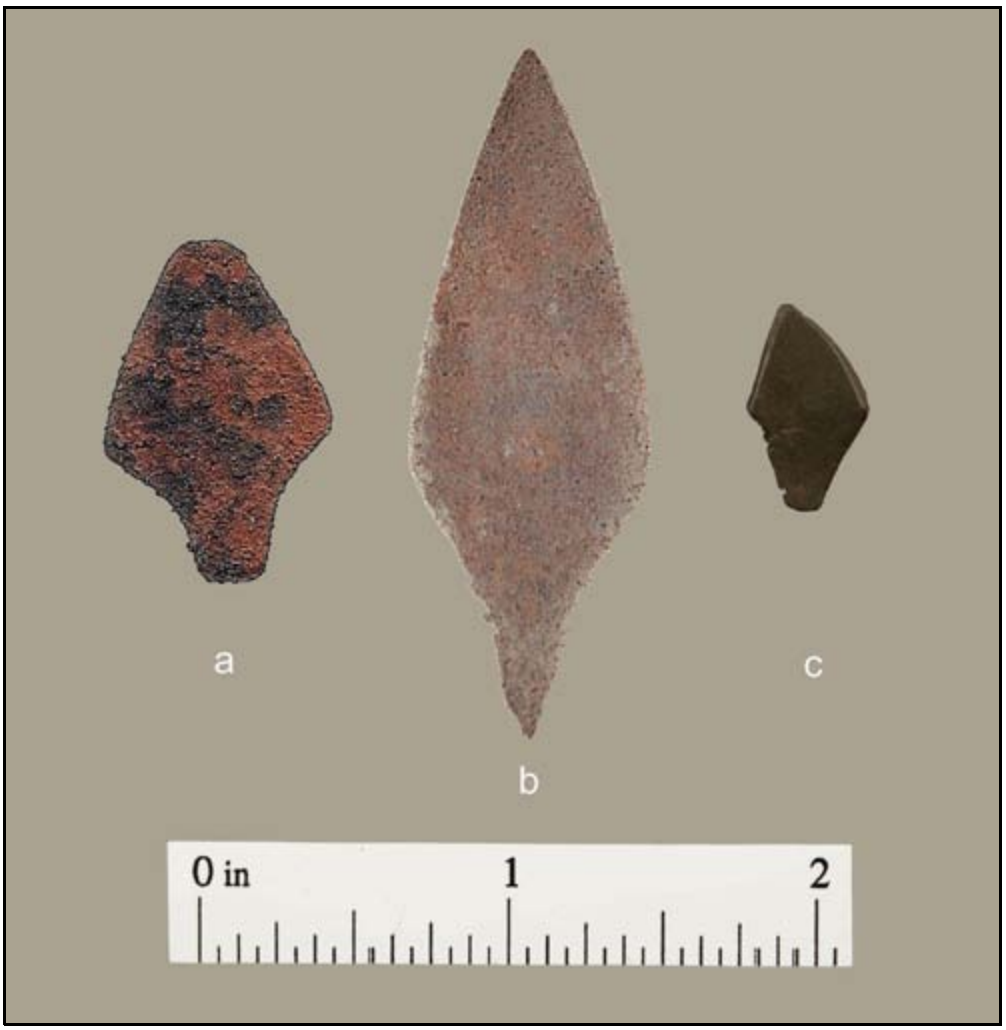


Plate 14: Metal Projectile Points from the CWP and Ancillary Projects

a: FS1 from 5ME7089 (the Metal Arrow Point Site); **b**:FS22 from 5RB509 (the Perforated Can Site); and **c**: FS17—a heavily re-sharpened specimen—from 5RB4027.

Appendix H: OAHP Re-evaluation, Management, and Component Forms

(Available at OAHP and BLM White River,
Glenwood Springs and Grand Junction Field Offices)