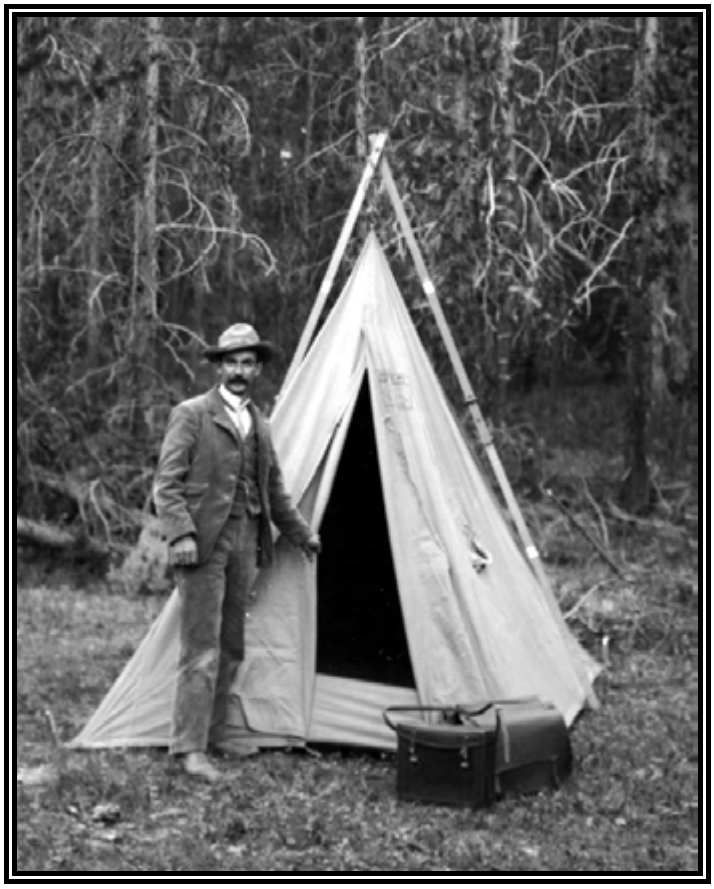
AN ARCHAEOLOGICAL ASSESSMENT OF TWO UTE TRAILS IN EAGLE COUNTY, COLORADO

COMPLETED FOR
THE COLORADO HISTORICAL SOCIETY STATE HISTORICAL FUND
AND THE BUREAU OF LAND MANAGEMENT



DARG Dominquez Archaeological Research Group

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

Public review copy:

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An undated historical photograph of a two-pole Biddle
or Range tent patented in 1895 by Spencer F. B. Biddle,
a type of tent poles found at site 5EA3232.

(Rawitzer, C.M., 1912,
American Tent and Awning Company,
Illustrated Price List (catalogue),
Minneapolis.)

AN ARCHAEOLOGICAL ASSESSMENT OF TWO UTE TRAILS IN EAGLE COUNTY, COLORADO

Completed for the

Colorado Historical Society State Historical Fund
and the Bureau of Land Management
Multi-disciplinary Cultural Resource Survey
BLM #15816-1 / OAHP #EA.LM.R235
SHF Project #2015-02-024

DARG Project No. D2015-2
1 February 2016

Prepared by
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Submitted to
The Colorado Historical Society State Historical Fund
1200 Broadway
Denver, Colorado 80203
and
The Bureau of Land Management
Colorado River Valley Field Office
2300 River Frontage Road
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Acknowledgments

We would like to thank Erin Leifeld, archaeologist of the Bureau of Land Mangement's Colorado River Valley Field Office, for her assistance in the conception and execution of this project. Cheryl Harrison, retired archaeologist from the same office, assisted in the identification of the trail segments and consulted with Jessica Yaquinto, project ethnographer. Jessica also consulted with USFS archaeologists Lynn Lockwood and Andrea Brogan. We would especially like to thank our Ute Tribal advisors Betsy Chapoose, Terry Knight and Alden Naranjo for their involvement. Finally, we would not be able to pursue these projects without the support of Dan Haas of the Bureau of Land Management Colorado State Office and the staff of the Colorado Historical Society State Historical Fund for their support of our efforts to define and characterize the Ute Trails projects of Western Colorado.

Rich Ott and Michael Berry, individually responsible for this project's coordination and database creation respectively, were the original collaborators for the development of and ensure the professional completion of the Ute Trails projects. Dominquez Archaeological Research Group is grateful for the participation of Curtis Martin, Barbara Davenport, Lucas Piontkowski, Holly Shelton, Courtney Groff, Dakota Kramer, Natalie Higginson, Masha Ryabkova, Nicky Pham and Natalia Conner for their participation in the fieldwork and report preparation.

ABSTRACT

Dominquez Archaeological Research Group (DARG), by means of a cultural resources research grant from History Colorado State Historical Fund (SHF Project #2015-02-024) and under a Bureau of Land Management Colorado River Valley Field Office (BLM) field authorization, conducted a study entitled Ute Trails of Eagle County that included segments of two aboriginal trail systems within the Colorado River corridor. Centrally located in the Northern Utes' aboriginal territory, the two selected trail segments are part of the Sawatch Mountains system (Pisgah Mountain Section, ~9.0 miles) and White River Plateau system (Dotsero Section, ~2.75 miles). These segments offer rich and varied sources of archaeological information, and are historically significant to today's living descendants of the Utes that traveled them.

Fieldwork was conducted between 6 August and 9 September 2015 on lands under jurisdiction of the Bureau of Land Management, Colorado River Valley Field Office. A total of 2500 acres in two discrete parcels and centered on two suspected Ute Trails was included in the reconnaissance survey for cultural resources. Participants in the inventory of the Pisgah Mountain Section included PAAC members and members of the History Colorado SHF staff. Overall 33 sites and 71 isolated finds were identified with the present study.

Information about the recorded sites was included in a database for the Ute Trails of Colorado and is augmented by a map-based findings review – both of which are accessed through the DARG website under password. Ute tribal participation has occurred at the development and findings stages. Additional involvement is expected during official consultation and specific site visitations that will be co-sponsored by BLM.

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1.0 INTRODUCTION

Dominquez Archaeological Research Group (DARG), by means of a cultural resources research grant from History Colorado State Historical Fund (SHF Project #2015-02-024) and under a Bureau of Land Management Colorado River Valley Field Office (BLM) permit and authorization (Permit No. C-67009; Authorization No. 15816-1), conducted a study entitled Ute Trails of Eagle County that included segments of two aboriginal trail systems within the Colorado River corridor (Figure 1). These and other trails are historically significant to today's living descendants of the Utes that traveled them, and to the diverse professional and public communities that value and study Ute heritage and early western Colorado history. Centrally located in the Northern Utes' aboriginal territory, the two selected trail segments are part of the Sawatch Mountains system (Pisgah Mountain Section) and White River Plateau system (Dotsero Section). These segments offer rich and varied sources of archaeological information. The study areas focus was on the elevations used predominantly from Late Fall through Spring as base camp habitations.

This project was conducted under Section 110 of the National Historic Preservation Act (NHPA, 16 U.S.C. § 360), which sets out the broad historic preservation responsibilities of Federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all Federal agencies. It was initiated as part of BLM's commitment to pursuing projects and programs that further the purposes of the NHPA, and in so doing was conducted to identify historic properties located along the two selected trail sections for their protection and preservation.

The two trail segments were buffered to a width of 2000 feet (centered on the suspected trails): Dotsero Section (~2.75 miles); and, Pisgah Mountain Section (~9.0 miles) (Figure 5). Accordingly, a total of 2500 acres were included in a reconnaissance survey for cultural resources. The project areas were confined to BLM administered lands. Fieldwork was conducted between 6 August and 9 September 2015.

The fieldwork and report preparation portion of the project was completed by Carl E. Conner (Co-Principal Investigator), Curtis Martin (Field Supervisor), Courtney Groff, Dakota Kramer, Hannah Mills, Richard Ott, Marie Ryabkova, Thuong Pham, Lucas Piontkowski, and Holly Shelton. The project also included development of a database, and a cultural chronometry and multivariate analyses based on the diagnostic tools, which was performed by Michael S. Berry (Co-Principal Investigator). Rich Ott developed new means by which Ute Tribal representatives and BLM resource managers can review the results of the project on-line (under password at dargnet.org), which include maps and findings summaries of the recorded sites. He reviewed these new processes and results of the inventory with Ute Tribe's project participants: Betsy Chapoose, Cultural Rights and Protection Director for the Ute Tribe of the Uintah and Ouray Reservation, Terry G. Knight, Sr., Ute Mountain Ute Tribal Historic Preservation Officer and NAGPRA Liason, and Alden Naranjo, NAGPRA Coordinator for the Southern Ute Tribe.

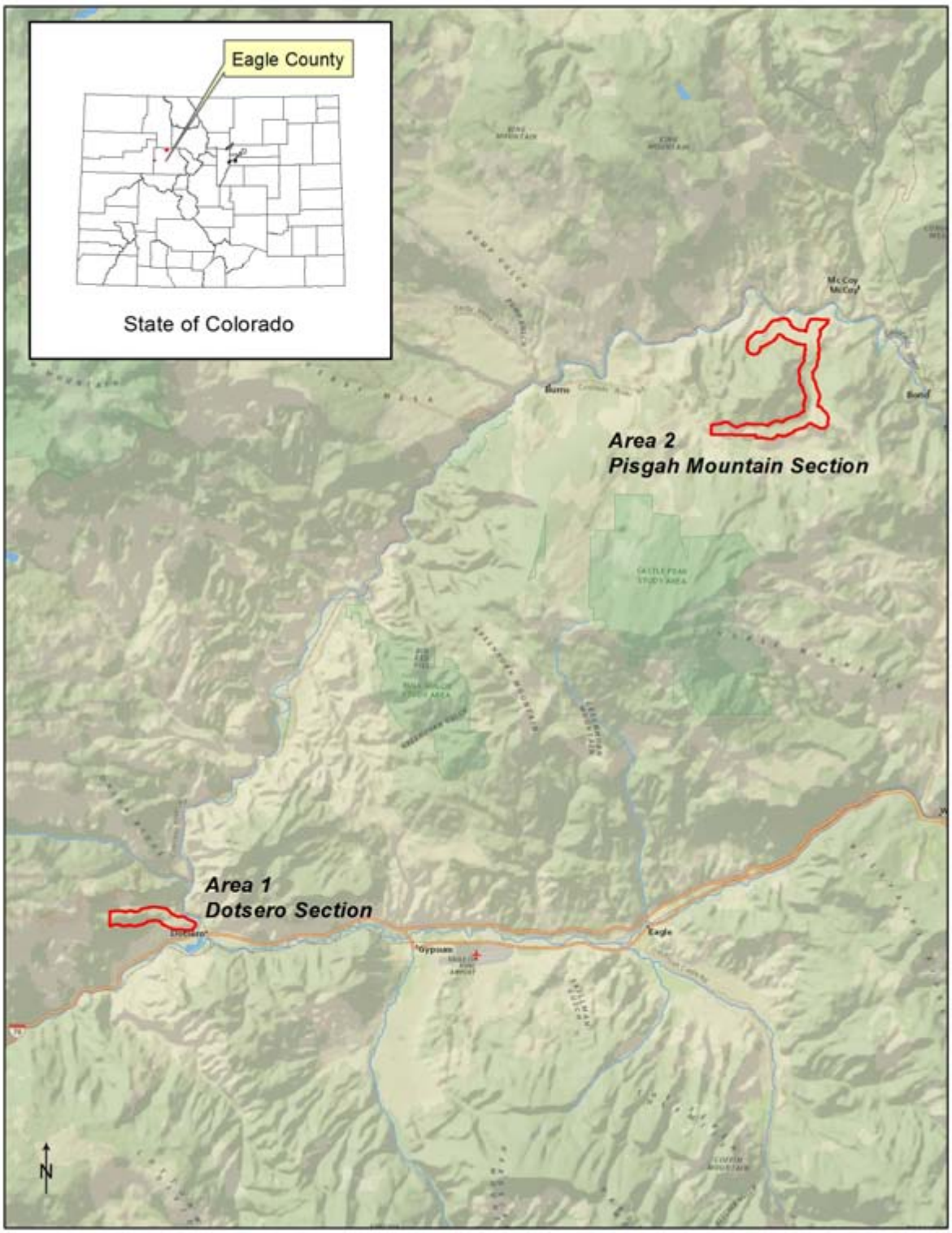

Figure 5. Project location map for Areas 1 (Dotsero Section) and 2 (Pisgah Mountain Section), Ute Trails of Eagle County.

1.1 Institutional Background

Dominquez Archaeological Research Group, Inc. (DARG) is a 501(c)(3) non-profit corporation established in 2003 to serve as a catalyst for innovative and collaborative archaeological and anthropological research, preservation, and education in the northern Colorado Plateau. Functioning as a consortium of research associates and technical advisors, DARG's operational focus is to coordinate research, raise and administer funding, and manage projects that advance our shared values and mission.

Our research strategy is focused on 1) intensive documentation of endangered and ephemeral archaeological resources and indigenous cultural landscapes, 2) poorly recorded and under-studied archaeological resources and neglected research themes, and 3) cross-disciplinary studies which integrate and synthesize information from multiple perspectives, including those of Native Americans. Our preservation goals are targeted foremost on improving the scope and quality of archaeological data, and on development of information systems that facilitate efficient, parity access across the professional research community, Native American stakeholders, and cultural resource managers. We proactively seek opportunities for collaborative public outreach and education, and have established on-going working relationships with numerous local, regional, and state-wide organizations supporting preservation and appreciation of cultural resources and heritage landscapes.

DARG has successfully conducted several major on-going projects that have significantly expanded baseline knowledge of western Colorado archaeology, notably including the Colorado Wickiup Project (CWP), the Colorado Radiocarbon Database Project, and the Ute Trails of Mesa County Project. In recognition for our work on the CWP, we received the 2014 Governor's Award for Historic Preservation. Our Ute ethnohistory and ethnobotany studies have opened important new channels of communication with Ute consultants and research partners, and through a series of recently conducted bison studies we have revealed a more complete picture of the occurrence of this important resource during the Early Numic and Historic Ute periods in western Colorado. These projects provided us with a solid foundation of baseline knowledge and organizational experience with which we carried out the Ute Trails of Eagle County Project.

1.2 Project Background

Trails systems are important corridors linking key river crossings and seasonal destination locales for aboriginal inhabitants in central Colorado. These are evidenced by clusters of Early Numic, Historic Ute and other archaeological sites that have been recorded in the selected study areas. One site in particular, near the center of the Sawatch Mountains Trail segment, offers an unparalleled insight into Protohistoric Numic lifeways in the mid-nineteenth century. Site 5EA2740, the Pisgah Mountain Wickiup Village, consists of 28 aboriginal wickiups and other wooden features and produced over 100 artifacts – primarily metal trade

goods and glass seed beads. Over 20 tree-ring samples were analyzed indicating an occupation in the fall or winter of AD1853. It was anticipated that additional prehistoric and historic Numic sites will be found within this travel corridor. Importantly, within sight of the Dotsero Section (BLM designated trail) wickiups have been observed but not recorded.

Both of the trail segments proposed herein for study were likely similar in prominence and importance to the aboriginal peoples as were the West Grand Mesa and McDonald Creek Trails that are currently being investigated by DARG in the west-central part of the state. They appear to have been major routes connecting the open grasslands of northwest Colorado to the Sawatch Mountains of the central Rockies, via a historically known river crossing on the Colorado River (in the case of the Sawatch Mountains Trail, Pisgah Mountain Section), and the Colorado River – at its confluence with the Eagle River – to the uplands of the White River Plateau and the Flat Tops Wilderness (in the case of the White River Plateau Trail, Dotsero Section). These trails, as indicated by early maps and ethnohistories of the region (Preuss 1848; Hayden 1881), were undoubtedly key routes that connected Utes living in the mountains of central Colorado with not only a variety of seasonally-productive procurement areas but also with other Utes to the north and west, to the territories of the Shoshone and Comanche, and to the plains of Wyoming – an important procurement area for bison and other food sources, as well as slaves.

The trails are historically significant to today's living descendants of the Utes that traveled them, and to the diverse professional and public communities that value and study Ute heritage and early western Colorado history. The Numic-speaking Utes were highly mobile, and only ephemeral and widely distributed traces of their continual seasonal migrations survive in the archaeological record. Early Numic and Historic Ute archaeology, consequently, has remained significantly under-studied and not well-understood (Baker et al. 2007; Baker 1995; and Nickens 1988). A number of studies in recent years, however, have begun to reveal the breadth of the ancestral landscapes that provided material and spiritual sustenance to the Utes across a sweep of time reaching from prehistory to little more than one hundred years ago. It has become clear that the traditional cultural heritage of the Utes lies not only in their archaeological legacy, but in the aboriginal trails and natural landscapes of their ancestral homelands.

2.0 LOCATION OF THE PROJECT AREA

The two discreet linear shaped survey areas centered on buffered suspected prehistoric trails are located approximately 15 miles (Dotsero Section) and 35-40 miles (Pisgah Mountain Section) northeast of Glenwood Springs, Colorado. The Dotsero area is within T. 4S., R. 86W., Sections 31 and 32; T. 4S., R. 87W., Sections 35 and 36; T. 5S., R. 86W., Sections 5 and 6; 6th P.M. (Figure1). The Pisgah area is located in T 2S ., R 84W., Sections 2, 10-13, 21-28; 6th P.M. (Figures 2-4).

3.0 ENVIRONMENT

The project areas are within the southern portion of the Sand Wash Basin. The basin, which comprises some 4000 square miles in the north central portion of Colorado and is an extension of the Wyoming Basin Province, was formed in Late Cretaceous or early Tertiary times. It subsided sufficiently to accumulate nearly 9000 feet of Cenozoic wind and freshwater deposits. The higher elevations of the basin are supported by older rocks of Mesozoic and Paleozoic sediments, or Tertiary intrusions (Young and Young 1977:51-52).

Within the discrete study units, Pennsylvanian Age sedimentary rocks of the Evaporitic Facies underlie the bulk of the Dotsero Section study area with a minimal amount of Belden formation at the west end of the boundary. These consist of shale, siltstone and a lesser amount of limestone. The geology of the Pisgah Mountain Section study area is comprised of layers spanning several ages. The north portion is mostly sandstone and siltstone of the Pennsylvania Age while Cretaceous Age shale and limestone of the Colorado Group form the bulk of the south portion. Present in lesser quantities is bedrock of the Jurassic, Cretaceous, Triassic-Permian and Cretaceous-Jurassic ages.

The topography of the Dotsero study area consists of a single east-west ridge, with steep slopes north of the Colorado River. The elevation range over this two mile stretch is fairly great, from 6200 to 7880 feet. The terrain of the Pisgah study unit contains the interfluvial, broad ridges and slopes that surround Pisgah Mountain (Plate 1). The elevation ranges from 6720 at the north end near the Colorado River to 8400 feet to the south as the distance from the river valley and various drainages increases.

These mid-range elevations are host to a cool semiarid climate where temperatures can drop to -20 degrees F during the winters and summer temperatures may reach 90 degrees F; there is a maximum of 120 frost-free days and the annual precipitation is about 14 inches. The surrounding higher elevations are characterized as cooler and moister. Annually, the high mountain temperatures could average 5 degrees cooler and the precipitation as much as 14 inches greater than the surrounding low elevations (USDA SCS 1975).

Both study areas have Upper Sonoran and Transitional zone vegetation. The upper story of these plant communities consists of pinyon/juniper, gambel oak, big sage, mountain mahogany, serviceberry, and rabbitbrush. Riparian communities dominated by narrow leaf cottonwood trees are present along Big Alkali Creek in the south portion of the Pisgah study area. Such vegetation communities support a variety of wildlife species, although the present day land use of the project area (hunting and general recreation) has pushed most large mammals into the surrounding mountains. There, mule deer, elk, coyote, and black bear are common, as are cottontail rabbits, beavers, and various rodents. Mountain lion, bobcat, fox, skunk, badger, and weasel are also likely inhabitants. Bird species observed in the area include the jay, raven, red-shafted flicker, long-eared owl, and various other raptors.

Plate 1. Panoramic overview of the Pisgah study area looking south toward Pisgah Mountain.

4.0 PREHISTORIC LITERATURE OVERVIEW

North America's first human explorers arrived near the close of the Pleistocene as early as 18,000 years ago traveling by passage along Beringia the continental land bridge between what is now Siberia and Alaska. As craniometric evidence has indicated, the immigrants were diverse in origin, identified as belonging to various populations found in Asia and along the Pacific Rim. Specifically, northern and central Asians, people who later occupied the Polynesian islands, and the Ainu who later resided on the islands of northern Japan have been identified as the earliest ancestors of the Native Americans. The number of these colonists was apparently small because evidence of the first incursions is scant. However, the fact that they rapidly spread across the continents of North and South America is found in excavations at Meadowcroft Rockshelter Pennsylvania (Adovasio et al. 1990) and at Monte Verde in Chile (Dillehay 1984), sites which date to about 18,000 and 14,000 years ago respectively. Consensus has emerged that the dating of Monte Verde is valid; however, the dating of Meadowcroft continues to be the subject of debate (Haynes 1980, 1991). In any case, such finds suggest a pre-Clovis colonization of the Americas.

Local and regional archaeological studies indicate nearly continuous human occupation of west-central Colorado for the past 12,000 years. The prehistory of the region is outlined in the Colorado Council of Professional Archaeologists' *Colorado Prehistory: A Context for the Northern Colorado River Basin* (Reed and Metcalf 1999), and in the *Archaeological Monitoring and Data Retrieval for the Collbran Pipeline Project* (Conner et al. 2014). Discussed therein are manifestations of the Paleoindian Era big-game hunting peoples (ca. 11,500 - 6400 BC); Foothill-Mountain Tradition (ca. 9500-6500 BC); Paleoarchaic transition period (ca. 7500-5500 BC); the Archaic Era (Early, Middle, Late) hunter/gatherer groups (ca. 6500 - 400 BC); the Formative Era horticulturalist/ forager (Fremont, Anasazi, Avonlea) cultures (ca. 400 BC- AD 1300); the Early Numic and Athabaskan hunter/gatherers (ca. AD 1300 - AD 1650); and, the early historic horse-riding nomads (Late Numic, Athabaskan, Plains cultures) ca. AD 1650 - AD 1920).

A radiocarbon record of occupation for high altitude occupations in the central

mountain region is derived from the excavation of 25 sites in the Curecanti National Recreation Area. The investigations resulted in 66 radiocarbon dates that indicate a nearly continuous occupation of the Gunnison Basin for the past 10,000 years. Three periods of possible higher frequency of occupation occurred between about 5500-4000 BC, 3700-800 BC, and 650 BC - AD 150. The highest frequency of dates occur ca. 4000 BC (Jones 1984:19-21). In contrast, O'Neil (1993:293) reports that results of 123 radiocarbon dates from 35 tested and excavated sites in the lower elevations of west-central Colorado indicate clusters of higher frequency occupation occur ca. 7200-5600 BC, 4300-3800 BC, 3200-1000 BC, and 900 BC -1800 AD. For this sequence, the earlier dates are low in occurrence as compared with the mountain regions, and the long hiatus between 5600 BC and 4300 BC may be directly linked to the effects of an interglacial dry period when populations apparently gravitated to higher elevations.

Historic records indicate occupation or use by Euro-American trappers, settlers, miners, farmers, and ranchers as well. An overview of the history of the region is provided in a document published by the Colorado Council of Professional Archaeologists entitled *Colorado History: A Context for Historical Archaeology* (Church et al. 2007).

5.0 PALEOCLIMATE

A graphic illustration of regional climatic studies by Petersen (1981) for the La Plata Mountains and by Chen and Associates for the Battlement Mesa area (Conner and Langdon 1987:3-17) is presented in Figure 6. As one can see, the two graphs are not in complete agreement, but they offer comparable assessments of the region's paleoclimate based on the present knowledge of the geomorphology. In addition, the following is a distillation of the discussion of general climatic shifts derived from geologic implications as reported in the Class I for the GJFO (Conner et al. 2011:2-8 through 2-50).

In the Southern Rocky Mountains, generally warm, moist conditions prevailed during the Early Holocene (ca. 11,700 BP). As the generalized warming trend continued, the warm/ moist conditions began to change. At the lower elevations, dry/wet climatic fluctuations appear to have brought on drought conditions between 11,200 and 9500 BC in the San Juan and Wyoming Basins, lowering the water table and concentrating surface water into shrinking water holes. In other areas, especially the higher terrain, increased effective precipitation would have produced a rise in the ground water tables, local lake levels, and the number of springs, as well as an expansion of tall and short grass forage regions (Eckerle 1992).

Beginning about 9200 BC, wetter environmental conditions again prevailed and timberline was lower in the La Plata Mountains. Dune areas began to stabilize and the sage brush began to replace the desert shrub. However, around 9000 BC another change occurred and the environment became drier. Between then and about 4300 BC the timberline in the San Juan Mountains gradually retreated to higher elevations than at present. Somewhere around 8250 BC the monsoon pattern appears to have shifted southward.

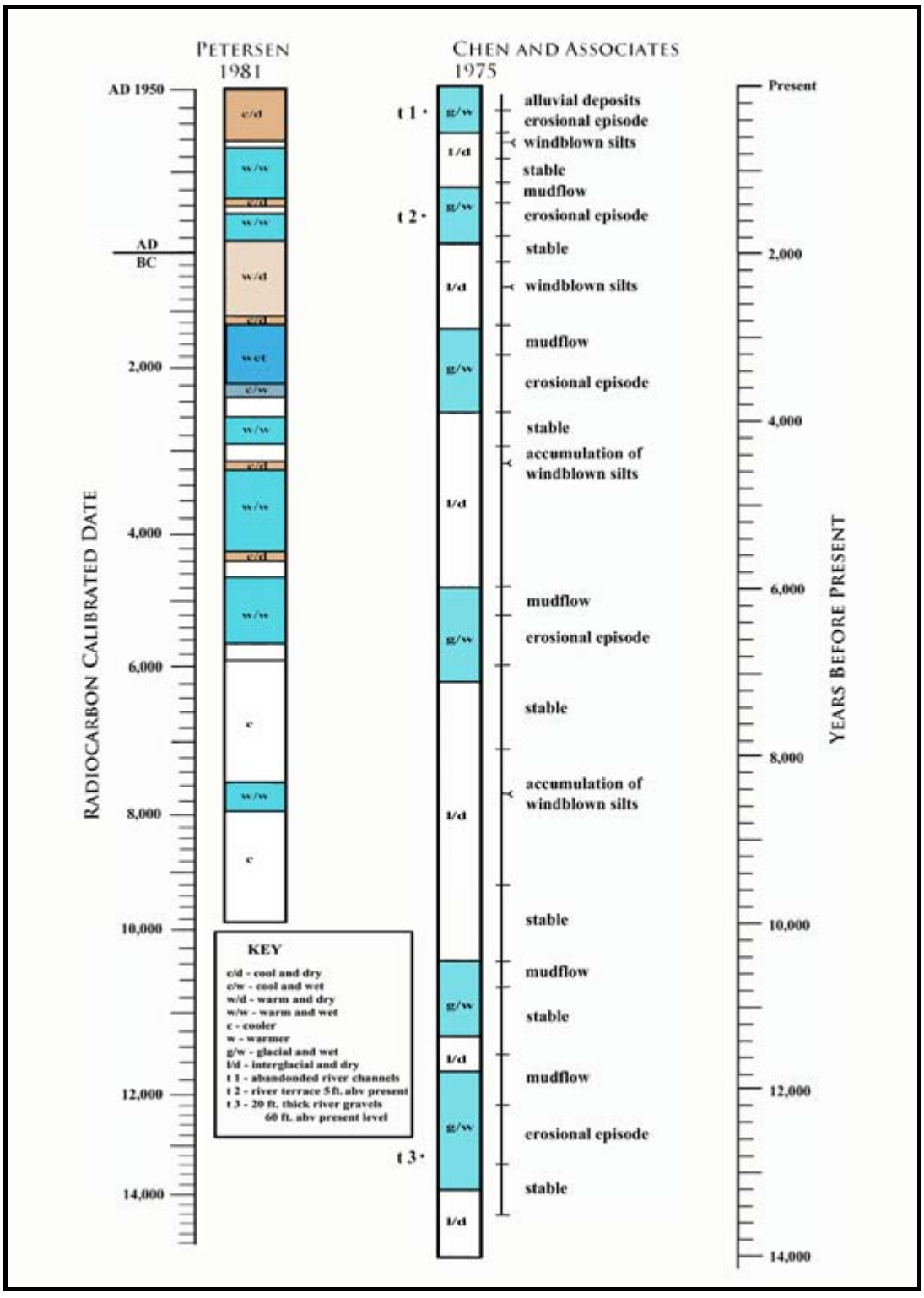

Figure 6. Illustration of regional climatic studies by Petersen (1981) for the La Plata Mountains and by Chen and Associates for Battlement Mesa Community (Conner and Langdon 1987:3-17).

The Paleoarchaic period (7500-5500 BC) witnessed a deterioration of regional climates accompanied by higher average temperatures and less effective moisture. The three following periods are defined by cultural changes and punctuated by climatic episodes: Early Archaic (ca. 5500-3750 BC), Middle Archaic (ca. 3750-1250 BC), and Late Archaic (ca. 1250 BC - AD 1300).

The Early Archaic (5500-3750 BC) exhibits a good deal of cultural continuity with the preceding period. This period marks the first half of the Middle Holocene and represents the harshest drought conditions experienced by the prehistoric population. Based on excavation data, evidence of occupation in northwest Colorado during the Middle Archaic Period, ca. 3750-1250 BC, greatly expands in comparison to the previous periods. This occurs in the second half of the Middle Holocene and roughly corresponds to the Neoglacial period, which exhibited an overall increase in effective moisture and cooler temperatures.

Climatic fluctuations occurred during this period and two distinct dry episodes are recorded by Petersen (1981) for the La Plata Mountains and by Chen and Associates for the Battlement Mesa area (Conner and Langdon 1987:3-17). Data supporting the first dry episode is derived from excavations conducted in the Alkali Creek Basin (located just north of the Gunnison Basin) and reported by Markgraf and Scott (1981). Their study indicates the presence of a montane pine forest at an elevation of 9,000 feet until ca. 3250 BC. The environmental model prepared for the Battlement Mesa Community shows an accumulation of windblown silts ca. 3250 BC (at the end of an extended, increasingly dry episode of the Neoglacial period) and again ca. 600 BC.

Between 2850 BC and 2550 BC, the increased moisture allowed the pinyon pine to expand northward from New Mexico into central Colorado and eastern Utah, and it became a major component of the La Plata Mountains in southwestern Colorado. By about 1700 BC, pinyon/juniper forest is present in the canyon bottoms and washes of the Colorado Plateau. This period exhibits stabilization of dune fields and reversion to sagebrush steppe of much of the area covered in desert shrub communities. Consequently, increased game populations and a wider variety of edible plants were available to the human populations at lower elevations.

The Late Archaic/Formative (1250 BC - AD 1300) is a time of apparent stress on settlement systems. Drought-like conditions coupled with population packing (increased populations in smaller ecological niches) caused adaptive strategies to reach a pinnacle of intensification. Such intensification is reflected in heightened processing of seeds and other lower rate-of-return resources, cultigen manipulation, and evidence of a shift to the bow and arrow. The Archaic lifeway likely continued as a survival strategy for hunter-gatherer groups through the end of the Formative period. The initial portion of the Late Archaic Period appears to consist primarily of climatic conditions somewhat similar to the present with periodic fluctuations between cooler and wetter, cooler and drier, or hotter and drier conditions, depending upon geographic location.

In summary, the end of glacial conditions came around 13,400 BC [* represents

calibrated dates]. An early drought, called the Clovis drought by Haynes (1991), caused erosion and is associated with most of the Pleistocene extinctions. Glacial conditions returned in the Younger Dryas between 11,000 and about 9000 BC*. Severe drought in the early Holocene lasted from 9000 to 5500 BC*, interrupted once around 7450 BC*, which coincides with the presence of Pryor Stemmed projectile points in the region. After 5500 BC*, climates ameliorated. Conditions between 5500 and 3100 BC* approached but did not exceed conditions during the Late Glacial; changing plant communities, frost heave, syngenetic (in-place) weathering, and changing lake levels all point to cooler conditions. Droughts interrupted the generally cooler-moister conditions after 5500 BC*, with major periods of drought identified between and 1850 to 950 BC*, 275 BC* to 165 AD*, 900 to 1350 AD*. After about 150 years ago, conditions have caused deflation and alluvial deposits have moved in fits and starts downstream, via avulsion.

Geologic evidence can identify changes in climate within a scale of hundreds of years, but lacks precision when compared to tree ring data, but the two compare nicely. The sequence of deposition and erosion is easy to see, but dating the sequence with radiocarbon determinations obtained mostly from cultural features presents its own challenges. Furthermore, although the changes due to climate change are visible in the stratigraphic record, the boundary conditions that favor deflation over deposition in loess deposits or trigger fine clastic deposition in alluvial valleys are not precisely known. Nevertheless, a coarse summary of climate based on alluvium and aeolian deposition can be suggested, and is generally supported by tree ring data for at least the last 2000 years.

6.0 PROJECT OBJECTIVES / RESEARCH DESIGN

This research project is part of DARG's overall objectives to employ landscape archaeological perspectives to examine how prehistoric, protohistoric and historic Native Americans modified, utilized and perceived the natural environment of Colorado's Western Slope and adjacent areas. The literature of landscape archaeology is voluminous (e.g., Criado and Parcero 1997, Ashmore and Knapp 1999, Campana and Frankovich 2001, Bevan and Conolly 2004, Kavamme 2003, Chapman 2006). This project was modeled from two distinct yet complementary perspectives: 1) analytic and quantitatively based Western science, and 2) Traditional Ecological Knowledge (TEK) (e.g., Hobson 1992. Berkes 1993, Inglis 1993, Calamia 1996, Gulliford 2000, Pierotti 2007) of landscapes gleaned from the ethnohistorical record and consultation with contemporary Numic speaking tribal members including representatives of the Ute Tribes.

For these projects we examined the information on two different scales of observation; the specific and the regional. At the specific level we are considering two Native American trails for analyses. We opted to begin with trail systems because, empirically speaking, these trails appear to tie together subsistence resources, activity loci, camp sites, and possible rock art panels and ceremonial sites. These conjoined systems constitute cultural landscapes that were,

and continue to be, significant in the world view of the Numic speaking groups of western Colorado. Ethnographically, trails were used as links between individuals and groups to their past, their mythology of the landscape, and to the land itself. Individuals or groups may have come together for ceremonial purposes (a reaffirmation of human relation-ships such as the Bear Dance) or to move along a particular trail as part of a spiritual pathway by revisiting sacred sites (particular landscape localities or rock art sites).

The first of our selected trails, Dotsero Section, is located on the northeast end of Glenwood Canyon. There it ascends a ridge and connects to a trail that crosses the Flattops Wilderness that was recorded by the Forest Service (White River District Office, Glenwood). An undocumented portion of this trail extends south across the Colorado River. The second, Pisgah Mountain Section, is located on the south side of the Colorado River. It connects to a trail leading south towards a crossing of the Eagle River at Wolcott. It also connects to a northern extension that crosses the Colorado River and heads towards the Yampa River area. Near Wolcott, important ceremonial activities have been recorded in the area including a bison kill (with ceremonial aspects) and a sheltered site with unusual rock art. Within the Pisgah Mountain Section, an important wickiup village has been documented using the archival preservation methods employed by DARG researchers. It was tightly dated by dendrochronology to the late 1850's.

At the regional level we attempt to incorporate evidence from the known range of the eastern Numic speakers in order to place the two trail systems in a broader temporal and ecological context. Data from this study will also be directly comparable to that of the Ute Trails of Mesa County and the CWP. From the Western science perspective, it is critical to garner regional patterns of archaeological remains including chronometry, artifact typologies, rock art elements, architectural elements, settlement patterns and climatic variation. From the TEK perspective it is necessary that we gain understanding of the importance of place as it may have been perceived seasonally and, perhaps more importantly, diachronically through changes in climate (variation in precipitation and temperature), the social milieu (increasing European interaction/conflict) and the introduction and cultural inclusion of the horse.

As with the current study underway with the Ute Trails of Mesa County, the TEK approach was to be revisited and potentially expanded upon to detect where the Western science and TEK perspectives "mesh" as well as where they conflict. That, indeed, will be the primary process by which we will be able to build meaningful landscape models. The approaches and methods that will be employed toward this end are as follows:

1) Extant Data. The identification of the selected trails and creation of the primary data set of early Numic, protohistoric and historic Utes sites was made through searches of the files at the BLM-CRVFO and the Office of Archaeology and Historic Preservation. From that data set, sites will be selected for revisiting and re-documentation. Pedestrian inspections of the study corridors will include intensive inventories of various sections, which will likely identify previously unrecorded resources.

2) Wickiups. A number of wickiups have been observed along the Dotsero Section and along the Pisgah Mountain Section where the Pisgah Village was thoroughly documented by DARG. Over 400 wooden structures of probable Numic affiliation have been recorded over a larger area as a consequence of DARG's Colorado Wickiup Project (CWP) (Martin, Conner and Darnell 2005; Martin, Ott and Darnell 2005, 2006; Martin and Ott 2009; Martin and Brown 2010, 2011; and Martin, Lindstrom, and Shelton 2012). We anticipated that additional aboriginal structures would be discovered during the course of this project based on anecdotal reporting. One very significant contribution of the CWP has been the rather precise chronometric placement of these structures and, by inference, the temporal placement of undated but morphologically similar sites along the two trails identified for this project. Currently, the CWP data reside in paper files. A significant aspect of this proposed project will be the contributions to a queryable relational database that DARG is developing for the Ute Trails of Mesa County. This will greatly enhance the research potential of the CWP during the interpretive component of the currently proposed project, as well as on-going and future research on Early Numic and Historic Ute archaeology.

3) Rock Art. BLM's Native American consultation with tribes has underscored the significance of particular rock art motifs in a landscape context. Numerous Western science classifications of rock art panels and motifs have been published (Cole 1987, 1990; Keyser 2008; Keyser and Klassen 2001). These classifications have been useful, if intuitively derived. Again, to place our proposed study areas in a regional context, we propose to analyze motifs thus far classified as Late Prehistoric, Early Numic and Historic Ute quantitatively over a broad area of eastern Utah, western Colorado and southern Wyoming. A problem we have noted is that similar motifs tend to be classified differently by individual analysts working in different regions. A selected set of proven quantitative methods (e.g., Zhu, Wang, Keogh and Lee 2009; Gower 1971) will be employed to overcome such regional biases by discovering similar patterning over broad areas. And of course, as has been pointed out by Daehnke (2009), the placement of a rock art panel in the landscape may be equally important as the particular motif executed.

In addition to quantitative techniques, DARG will acquire high-resolution visual and spatial digital data from petroglyph and pictograph features recorded during the study – including their contextual landscape settings – at scales ranging from sub-millimeter resolutions on panel surfaces to landscape views of site settings. These will be archived for subsequent BLM tribal consultation with tribal elders who may not have been able to observe rock art panels in the field. Notably, DARG will incorporate photos of rock art panels in the study's public documents and website only after BLM has conducted tribal consultation on the sensitivity of sharing the images.

4) Artifacts. Projectile points and other stone tools, as well as historic trade goods, can be important indicators of cultural affiliation and change through time. As part of the

Ute Trails of Mesa County, we proposed to build a multi-variate typology of projectile points through the use of geometric morphometrics (Zelditch, Swiderski, Sheets and Fink 2004; Burnett and Otarola-Castillo 2008), or use an alternative research approach that would employ digitizing the points and creating a Euclidian-squared distance matrix for sorting via Ward's minimum variance cluster algorithm (Anderberg 1973). Based on the results of the earlier work by DARG, findings from the present project will be added to expand the context created for future research in other parts of Western Colorado. Other artifacts having an inferred function can also help to elucidate activities within a given landscape context and will be addressed by the present study. Artifacts will be photographed and left *in situ* – no collections will occur.

5) Tribal Involvement. Concurrent with the above analyses will be the involvement and collaboration with tribal members both in field observations and discussion of interpretations of varying landscapes through time and differing circumstances. This is the arena in which the agreements and disagreements between Western science and TEK landscape modeling can be resolved. The broad base of informal ethnographic and ethnohistorical information that has resulted from Tribal participation in previous collaborative projects with DARG and agency partners will be enhanced and extended through focused, in-field consultation at sites and locales within this project's study areas. Information from ongoing Ute ethnobotany and place names projects, conducted by the Tribes for a number of years, will also make significant contributions to the currently proposed project's landscape modeling.

6) Public education and information sharing. Results of this project will be disseminated to the Ute Tribes, cultural resource managers, professional research communities, and the general public. DARG's channels for sharing research results with federal and state agencies and professional researchers are well-established, and we regularly give public presentations to historic preservation and general public groups throughout the region. DARG's web site is continually being updated with new content. Results of the Ute Trails Project will be disseminated by all of these means.
DARG will also include avocational archeologist training as part of the educational outreach through a cooperative endeavor with the Program for Avocational Archaeological Certification (PAAC). Established in 1978 by the Colorado Archaeological Society (CAS) and the Office of the State Archaeologist of Colorado (OSAC), PAAC allows CAS members and other citizens to obtain formally recognized levels of expertise outside of an academic degree program. It also facilitates avocational public service and assistance in education, governmental management of cultural resources, research, and the protection of archaeological resources in Colorado. For this project, Program members will participate in survey and site documentation. Kevin Black, Assistant State Archaeologist and PAAC Coordinator, will supervise the fieldwork participation of this group.

7) Database development. DARG has created a robust, queryable database for the Ute

Trails of Mesa County, which is being utilized in this project. It is a desktop Microsoft Access database containing all the structured information regarding trails, rock art, wickiups and the associated distribution of artifacts. Queries have been developed to demonstrate the correlation and clustering of these entities over the landscape. Subsequently, the data was then converted to MySQL, a database platform more appropriate for web site information dissemination. Such a database is a key to understanding the complex interrelationships of the disparate domains of data that has been generated in the course of this project. DARG has extensive database experience as demonstrated by the Colorado Radiocarbon Database Project, The Falls Creek Rockshelters curatorial database, and the many geospatial databases we have employed using GIS technology.

8) Digital data archives. DARG's recent and current rock art documentation and quantitative analysis research has underscored the need for development of archival programs for digital archaeological data. The ultra-high resolution composite mosaics and panoramas of rock art panels that will be produced for this and other projects can easily exceed gigapixel sizes for individual images, and as our visual rock art database grows, voluminous quantities of digital data will be generated. Present systems in use by federal and state agencies responsible for cultural resource information management are ill-equipped to archive and disseminate such data. We have initiated discussions with the Museum of Western Colorado, which now administers a curation program for BLM and other agencies, regarding the potential development of a cooperative program for archiving and curating digital archaeological data as an adjunct to present systems. Data produced by the Ute Trails Project will provide an opportunity to explore this issue further. At a minimum, all project data will be delivered to BLM and OAHP on archival quality digital media (optical disks), and the high-resolution visual data from the project, with appropriate controls of location information, will be integrated into DARG's planned online research database.

9) Fieldwork. Field inventory of the approximately 2500 acres considered for this project consisted of intensive inspections of most portions and a reconnaissance survey of steep terrain. The emphasis was on the identification and recording of Numic (Ute, Shoshone, and Comanche) sites and isolated artifacts, although all cultural resources encountered were recorded. A focus of the inquiry will be on the identification of camping areas of the Numa, as well as their limited activity areas such as butchering or plant-processing localities. All documentation was processed to standards set by the BLM and the Office of Archaeology and Historic Preservation.

7.0 FIELD METHODS

A total of about 2500 acres was included in the field inventory area. The fieldwork for the inventory of the two buffered linear areas was conducted using a 4-6 member crew who

walked parallel transects spaced at 15-meter intervals. Crew members worked from USGS 7.5' series maps. All cultural resources such as, open camps, sheltered camps, lithic scatters and isolated finds were recorded as they were encountered.

Cultural resources were sought as surface exposures and were characterized as sites or isolated finds. A site is the locus of previous human activity (50 year minimum) at which the preponderance of evidence suggests either a one-time use or repeated use overtime, or multiple classes of activities. For example: a) Isolated thermal features such as hearths are to be designated as sites, due to the interpretable function of such utilization and the potential for chronometric and economic data of recovery, b) Single element rock art panels are to be designated as sites due to the interpretable nature of such an event and the potential diagnostic value of the motif, c) Similarly, isolated human burials are to be designated as sites, or d) Loci exhibiting groundstone and flake stone in association.

An isolate refers to one or more culturally modified objects not found in the context of a site as defined above. Note that this definition makes no reference to an absolute quantitative standard for the site/isolate distinction. For example: a) A discrete concentration of flakes from the same material regardless of the number of artifacts present likely represents a single, random event and is properly designated as an isolate, or b) Similarly, a ceramic pot bust is to be recorded as an isolate, regardless of the number of sherds that remain.

Data collection entailed the mapping of observed artifacts, artifact concentrations, features, and structures using BLM certified Trimble Geo XT units. Trimble data were downloaded and applied to 7.5 minute, 1:24,000-scale quadrangle maps as well as detailed site maps. Photographs were taken at each site and include overviews and views of specific artifacts and features. Plan views were drawn of every wickiup (house structure). Descriptions of cultural manifestations, soils and vegetation were also warranted. When warranted, limited trowel testing (< 10cm in depth) was conducted at suspected features to determine the potential for additional important data. Field notes and digital photos are on file at Dominquez Archaeological Research Group Inc., Grand Junction. Photographs have been included with the site forms submitted to the BLM. No artifacts were collected.

8.0 STUDY FINDINGS

Class I records searches for the project's discrete areas were made through the Bureau of Land Management Colorado River Valley Field Office, online at the Office of Archaeology and Historic Preservation (COMPASS) website, and at the White River National Forest Office (WRNFS). Access to some files at the WRNFS pertaining to the Flattops geographic area was denied due to Ute withdrawal of that information. The data collected is summarized herein as it pertains to the project's proposed scope-of-work. Within the study areas five sites, 5EA2147, 5EA2148, 5EA2150, 5EA2689 and 5EA2740 had been previously recorded - these were relocated and reevaluated.

As expected, cultural resources were encountered during the survey. This portion of the report presents a discussion of site significance evaluation and then describes the findings by site and as a list of isolates.

8.1 Site Significance

The National Historic Preservation Act of 1966 (NHPA) directs federal agencies to ensure that federally-initiated or authorized actions do not inadvertently disturb or destroy significant cultural resource values. Significance is a quality of cultural resource properties that qualifies them for inclusion in the 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 eligibility determination and consultation process is guided by Section 106 of the NHPA (36 CFR 60, 63, and 800). Inventory to identify, evaluate, and mitigate potential effects to cultural resources affected by an undertaking is the first step in the Section 106 process. Title 36 CFR 60.4 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 in prehistory or history.*

8.2 Site Descriptions

Thirty-three sites were recorded during the inventory of the two trail sections. Most are prehistoric sites but two are clearly from the historic Ute period.

Site **5EA2147**, a previously recorded prehistoric open camp, is located southwest of Pisgah Mountain and north of Big Alkali Creek. The elevation is between 7680 and 7800 feet. Vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-75 percent ground visibility). Soils are classifiable as Tanna-Pinelli complex (12-25 percent slopes) and Tridell-Brownsto stony sandy loams (12-50 percent slopes) (USDA SCS 1984:70 & 72). Both soils are well-drained, moderately deep or deep (40 to >60in [102 to >152cm]) alluvium and residuum, and are found on alluvial fans and

the sides of valleys.

The site was originally recorded in 2003 by Grand River Institute (Conner et al. 2003). At least 125 flakes, one spokeshave, one drill, two non-diagnostic projectile point fragments, one comal, one mano and two metate fragments were recorded. Although no distinct thermal features were observed, three concentrations of fire-cracked rock were recorded and one was noted to possibly represent a hearth feature.

The present project revisited the site and found a slightly lower density of cultural material. Some of the previously recorded artifacts were believed to have been relocated, but cannot be 100 percent verified due to the effects of site formation processes, discrepancies in geospatial data, and the lack of comparative photographs. New cultural material was also observed and recorded within as well as outside the digitized OAHP site boundary. As a result, the boundary was expanded and encompasses the newly observed cultural material.

Cultural material is located within an area 265 (ENE-WSW) by 120 (NW-SE) meters on an east-facing slope above an intermittent tributary of Big Alkali Creek. The cultural material clusters in an area previously noted to contain a relatively high artifact density. One chipped stone tool, a sparse scatter of flakes, ground stone, burned bone and two thermal features (Features 1 and 2) are present.

The chipped stone tool is the base of a small biface of opaque white chert. It exhibits a random flaking pattern and a thin, lenticular cross-section. A possible bending fracture–a lateral break produced as a result of force exerted perpendicular to the face of the artifact–is present.

Flake density is greatest near the site's southern periphery, south of the ground stone scatter. Within this area is a concentration of at least 32 unmodified flakes. The majority are without dorsal cortex and are of local chert. Primary and secondary flakes are also present, but occur in very limited quantities. Flake stage percentages and the general homogeneity of the lithic material may be indicative of a single lithic reduction event focused on the latter stages of tool manufacture. The few remaining unmodified flakes (i.e., one small biface thinning flake of translucent chert, two medium-sized interior flakes of opaque white chert, and one medium-sized primary flake of light gray chert) are broadly scattered across the site's surface.

Ground stone is concentrated near the site's center–an area previously distinguished by a relatively high density of artifacts. The artifacts include three manos, three comal fragments and five metate fragments. The manos are unshaped cobbles. Their broad surfaces are bifacially ground. Heat-induced changes to two suggest sequential use as boiling stones. The comal fragments are small, angular-shaped pieces of sandstone with thicknesses less than 13 millimeters. All three artifacts are scattered within 5 meters of each other, and may represent remnants of a single specimen. Of the metates, one is complete. This artifact, found face-down, is a slab metate exhibiting a flat, unifacially ground and pecked proximal surface. The

remaining metate fragments are small rectangular or angular-shaped specimens. Three of the fragments, which lie adjacent to each other, are bifacially ground, pecked and shaped, and appear to represent a single metate.

Features 1 and 2 are located north-south of each other and are separated by roughly 62 meters. Feature 1 is exposed along the gentle slope near the northern periphery of the site. The feature, an amorphous ash stain, is eroded within an area 100 by 70 centimeters. Fire-cracked rock and charcoal are not present; however, several small fragments of burned bone (~100 pieces) are located 10 meters downslope. Due to the lack of charcoal and due to its disturbed nature, it does not appear to possess good potential to yield chronometric data.

Feature 2, a possible rock-filled or rock-lined hearth, is located near the site's center amidst the ground stone scatter. It consists of a roughly circular alignment (65x70cm) of oxidized and heat-fractured cobbles. Moderate to heavy sediment accumulation surrounds or covers some the cobbles. Despite the lack of visible charcoal and ash, the feature may possess potential to yield important chronometric and economic data based on the likelihood of subsurface feature fill.

The site is characterized by minimal disturbance. Minor erosional processes are present. Illicit artifact collection may have occurred based on the presence of two axe-cut poles which are potentially associated with a developed spring 60 meters south of the site. Unauthorized collection may also explain why some of the artifacts, specifically the drill and the non-diagnostic projectile point fragments, could not be relocated. No other potential disturbances are apparent.

Evaluation and Management Recommendations

In 2003, the site was officially determined to be eligible for inclusion on the NRHP. No change is recommended to that evaluation. The site possesses the potential to yield information important in prehistory. It may yield important chronometric and economic data. In addition, subsurface cultural material is likely. Accordingly, protection and preservation are recommended.

Site **5EA2148**, a previously recorded prehistoric open camp, is located northwest of Pisgah Mountain and south of the Colorado River. The elevation is 7210 feet. Vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Almy loam (12-25 percent slopes) is the soil unit in the immediate vicinity of the site (USDA SCS 1984:19). This soil is deep (>60in [152cm]), well-drained, and is found on fans and uplands. It is formed in alluvium derived dominantly from calcareous sandstone and shale.

The site was originally recorded in 2003 by Grand River Institute (Conner et al. 2003). Fire-cracked rock and a low density of artifacts–seven flakes, one polishing stone and one

mano fragment–were recorded within a 30-meter diameter area. None of the artifacts were collected. The site was field evaluated as not eligible for inclusion on the NRHP.

The present project relocated the site. A greater density of cultural material was observed west and north of the digitized OAHP site boundary. As a result, the site's parameters were revised. No change was made to the site type.

The site measures roughly 60 (NE-SW) by 25 (NW-SE) meters. Lithics and three thermal features (Features 1-3) are present. The artifacts and features cluster in three locations that are potentially indicative of *in situ* activity areas.

At least 68 unmodified flakes of chert and a few pieces of angular shatter are visible on the site's surface. Eleven of the 68 flakes, as well as the angular shatter, are located in a collector's pile in a hollowed log. The remaining flakes cluster in the vicinity of the thermal features; however, none are pot-lidded or crazed. In general, the majority of the flakes lack dorsal cortex which suggests that preliminary tool manufacture was not the primary technological activity at the site.

Aside from debitage, four other artifacts are present. Two of the artifacts are expedient flake tools and exhibit lateral edge attrition in the form of micro-chipping and/or edge rounding. The remaining two artifacts include a polishing stone (possibly previously recorded) and one unshaped cobble of quartzite. Faint striations on one broad surface of the cobble suggest use as a grinding stone/mano. Battering on the proximal end of the artifact is indicative of concurrent or sequential use as a hammerstone.

Features 1 through 3 consist of small concentrations (<1.5m) of fire-cracked rock and/or ash. Two of the features, Features 1 and 3, possess poor research potential. Feature 2, a large (160 by 145cm) circular arrangement of small and/or medium-sized rocks, also lacks visible charcoal, but contains at least 9 centimeters of ashy fill that may yield important chronometric and/or economic data.

The site is in good condition. Minor erosional processes are present. Due to the presence of a collector's pile, it appears that the site was illicitly collected. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as eligible for inclusion on the NRHP under Criterion D. Feature 2, a thermal feature, possesses the potential to yield important chronometric and/or economic data. In addition, subsurface cultural material is likely. Accordingly, protection and preservation are recommended.

Site **5EA2150**, a prehistoric open lithic that was previously recorded as an isolated find, is located northeast of Pisgah Mountain at an elevation of 7220 feet. A sparse pinyon and juniper woodland, sagebrush, prickly pear cactus and native grass is present. Ground visibility is good (70-80 percent ground visibility). Almy loam (12-25 percent slopes) is the soil unit in the immediate vicinity of the site (USDA SCS 1984:19). This soil is deep (>60in [152cm]), well-drained, and is found on fans and uplands. It is formed in alluvium derived dominantly from calcareous sandstone and shale.

The site was previously recorded as an isolated find by Grand River Institute in 2003 (Conner et al. 2003). One Desert Side-notched projectile point of white and gray quartzite, one thumbnail scraper of mudstone, and at least three flakes of an unspecified lithic material were recorded. The artifacts were interpreted to represent a single, random and isolated occurrence with no diagnostic potential or potential to yield information important in prehistory.

The site was revisited during the present project. The Desert Side-notched projectile point was relocated and new cultural material was recorded. The site boundary was revised to encompass the newly observed artifacts and the site type was changed to an open lithic scatter.

The site is located in an area 30 (NNW-SSE) by 10 (E-W) meters and consists of two formal chipped stone tools and a low density of lithic debitage. The artifacts are not evenly distributed across the site, but are concentrated in two primary areas separated by approximately 15 meters. The spatial distribution of the artifacts is not clearly indicative of *in situ* activity areas.

The previously recorded Desert Side-notched projectile point is a small, thin, tri-notched specimen with one serrated blade edge and a bending fracture extending laterally across the mesial portion of the artifact (5EA2150.s1, Plate 2). The point, located amongst a sparse concentration of lithic debitage, roughly dates the site between AD 1300 and 1750; Reed and Metcalf (1999) and Kornfeld et al. (2010) indicate that these points commonly occur on Numic sites in the Great Basin and Intermountain West and date accordingly.

Plate 2. Desert Side-notched type point base.

The remaining formal chipped stone tool is a triangular-shaped, unifacial flake tool of yellow and gray chert. The blade edges are retouched so that the distal portion of the artifact forms a small point ideal for engraving and/or puncturing. The lateral edges of the artifact are suited for cutting and scraping.

Debitage at the site includes a total of 18 tertiary flakes of light gray chert. All of the flakes are without cortical coverage, possibly suggesting emphasis toward late stage tool manufacture. Evidence of use-wear such as lateral edge micro-chipping and/or edge rounding is not present. In addition, crazing and pot-lidding–possible signs of heat-treatment–are also

absent within the assemblage.

The site is in good condition. Erosional processes, although minor, appear to have exposed new cultural material since the previous recording. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. Since the previous recording, new cultural material has been exposed which suggests that additional subsurface cultural material may be present. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA2689.1**, a previously recorded segment of a historic road, is located south of Pisgah Mountain and north of Big Alkali Creek. Elevations are between 7310 and 8400 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Soil survey data indicate that the following soil units are present: Ipson cobbly loam (3-25 percent slopes), Jerry-Millerlake loams (6-25 and 25-45 percent slopes), Jodero loam (1-12 percent slopes), Kobar silty clay loam (1-6 and 6-12 percent slopes), Southace cobbly sandy loam (12-25 percent slopes), Tanna-Pinelli complex (12-25 percent slopes), Torriorthents-Cambrothids-Rock outcrop complex (6-65 percent slopes) and Torriorthents-Rock outcrop complex (45-95 percent slopes) (USDA SCS 1984:46, 51-54, 67, 70 & 71).

Segment 5EA2689.1 was originally recorded in 2008 by Cultural Resources Analysts, Incorporated and mapped in Sections 24 and 25 of T2S R84W of the 6th Principal Meridian (Tallman 2008). A total of 3,290 linear feet (0.6mi) of an 8 to 12-foot-wide road was recorded and noted to follow the current alignment of BLM Road 8530 (also known as County Road 41A). No evidence of the road was observed diverging from the BLM road, and no associated artifacts or features were recorded.

The present project revisited the segment and recorded a total of 18,432 contiguous linear feet (3.5mi) extending the resource west-southwest. The contiguous portion in Section 24 descends a small ridge into a drainage bottom where it parallels and occasionally crosses several intermittent tributaries in Section 23, 26, 27 and 28. In Section 28, the road terminates at its juncture with the Big Alkali Creek Road.

The segment appears to have undergone considerable modification due to frequent maintenance (the road is a maintained county road). The original character of the resource, or extant portions of the original route, are no longer visible. Erosion is most pronounced along sections bridging tributaries in the drainage bottom.

According to the BLM GLO independent resurvey plat dated the 30th of April 1918 and

the 15th of April 1919 for T2S R84W, the road is at least 97 years old. The plat image shows the route following the general alignment of what is currently known as County Road 41A or BLM Road 8530. It also shows a crossroads in the southeast-quarter of Section 24. To the southwest, the road continues outside the present project boundary into T2S R83W. The road to the north continues for several more miles through the project boundary and is designated herein as 5EA2689.2.

Evaluation and Management Recommendations

The site as a whole can be recommended for inclusion on the NRHP under Criterion A; the presence of this segment of trail was recognizable and mapped in the early 1900s and this would suggest that it may have played a role in the historic (and possibly prehistoric) settlements in the area and may have been a significant conduit by which trail users conducted commerce or maintained ties with family and community. It is not eligible under Criterion B, as it is not associated with persons significant in our past or Criterion C, as it does not embody the distinctive characteristics of a type, period, or method of construction. Because the road has not been fully documented, additional segments may yield information important to the history/prehistory of the area. Accordingly, the site is field evaluated as eligible under Criteria A and D.

The recorded segment lacks the qualities of integrity for which the entire resource is considered eligible. Thus, it is considered to be non-supporting. Accordingly, no further work is recommended.

Site **5EA2689.2** is a newly recorded segment of a historic road. The segment is located south of the Colorado River along the east side of Pisgah Mountain. Elevations are between 6710 and 8260 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Soil survey data indicate that the following soil units are present: Almy loam (1-12 and 12-25 percent slopes), Cochetopa-Antrobus association (25-50 percent slopes), Cushool-Rentsac complex (15-65 percent slopes), Dahiquist-Southace complex (25-50 percent slopes), Earsman-Rock outcrop complex (12-65 percent slopes), Jerrry-Millerlake loams (25-45 percent slopes), Southace cobbly sandy loam (12-25 percent slopes), and Torriorthents-Cambrothids-Rock outcrop complex (6-65 percent slopes) (USDA SCS 1984:18, 19, 26, 30, 32, 35, 52, 67 & 71).

Segment 5EA2689.2 is an adjoining segment of previously recorded 5EA2689.1. Segment 5EA2689.1 was originally recorded in 2008 by Cultural Resources Analysts, Incorporated and mapped in Sections 24 and 25 of T2S R84W of the 6th Principal Meridian (Tallman 2008). A total of 3,290 linear feet (0.6mi) of an 8 to 12 foot-wide road was recorded and noted to follow the current alignment of BLM Road 8530 (also known as County Road 41A). No evidence of the road was observed diverging from the BLM road, and no associated artifacts or features were recorded.

Segment 5EA2689.2 measures roughly 17,708 feet in length (3.35mi) and 8 to 12 feet in width. It diverts northwest from 5EA2689.1 in the southeast-quarter of Section 24 and follows the current alignment of BLM Roads 8530 and 8535 (depicted as unnamed jeep trails on the 7.5 minute quadrangle maps) north into Sections 13 and 12 of T2S R84W. In Section 12, the northernmost portion of the linear resource follows BLM Road 8535A which continues on outside the present project boundary. Importantly, it is unknown or unclear whether the route depicted in this section, Section 12, accurately represents the historic resource. An overlay of the BLM GLO independent resurvey plat into ArcMap shows the resource following a northwesterly route through the west-half of the section, but the alignment recorded traverses north-south through the east-half.

The road segment traverses variable terrain–drainages and finger ridges. For the most part, the terrain is not difficult as the percent grade is gradual to moderately steep. The roadbed is characterized by some rutting, and it is not a regularly maintained or frequently traveled route.

According to BLM GLO survey plats, the road is at least 97 years old. It is present on the independent resurvey plat dated the 30th of April 1918 and the 15th of April 1919. No evidence of an earlier existence is present or could be found for the resource.

Evaluation and Management Recommendations

The site as a whole can be recommended for inclusion on the NRHP under Criterion A; the presence of this segment of trail was recognizable and mapped in the early 1900s and this would suggest that it may have played a role in the historic (and possibly prehistoric) settlements in the area and may have been a significant conduit by which trail users conducted commerce or maintained ties with family and community. It is not eligible under Criterion B, as it is not associated with persons significant in our past or Criterion C, as it does not embody the distinctive characteristics of a type, period, or method of construction. Because the road has not been fully documented, additional segments may yield information important to the history/prehistory of the area. Accordingly, the site is field evaluated as eligible under Criteria A and D.

The recorded segment lacks the qualities of integrity for which the entire resource is considered eligible. Thus, it is considered to be non-supporting. Accordingly, no further work is recommended.

Site **5EA2740**, the Pisgah Mountain Wickiup Village, is located on an east-facing talus of a ridge northeast of Pisgah Mountain and south of the Colorado River. The site lies at elevations between 7160 and 7200 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Soils are identified as Cushool-Rentsac complex and Earsman-Rock outcrop complex (USDA SCS 1984:30 & 35). Both soil units are well-drained and are formed

in residuum and, in the case of the latter, colluvium derived from sedimentary rock. Soil depth is variable (8-40in [20-102cm]).

In 2008, the site was investigated by Cheryl Harrison, Brian O'Neil and Bob Elderkin (information regarding original recording not available or unknown). The purpose of the investigation was to perform a general reconnaissance which included mapping and photographing the site, and identifying temporally diagnostic artifacts to provide preliminary age determinations for its occupation. Chipped and ground stone artifacts, thermal features, calcined bone fragments and at least 15 to 20 aboriginal wooden features were observed. Three artifacts were collected: a metal object tentatively interpreted as a concho from a saddle (5EA2740.s1), a fragment of obsidian angular shatter (5EA2740.s2), and a chert end scraper (5EA2740.s3).

In the fall of 2009, the site was revisited by DARG during Phase VI of the Colorado Wickiup Project (CWP) (Martin et al. 2011). Twenty wooden features and eight associated sub-features were identified, photographed, and mapped with a Trimble GPS unit. Due to the unexpectedly high number of features and the substantial results from the initial metal detections tests, it became apparent that a full recording of the site was beyond the scope and budgetary restrictions of Phase VI.

In the spring of 2010, an Archaeological Assessment grant application, seeking additional funding for the completion of work at the site, was submitted to the Colorado State Historical Fund (SHF). This grant and additional assistance agreement money from the CRVFO of the BLM was awarded in June 2010 and fieldwork commenced on the 12th and 16th of July (State Historical Fund Project No. 2010-AS-04).

The following is an excerpt from the 2010 report titled "A Further Assessment of 5EA2740, The Pisgah Mountain Wickiup Village in Eagle County, Colorado" (Martin and Brown 2010).

> Site 5EA2740, the Pisgah Mountain Wickiup Village, is a large open village of lithic, metal, and glass artifacts as well as aboriginal wooden features including leaner and freestanding wickiups, horizontal beams supported in the branches of trees, utility poles, brush enclosures, firewood caches, and a bark-peeled tree... [A total of 116 individual field specimens were collected and analyzed including 21 tree-ring samples from metal ax-cut feature elements and tree stumps.]
>
> The [28] wooden features at the Pisgah Mountain site are roughly arranged in a crescent shape, open to the northeast... The wickiups and other features cluster in four loose groupings: Features 15, 16, 17 and 20 are separated from the rest of the site by a low saddle and are associated with the Open Activity Locus (OAL) in the extreme southeastern corner of the site. Features 1,

2 and 18 are situated at the opposite "point" of the crescent—the northeastern end of the site. More centrally located are clusters containing Features 3 through 7 and 19 and Features 8 through 14...

The cultural affiliation of the site has been identified as Protohistoric Ute. The results of the dendrochronological analysis... indicate that the site was occupied in the fall or winter of AD1853. This date correlates with the presence of metal projectile points and a muzzle-loader percussion cap on the site suggesting that it was occupied after the invention of percussion cap technology in the 1830s, but prior to the possession of fixed-ammunition firearms by the site's occupants, which were commonplace among the Ute in western Colorado by the middle of the Nineteenth Century.

During the present project, the site was determined to be in the same general condition as recorded in 2009 and 2010 (Martin et al. 2009 and Martin and Brown 2010). The 28 previously recorded wooden features were revisited and several were photographed for monitoring purposes. No additional wooden features were discovered; however, six new artifacts were recorded and left *in situ* on the site's surface. These included a rusted metal knife (of a style typically referred to as a "utility" or "slicing" knife) with the bone or wood handle missing (5EA2740.s117, Plate 3) and six seed beads (5EA2740.s118, Plate 4) on the anthill where previously documented beads were collected.

Plate 3. Metal knife (.s117) observed as part of the revisit to 5EA2740.

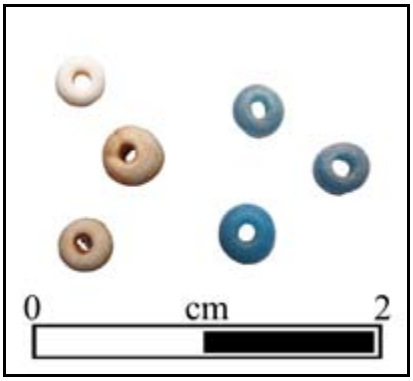

Plate 4. Six seed beads (.s118) newly recorded as part of the revisit to 5EA2740.

Evaluation and Management Recommendations

An official determination regarding the eligibility of the site has not yet been made by the State Historic Preservation Officer. In 2009 and 2010, the site was field evaluated as eligible according to NRHP Criteria A, C and D. This recommendation was greatly substantiated by the discovery of additional diagnostic artifacts during the current revisit. Accordingly, protection and preservation are recommended. Test excavations at the locations of various features are also highly recommended. The newly discovered metal knife–found in an area of the site that was not previously metal detected–is an indication that additional metal detection is warranted. Numerous non-metallic artifacts are also anticipated to lay buried beneath the surface.

Site **5EA3210**, a newly recorded prehistoric open camp, lies at an elevation of 7560 feet on a ridge between Deep Creek and Burnt Tree Ridge. Vegetation consists of a pinyon and juniper woodland with an understory of sagebrush, prickly pear cactus, and grasses. Ground visibility is good (70-80 percent ground visibility). Soils are classifiable as Zillman very flaggy loam–a deep, well-drained soil on 25 to 65 percent slopes that forms in colluvium and residuum derived predominantly from sandstone (USDA SCS 1984).

The site measures roughly 75 (E-W) by 35 (N-S) meters. It consists of a low density of cultural material. Fire-cracked rock, ground stone, and chipped stone artifacts, including one formal tool, are present.

A small concentration (six pieces) of fire-cracked rock is located near the eastern periphery of the site in the same general vicinity as the ground stone artifact. Ash and charcoal are not associated with the concentration. The only formal tool is a drill of a crude chert material that is different from any of the lithic debitage present on the site.

The ground stone assemblage consists of one quartzitic, loaf-shaped mano. The artifact is unifacially ground and pecked and exhibits a moderate degree of weathering. No other ground stone artifacts are present.

Five flakes of local chert and siltstone material are present. Three cores, also of local chert material, are strewn across the site, and one utilized cobble of quartzite is located near the northern periphery.

The site is in fair condition. A jeep trail bisects the site. Artifact density is greatest along the south shoulder of the trail, and it is possible that some of the cultural material was exposed by erosion. Because the site is located along a vehicular route, illicit artifact collection is a potential threat. As observed, the low density of cultural material suggests that the site was a short-term camp, possibly for lithic tool manufacture and faunal and floral processing.

Evaluation and Management Recommendations

Although the site lacks datable features and does not contain temporally diagnostic artifacts, erosional processes in the vicinity of the road may have exposed cultural material from subsurface contexts. Thus, additional subsurface cultural material may be present which possesses the potential to yield information important to the prehistory of the area. Therefore, the site is field evaluated as needs data under Criterion D. Accordingly, testing is recommended before a final determination regarding eligibility can be made.

Site **5EA3211**, a newly recorded prehistoric open camp, lies at an elevation of 6800 feet on a ridge between Deep Creek and Burnt Tree Ridge. Vegetation consists of a pinyon and juniper woodland with an understory of small sagebrush, prickly pear cactus, and sparse grasses. Ground visibility is good (85 percent ground visibility). Soils are classifiable as Torriorthents-Camborthids-Rock outcrop complex–a shallow or moderately deep, well-drained soil formed in residuum and colluvium derived dominantly from sedimentary rock (USDA SCS 1984:71). This unit is found on moderately sloping to steep, south-facing hills, ridges and foot slopes. Cushool-Rentsac complex soils are also found in a small portion of the site. This soil is a moderately deep, well-drained soil formed in residuum derived from sandstone and shale (USDA SCS 1984:30).

The site measures roughly 255 (NE-SW) by 95 (NW-SE) meters. It consists of a fairly low density of cultural material. Chipped stone tools, ground stone, and lithic debitage are present. *In situ* activity areas are not readily apparent.

Chipped stone tools at the site include five utilized flake tools, one utilized core, one spokeshave, one scraper, and the tip to a biface (possibly a projectile point). The spokeshave is crafted from local chert material and has two notches that could have been utilized. The biface fragment was found on an anthill in the northern portion of the site.

The ground stone assemblage consists of two manos. Both are located in the southern-half of the site. One is a unifacially ground sandstone cobble. The second is a fragment of a granitic cobble. An additional specimen not mentioned in the above categories, is a sandstone cobble that exhibits evidence of possible utilization.

Nine unmodified flakes, indicative of varying stages of tool manufacture, are strewn across the site. Many of the flakes are medium (18-25mm) in size or larger, but very few exhibit any cortical coverage. Small (9-18mm) and micro (1-9mm) flakes are present in very limited quantities. Lithic materials consist almost entirely of chert derived from nearby provenances; however, quartzite and chalcedony are also present and were likely procured locally as well.

The site is in good condition. A jeep trail bisects the northern portion of the site, but does not appear to have made any major impact. Illicit artifact collection is a potential threat

and may have occurred in the past due to repeated use of the trail. No other disturbances or potential disturbances, other than erosion, are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site is believed to be a surface manifestation with no potential for buried cultural material. Additionally, no diagnostic artifacts or features are present. No further work is recommended.

Site **5EA3212**, a newly recorded prehistoric open camp, is located east of an intermittent tributary of the Colorado River and north of Balanced Rock Spring. The elevation is 6880 feet. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Goslin fine sandy loam (6-25 percent slopes) is the soil unit for the area (USDA SCS 1984:44). This soil is deep (>60in [152cm]), well-drained and occurs on toe slopes, fans and terraces. It is formed in alluvium and colluvium derived dominantly from sandstone and shale.

The site is located in an area 42 (NW-SE) by 40 (NE-SW) meters. One non-diagnostic chipped stone tool, a sparse scatter of flakes, and a few ground stone artifacts are present. *In situ* activity areas are readily apparent.

The non-diagnostic chipped stone tool is an unfinished biface tip manufactured from a large tertiary flake of a light brown claystone. One surface of the artifact is crudely worked while the opposite surface is almost entirely covered by a single large flake scar. Bifacial retouch is present along one lateral edge of the unworked surface.

At least 22 flakes of various local lithic material (chert, siltstone and claystone) are scattered across the site's surface. Interior flakes are the most prevalent. The predominance of these flakes in the assemblage suggests that early stage reduction was not the principle technological activity at the site. Instead, it appears that emphasis was placed on the latter stages of tool manufacture which is also consistent with the lack of cores and tested cobbles at the site.

The few ground stone artifacts at the site include one complete, unifacially ground mano and a metate that are located within one meter of each other near the south-end of the site. The metate is a stationary trough metate. It is a large, thick piece of sandstone with a markedly concave, unifacially ground surface. No other modifications to the metate are apparent.

The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site is believed to be a surface manifestation with no potential for buried cultural material. Additionally, no diagnostic artifacts or features are present. No further work is recommended.

Site **5EA3213** is a newly recorded prehistoric open camp. The site is located east of an intermittent tributary of the Colorado River and north of Balanced Rock Spring. The elevation is 6960 feet. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Goslin fine sandy loam (6-25 percent slopes) is the soil unit for the area (USDA SCS 1984:44). This soil is deep (>60in [152cm]), well-drained and occurs on toe slopes, fans and terraces. It is formed in alluvium and colluvium derived dominantly from sandstone and shale.

The site is located within an area 40 (N-S) by 30 (E-W) meters. It consists of a low density of chipped stone artifacts, including one diagnostic projectile point, and two thermal features. The artifacts and features generally cluster in a northwest-southeast linear alignment along the western periphery.

The diagnostic projectile point (5EA3213.s1, Plate 5) is a base fragment of a low side-notched point representing the Early Plains Archaic, which compares well with a recently named type called "Narrow Series Points" (Metcalf and Reed, ed. 2011:131-133) They are similar to the aforementioned wider points with broad, shallow side-notches, but are narrow, convex-to-triangular in overall shape – sometimes grading into a stemmed appearance. The authors also identified a subset defined by shallow notches and a basal shape ranging from convex to very slightly concave. These points have been dated ca. 7100–5900 cal BP, [6000-4750 BC] (ibid.:132).

Plate 5. Base of an Early Archaic side-notched point.

At least nine flakes representing all stages of lithic reduction are scattered across the site's surface. Interior flakes are the most abundant. Primary and secondary flakes are present in limited quantities. Flake size is variable (1-25mm), but the majority are between 18 and 25 millimeters. Unfortunately, reduction stage and size percentages do not offer valid insight regarding the types of reduction carried-out.

The two features, Features 1 and 2, are located 2.5 meters apart near the site's western periphery. The features are exposed in a soft soil matrix of moderate depth. Feature 1, a slab-lined thermal feature or storage cist, consists of a roughly circular alignment of seven partially exposed, medium to large-sized sandstone clasts defining an area 65 centimeters in diameter. Charcoal and ash are not visible, nor were they detected during a trowel test conducted adjacent to two of the slabs. Due to the lack of ash and charcoal, the feature appears to possess no potential to yield chronometric data; however, it may yield important economic data. In addition, significant buried artifactual material may be present within the feature.

Feature 2 consists of a concentration of at least 10 rocks within a 2.5-meter diameter area. One of the rocks appears to be in an upright position. No ash or charcoal is evident. It is undetermined if the feature is cultural.

The site is good condition. The primary impact to the site, although not pronounced, is erosion. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. Feature 1 may yield significant economic data or artifactual material. In addition, cultural material may be buried throughout the site. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA3214** is a newly recorded aboriginal open architectural site with a non-aboriginal historic component. The site is located at an elevation of 6860 feet northeast of Pisgah Mountain and roughly 625 meters south of the Colorado River. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is between 70 and 80 percent. The soils are classifiable as Earsman-Rock outcrop complex and Southace cobbly sandy loam (UDSA SCS 1984:35 & 67). Earsman-Rock outcrop complex is shallow (10-20in [25-50cm]) and is formed in residuum and colluvium derived from calcareous sandstone. Portions of the surface are covered with flagstone and channery fragments. Southace cobbly sandy loam is deep (>60in [>152cm]) and is formed in alluvium and colluvium derived dominantly from sandstone and shale intermixed with gypsiferous material.

The site is located in sparse pinyon and juniper woodland in an area 80 (NE-SW) by 40 (NW-SE) meters. One possible wickiup (Feature 1), one thermal feature (Feature 2) and five axe-cut fence posts are present. No artifacts are visible on the site's surface.

Feature 1 consists of two narrow, metal-ax cut juniper poles resting against a limb of a dead juniper support tree; possibly the remnants of a leaner-style wickiup. It is distinguished from nearby, historic, fence posts that are also leaned against the trunks and limbs of trees by the fact that the Feature 1 poles are notably narrow for "cedar" posts and, although devoid of secondary limbs and twigs, they have not been formally limbed by ax-cuts as is the case with some of the fence posts.

The apparent wickiup poles range in length from 2.30 to 2.36m and are both 8cm in mid-pole diameter. The interior headroom of the shelter, as indicated by the current position of these poles, is 1.2m. The floor area is difficult to estimate; however, it measures approximately 1.5m in diameter.

Feature 2 is a thermal feature consisting of a concentration of ash and fire-cracked

rock eroding from the side of an erosional rill, possibly the remains of a shallow basin hearth. The exposed aspects of the feature measure approximately 40 by 25 centimeters. Due to the lack of charcoal, the feature possesses poor potential to yield radiocarbon data.

The site is characterized by minor erosional disturbance. Fire poses a potential threat to the aboriginal wooden feature. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as needs data under Criterion D due to the presence of a possible wickiup, a rare and fragile cultural resource, and due to the likelihood of buried cultural material. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA3215**, a newly recorded prehistoric open camp, lies southeast of Pisgah Mountain at an elevation of 8420 feet. Pinyon, juniper, sagebrush, prickly pear cactus and native grass are present. Ground visibility is between 50 and 70 percent. The soils are classifiable as Jerry-Millerlake loams (USDA SCS 1984:52). These soils are deep (>60in [152cm]) and well-drained, and are formed in alluvium derived dominantly from sedimentary rock.

Cultural material is located within an area 67 (WNW-ESE) by 23 (N-S) meters. Artifacts include two formal chipped stone tools, a sparse scatter of flakes and one ground stone artifact. Artifact density is greatest within the east-half of the site. No thermal features are present.

Formal chipped stone tools at the site include two projectile point fragments (5EA3215.s1 and 5EA3215.s2, Plate 6). One (.s1) is a stemmed variety with a slight basal notch that has been reworked into a drill, and the second (.s2) is a broad, shallow side-notched point. These two compare well with Early Plains Archaic types recovered from the Medicine Lodge Creek site in Wyoming (Kornfeld et al. 2010:111). The dates for the Early Archaic sites range from about 7000 to 3850 BC.

Plate 6. Early Plains Archaic stemmed and low side-notched points recorded at 5EA3215.

At least 14 flakes are visible on the site's surface. Of the flakes, one is retouched and one is utilized. Small and medium-sized (9-18mm and 18-25mm) interior flakes derived from light gray and white chert are the most prevalent. One secondary flake is present while primary flakes are completely absent. The predominance of small and medium-sized interior flakes and the homogeneity of the lithic material in the assemblage may be suggestive of a single, late stage lithic reduction event.

The ground stone artifact at the site is a small, amorphous-shaped fragment of a metate.

It is manufactured from a thin, tabular piece of sandstone. The proximal surface is flat, pecked and minimally ground. No other modifications to the metate are apparent.

The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site has yielded important temporal and cultural information, but possesses little potential to yield additional significant information due to the paucity of artifacts, the lack of features, and the unlikelihood of subsurface cultural material. Accordingly, no further work is recommended.

Site **5EA3216**, a newly recorded aboriginal open architectural site, is located on a slope of a ridge east of an unnamed intermittent tributary of the Colorado River. The elevation is 6970 feet. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Earsman-Rock outcrop complex (12-65 percent slopes) and Southace cobbly sandy loam (12-25 percent slopes) (USDA SCS 1984:35 & 67). Earsman-Rock outcrop complex is shallow (10-20in [25-50cm]) and is formed in residuum and colluvium derived from calcareous sandstone. Portions of the surface are covered with flagstone and channery fragments. Southace cobbly sandy loam is deep (>60in [>152cm]) and is formed in alluvium and colluvium derived dominantly from sandstone and shale intermixed with gypsiferous material.

The site is situated along a slope above a seasonal drainage in an area 45 (NE-SW) by 30 (NW-SE) meters. Chipped and ground stone artifacts are present within the east-half of the site and are broadly scattered. An aboriginal wooden feature, a possible hunting blind, is located west of the lithic scatter.

Chipped stone artifacts at the site include one piece of lithic debitage, one expedient flake tool and one scraper. Both the expedient flake tool and the scraper exhibit patterned edge damage in the form of a cluster of tiny flakes removed from one margin. Polish from use is not visible; however, most expedient tools utilized for short periods do not have time to develop distinctive wear patterns or polishes indicative of residue build-up.

One complete mano and one mano fragment are also present. The complete mano is an ovoid-shaped, unifacially ground handstone. Battering on the proximal end of the artifact is indicative of sequential or concurrent use as a hammerstone. The other artifact is bifacially ground and pecked as well as fire-cracked.

The aboriginal wooden feature, a possible hunting blind (Feature 1), is located near the top of the slope and overlooks the drainage to the south. The feature consists of 12 stacked

juniper or pinyon (undetermined) timbers leaning at the base of a live pinyon tree overlooking a small drainage. The poles range in length from 1.9 to 3.1m with diameters from 14 to 48cm. The poles are leaning at a roughly 20 degrees.

The site exhibits minimal disturbance; however, erosional processes are more pronounced as the site is located on a moderate to steep hill slope. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

Although the site is associated with a rare and fragile aboriginal wooden feature, it is field evaluated as not eligible for inclusion on the NRHP. The site is unlikely to yield information important in prehistory as it is believed to be a surface manifestation with no potential for buried cultural material. Accordingly, no further work is recommended.

Site **5EA3217** is a newly recorded prehistoric isolated thermal feature. The site lies at an elevation of 7800 feet on a ridge north of Big Alkali Creek. Pinyon, juniper, sagebrush, prickly pear cactus and native grass are present. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the decomposition of basalt.

The isolated thermal feature, designated Feature 1, is located within an 8.5-meter diameter area near the base of a dead, fallen tree. The feature, a shallow basin hearth, is eroding from a soft soil matrix of moderate depth. Ash, fire-cracked rock, charcoal and two microflakes of white chert are present, and are exposed within an area 100 by 80 centimeters. The feature possesses good research potential as it is not completely deflated or disturbed, soil depth is good, and charcoal is present.

The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. The thermal feature possesses the potential to yield important chronometric and economic data. In addition, there is potential for subsurface cultural material which may yield additional information important to the prehistory of the area. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA3218**, a newly recorded prehistoric open camp, lies at an elevation of 7760 feet on a ridge north of Big Alkali Creek. The vegetation consists of a thin pinyon and juniper woodland with a sparse understory dominated by sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the decomposition of basalt.

The site consists of a small, non-diverse artifact assemblage located on a south-facing ridge slope within an area 30 (NW-SE) by 10 (NE-SW) meters. Artifacts include one formal chipped stone tool, one expedient flake tool, a sparse scatter of lithic debitage, and fire-cracked rock. Artifact density is greatest within the east-half of the site, and at least one *in situ* activity area is present.

The formal chipped stone tool is a small, unnotched projectile point fragment of light pink chert (5EA3218.s1, Plate 7). The artifact is missing its tip and is characterized by a triangular outline and irregular, excurvate blade edges. A small indentation along the left lateral blade edge may represent a non-fortuitous, preliminary side-notch. One surface of the artifact is almost entirely covered by a single large flake scar while the opposite surface is completely worked. The proximal and one lateral edge are bifacially retouched.

Plate 7. Cottonwood Triangular point fragment.

Morphologically, the point is comparable to Cottonwood Triangular type, which has been found in association with Uncompahgre Brown Ware ceramics. Sites with Uncompahgre Brown Ware in Mesa, Garfield and Rio Blanco Counties have been luminescent dated: 5ME4970, AD 1508 - 1644; 5ME16097, AD 1400 - 1520; 5GF620, AD 1450 - 1528; and, 5RB144, AD 1510 - 1590. Also in the Northwest Piceance Basin, site 5RB2929 was radiocarbon dated AD 1350±85 (580±80 BP, Beta-37819). Further south in Western Colorado, at the Pioneer Point site located in the Curecanti National Recreation Area, over seven hundred sherds of Uncompahgre Brown Ware ceramics (micaceous and non-micaceous tempered) were also recovered. These were associated with features dating ca. AD 1476 (474±70 BP) and AD 1466 (484±80 BP) (Dial 1989:19). Accordingly, the sites with Cottonwood Triangular and Desert Side-notched points most likely date post-AD 1300 in northwest Colorado (Conner et al. 2011:5-33, 5-34).

The flake tool is a very large (50+mm) interior flake of red quartzite. Attrition such as micro-chipping and/or edge rounding is visible along one or more of the lateral edges of the artifact. Polish from use is not visible; however, most expedient tools utilized for short periods do not have time to develop distinctive wear patterns or polishes.

Lithic debitage at the site includes at least 21 unmodified flakes of chert and quartzite. In general, the majority of the flakes lack dorsal cortex, vary in size (1-25mm), and are concentrated near the southeastern periphery of the site. Flake stage, size and lithic material percentages within this concentration may be indicative of an *in situ* lithic reduction event focused on the latter stages of tool manufacture.

No distinct thermal features are visible on the site's surface; however, one possible concentration of fire-cracked rock is present. The concentration, located roughly 5 meters north of the flake concentration, consists of at least 11 pieces of heat-altered sandstone. Post-depositional processes appear to have redeposited the artifacts, eradicating all traces of ash and charcoal.

The site is characterized by minimal erosional disturbance which may have exposed or redeposited artifacts. Although artifact density is greatest within the east-half of the site, erosion appears most pronounced along the trail within the site's west-half. Two artifacts, the Cottonwood Triangular point and a flake, are located within this trail and may have been exposed or redeposited by erosion.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. The site has yielded important cultural and temporal information, but also appears to possess potential for subsurface cultural material as artifacts may be eroding from subsurface contexts. Accordingly, testing is recommended before a final determination regarding eligibility can be made.

Site **5EA3219**, a newly recorded open aboriginal architectural site, is located on a ridge north of Big Alkali Creek. The elevation is 7720 feet. The vegetation is sparse (70-80 percent ground visibility) and consists of a thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass. The soils are classifiable as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the in-place weathering of basalt.

The site is located in an area roughly 38 (NW-SE) by 13 (NE-SW) meters. It consists of two wooden features (Features 1 and 2), a possible rock-lined storage pit (Feature 3), and two artifacts. The artifacts include one axe-cut tree limb and a single piece of angular shatter.

Feature 1 is a hunting blind, snare, or game control feature located along an existing game trail. It consists of two modified juniper branches. Pole No. 1, a leaner pole is 4.7m long. The mid-pole diameter of the branch is about 14.5cm. It contacts the north-northwest side of the support tree at a height of 1.58m above the present ground surface. Pole No. 2 is a

bent/broken branch of the live juniper support tree, a "pull-down." The mid-pole diameter is 6.5cm and the pole is 1.94m in length.

Feature 2, within a juniper tree, is an intentionally broken and bent-down tree limb wedged against a sub-trunk of the mother tree. The tree limb measures 2.8m in length with a mid-pole diameter of 8cm. The diameter of the tree is 42cm with an overall height of rough 5.5m. Its purposed is undetermined, but clearly the feature is a cultural phenomenon.

Feature 3, a possible storage pit, is located along a boulder-strewn slope. It is a large, circular, boulder-cleared area that measures roughly 150 centimeters in diameter. No ash, charcoal or fire-cracked rock is present.

The site is characterized by minimal erosional disturbance. Erosion is most pronounced along the game trail bisecting the site. No other disturbances are apparent; however, fire is a potential threat to the wooden features at the site.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. The potential for additional buried cultural material is considered likely and testing is needed before a final determination regarding eligibility can be made. Aboriginal open architectural sites are often characterized by very few visible artifacts; however, use of metal detectors have demonstrated that additional artifacts are often present, and are recommended for future site testing.

Site **5EA3220**, a newly recorded prehistoric open lithic scatter, is located on a ridge north of Big Alkali Creek and southwest of Pisgah Mountain. The elevation is 7640 feet. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Ground visibility is between 70 and 80 percent. Soil survey data for the area identify the soil types as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the in-place weathering of basalt.

The site, located in a clearing at the edge of a moderately steep slope, measures roughly 25 (N-S) by 20 (E-W) meters. It consists of a low density of chipped stone artifacts including one diagnostic projectile point and a sparse concentration of lithic debitage. The artifacts are broadly scattered and their spatial distribution is not clearly indicative of cultural patterning or *in situ* activity areas.

Plate 8. Deeply corner-notched point type recorded at 5EA3220.

The diagnostic projectile point (Plate 8) is a deeply corner-notched

varieties that is comparable to ones found at the Koch Site (5ME635). There, five projectile points were collected from the surface, and were associated with a conventional radiocarbon age of 2717±82 BP, CAL BC 970-803 [1 sigma] (Alexander and Martin 1980: 39). Deeply corner-notched points called Pelican Lake are in the region as well. This is a Late Plains Archaic variety that replaced McKean Complex points by ca. 3100 BP (Frison 1991:101).

Lithic debitage at the site is the presumed byproduct of specimen 5EA3220.s1. The debitage includes eight unmodified flakes of white to light gray chert. All stages of lithic reduction are present; however, interior flakes are the most abundant. Flake size is either small (9-18mm) or medium (18-25mm). The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. Although the site has yielded important temporal and cultural information, it appears to lack additional research potential due to its lack of diagnostic artifacts and features, and due to the unlikelihood of subsurface cultural material. Accordingly, no further work is recommended.

Site **5EA3221**, a newly recorded prehistoric open lithic scatter, is located on a ridge north of Big Alkali Creek and southwest of Pisgah Mountain. The elevation is 7660 feet. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Ground visibility is between 70 and 80 percent. Soil survey data for the area identify the soil types as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the in-place weathering of basalt.

The site consists of 34 unmodified flakes of various local lithic material (chert, quartzite and porcellanite) within an area 10 (NW-SE) by 6.5 (NE-SW) meters. In general, the majority of the flakes lack dorsal cortex (no primary flakes are present), vary in size (9-25mm), and are concentrated near the western periphery in an area that may be indicative of a late stage lithic reduction event.

The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site possesses limited research potential based on the paucity of artifacts, the lack of diagnostics, and the unlikelihood of subsurface cultural material. Accordingly, no further work is recommended.

Site **5EA3222**, a newly recorded prehistoric isolated thermal feature, lies at an elevation of 7680 feet on a ridge north of Big Alkali Creek and southwest of Pisgah Mountain. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Soil survey data for the area identify the soil types as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the in-place weathering of basalt.

The isolated thermal feature is located at the center of an 8.5-meter diameter area and consists of a small concentration (55x55cm) of at least 10 oxidized clasts exposed in a soft soil matrix. Ash and charcoal are not visible, nor were they detected during a trowel test. Artifacts associated with the feature include one small interior flake of white chert. Based on the results of the trowel test, the feature appears deflated and does not possess the potential to yield valuable chronometric or economic data.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The thermal feature is deflated and lacks the potential to yield valuable chronometric and economic data. In addition, the site appears to be a surface manifestation with no potential for buried cultural material. Accordingly, no further work is recommended.

Site **5EA3223** is a newly recorded prehistoric open lithic scatter. The site lies at an elevation of 7840 feet on a ridge north of Big Alkali Creek and southwest of Pisgah Mountain. A thin pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Ground visibility is between 70 and 80 percent. Soil survey data for the area identify the soil types as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock; Cambrothids are also derived from the in-place weathering of basalt.

The site is located in an area 18 (NE-SW) by 15 (NW-SE) meters. A low density of lithic debitage and two other chipped stone artifacts are present. Artifact density is greatest within the east-half of the site.

At least 35 flakes of gray chert and quartzite are concentrated in a large area along the site's eastern periphery. The majority of the flakes lack dorsal cortex (i.e., interior or tertiary flakes). A very small percentage have either less than 50 or 100 percent dorsal cortical

coverage. Flake size is variable (1-25mm). Together, lithic reduction stage and size percentages appear to be suggestive of a late stage reduction event.

The remaining two artifacts at the site include a scraper of gray claystone and a core of white chert. The core is flaked expediently from multiple platforms and does not show evidence of an effort to produce a consistent series of regular flakes. Battering or retouch indicative of sequential use as a tool is not present.

The site is in good condition. Minor erosional processes are present. The presence of a deer skull nailed to a branch suggests that the site was visited recently. Thus, it is possible that the site was illicitly collected. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site possesses limited research potential based on the paucity of artifacts, the lack of diagnostics, and the unlikelihood of subsurface cultural material. Accordingly, no further work is recommended.

Site **5EA3224.1** is a newly recorded segment of an unnamed jeep trail. The trail, located southwest of Pisgah Mountain, ascends a ridge overlooking an intermittent drainage of Big Alkali Creek. Elevations are between 7580 and 7810 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Torriorthents-Cambrothids-Rock outcrop complex (6-65 percent slopes) and Tridell-Brownsto stony sandy loams (12-50 percent slopes) (USDA SCS 1984:71 & 72). Both soil units are well-drained. Torriorthents-Cambrothids-Rock outcrop complex can be either shallow or deep (4-60in [10-152cm]) and is formed in residuum and colluvium. Tridell-Brownsto stony sandy loams are moderately deep or deep (40 to >60in [102 to >152cm]) and are formed in residuum and alluvium.

Site 5EA3224.1 is a 1564 foot-long (477m) segment of a narrow, unnamed jeep trail that descends a ridge and terminates in the bottom of a drainage north of Big Alkali Creek. Roughly 584 feet (178m) of the northern-end of the resource is a well-defined game trail. The central portion of the resource–a crude, roughly 4 foot-wide route–is characterized by a moderately steep grade and is cut into the side of an east-facing slope. The southern-end follows an easterly descent to the bottom of the drainage.

The linear resource is in poor condition as it appears to have been an expediently designed route that is no longer in use. Small to large angular chunks of sedimentary rock cover the roadbed. The route is largely devoid of vegetation; however, a collapsed tree partially blocks access.

One historic feature, a large pinyon tree with a scarred trunk (Feature 1), is present alongside the resource. It appears that the trunk of the tree was once wrapped with a large cable for some unknown purpose. No other modifications to the tree are apparent.

The BLM GLO records were searched for more information regarding the resource. The search failed to reveal any definitive information. It is not visible on the 1883 original survey plat nor the independent resurvey plat dated the 30th of April 1918 and the 15th of April 1919. In addition, there are no land patents on file for the area of interest.

Evaluation and Management Recommendations

The entire linear resource has not been recorded in full; thus, in keeping with Section 106 guidelines, it (i.e., the entire resource) is evaluated as eligible for inclusion on the NRHP. It is possible that the non-recorded portions retain sufficient integrity to convey significance under Criterion D. Importantly, for properties eligible under Criterion D, setting and feeling may not have direct bearing on the property's ability to yield important information. Evaluation of integrity will probably focus primarily on location, design, materials, and perhaps workmanship.

The recorded segment lacks the qualities of integrity for which the entire resource is considered eligible. Thus, it is considered to be non-supporting. Accordingly, no further work is recommended.

Site **5EA3225**, a newly recorded prehistoric open lithic scatter, is located southwest of Pisgah Mountain and north of Big Alkali Creek. The elevation is 7680 feet. Vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-75 percent ground visibility). Soil survey data for the area identify the soil types as Torriothents-Cambrothids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). Torriorthents and Cambrothids can be either shallow or deep (4-60in [10-152cm]) and are well-drained. They are formed in residuum and colluvium derived dominantly from sedimentary rock, although Cambrothids soils are also derived from the in-place weathering of basalt.

The site measures roughly 22 (NW-SE) by 15 (NE-SW) meters and encompasses a low density lithic scatter. One non-diagnostic formal tool and a sparse scatter of flakes are present. The artifacts are broadly scattered, and *in situ* activity areas are not readily apparent.

The non-diagnostic formal tool is a small biface midsection of translucent white chert. The biface exhibits a random flaking pattern and lenticular cross-section. It is fractured laterally across proximal and distal portions of the blade and longitudinally along one lateral blade edge. No other modifications to the artifact are readily apparent.

Lithic debitage at the site includes a total of six unmodified flakes. All of the flakes, except for one, are of light gray or white chert. Interior flakes are the most abundant, but one secondary flake is also present. Flake size is variable (1-25mm).

The site is in good condition. Minor erosional processes are present. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. The site possesses limited research potential based on the paucity of artifacts, the lack of diagnostics, and the unlikelihood of subsurface cultural material. Accordingly, no further work is recommended.

Site **5EA3226**, a newly recorded prehistoric open camp, lies north of an intermittent tributary of Big Alkali Creek and southwest of Pisgah Mountain. The elevation is between 7680 and 7760 feet. A sparse pinyon and juniper woodland with an understory dominated by sagebrush, prickly pear cactus and native grass is present. Ground visibility is between 50 and 70 percent. The soils are classifiable as Torriorthents-Camborthids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). These soils formed in residuum and colluvium derived dominantly from sandstone, shale or basalt and may be shallow or deep (~4 to 60in [10-152cm]).

The site is situated on a southwest-sloping plain of a saddle in an area 52 (NE-SW) by 40 (NW-SE) meters. A low to moderate density of lithics, two thermal features (Features 1 and 2) and scattered fragments of bone are present. Artifact density is greatest in the vicinity of the features within the west-half of the site. Although erosion has contributed to artifact clustering, the site appears relatively intact and *in situ* activity areas are present.

Plate 9. Duncan type point recorded in 5EA3226.

The chipped stone assemblage contains a low density of formal tools of which only one is diagnostic. This artifact, a bifurcated stemmed projectile point of gray chert (5EA3226.s1, Plate 9), is missing its tip and one shoulder. The point exhibits a short, broad, bifurcated stem with rounded basal margins. The blade is triangular and the lateral edges are straight. Morphologically, the point compares well with the Middle Archaic Duncan type, which is associated with the later levels of McKean complex (Kornfeld et al. 2010:114-116). Sites of this period date about 5000-3000 BP [ca. 3800 -1250 BC].

The remaining chipped stone tools in the toolkit include one non-diagnostic projectile point tip, one biface base fragment, and two scrapers with steeply retouched, convex distal

edges. Both the projectile point tip and biface base are small, relatively well-worked specimens with lenticular cross-sections.

Lithic debitage at the site includes 76 unmodified flakes; the majority are eroding from the slope in the vicinity of Features 1 and 2. Most of the flakes associated with Feature 1 are characterized by fine, vein-like crack networks and/or pot-lidding indicative of intentional heat-treatment or, conversely, discard. All stages of lithic reduction are present within the assemblage; however, interior flakes are the most abundant. Flake size is predominantly between 1 and 35 millimeters. Reduction stage and size percentages appear to suggest that the initial stages of lithic reduction occurred elsewhere, perhaps at a quarry, and that the material was transported to the site for further reduction/tool manufacture. Emphasis on the latter stages of tool manufacture is also supported by the absence of tested cobbles and the general lack of cores–two cores are present.

A significant percentage of the artifacts at the site are ground stone. Eight of the artifacts in the assemblage are ovoid to subrectangular-shaped manos, and most are bifacially ground and pecked. Unifacial grinding is less common and a few are indeterminate due to their fragmentary nature and/or exfoliated surfaces. Two of the fragmentary manos lie within Feature 2 along its eastern edge and exhibit heat-induced characteristics.

The remaining ground stone artifacts in the assemblage are located adjacent to the western edge of Feature 2. The artifacts include three bifacially ground, triangular-shaped remnants of a single metate. The outer edges of all three fragments are intentionally shaped. A faint notch along the long axis of one specimen may have been used to wrap cordage, making the metate portable.

Two lithologically distinct types of toolstone (chert and quartzite) are present. Chert is the most prevalent and is present in a fairly wide range of colors–white, cream, tan, gray, black and red. The different colors in the assemblage, the abundance of the materials observed, and the uniformity of the assemblage with other assemblages at nearby sites is indicative of procurement from local sources found in nearby geologic formations.

Features 1 and 2 are exposed in shallow to moderately deep, rocky soil on a south-sloping plain above an intermittent tributary of Big Alkali Creek within the west-half of the site. Feature 1, the smallest concentration, measures roughly 5 by 2 meters (WSW-ENE by N-S). Ash and disseminated pieces of charcoal are present. Feature 2 lies approximately 1.5 meters downslope of Feature 1. It measures roughly 10 by 5 meters (NE-SW by NW-SE) and consists of profuse ash, small flecks of charcoal, fire-cracked rock and several pieces of bone, some of which is burnt. Both features are associated with a fairly dense concentration of artifacts and may represent the remains of middens or the disturbed remains of several eroded thermal features. The features possess good research potential as they are not completely deflated or disturbed, soil depth is good and charcoal is present.

The site exhibits little disturbance. The primary impact to the site is erosion. Illicit artifact collection is a potential threat due to the site's proximity to a two-track (~35m south). No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as eligible for inclusion on the NRHP. The thermal features at the site may yield important chronometric data. In addition, they may also contribute information regarding subsistence, seasonality and the paleoenvironment–all of which are important in developing and understanding local resource utilization strategies. Finally, subsurface cultural deposits are likely. Accordingly, protection and preservation are recommended.

Site **5EA3227**, a newly recorded prehistoric open camp with a possible historic component, lies south of an intermittent tributary of Big Alkali Creek and southwest of Pisgah Mountain. The elevation is 7800 feet. The onsite vegetation consists primarily of sagebrush, prickly pear cactus and native grass. A sparse pinyon and juniper woodland occupies the surrounding slopes. Ground visibility is between 50 and 70 percent. The soils are classifiable as Tanna-Pinelli complex. Tanna-Pinelli complex occupies 12 to 25 percent slopes and is found on alluvial fans and the sides of valleys (USDA SCS 1984:70). These soils formed in alluvium and residuum and may be moderately deep or deep (40-60+in [102-152+cm]).

The site occupies a 40 (NE-SW) by 10 (NW-SE) meter area at the base of a small knoll in an open sage flat. The artifact assemblage is small and non-diverse and is indicative of an ephemeral occupation. A single non-diagnostic formal tool, lithic debitage, one ground stone artifact and two cans are present. Artifact density is greatest within the west-half of the site. No thermal features are visible on the site's surface.

The non-diagnostic formal tool is a small unifacial tool of yellow/brown chert. The tool, located near the eastern periphery of the site, exhibits a random flaking pattern and a steeply retouched, convex distal edge conducive to scraping. The lateral edges of the artifact are suited for cutting.

At least 10 unmodified flakes of various local lithic material (chert, chalcedony and quartzite) are scattered within the west-half of the site. The majority of the flakes lack dorsal cortex (i.e., interior flakes), and only a few retain less than 50 percent cortex (i.e., secondary flakes). Flake size is variable (9-50+mm); most are between 9 and 18 millimeters. Reduction stage and size percentages may suggest that emphasis was placed on the latter stages of tool manufacture; however, the quantity of debitage is limited and may not be an accurate reflection of the types of lithic reduction carried-out.

The ground stone artifact is a small, amorphous-shaped fragment of a metate. It is manufactured from a thin, tabular piece of sandstone. The proximal surface is flat and moderately ground. The outer edge is shaped.

The two sanitary cans at the site suggest the possibility of a historic component. Sanitary cans, the cans used today, became available in 1897 due to innovations in seam crimping technology (Horn 2005:14). By 1904, sanitary cans were in full production. The cans are crushed and deteriorated, and exhibit knife openings mimicking saw blades.

The site is in good condition. Erosion, although not pronounced, is the primary impact to the site. Illicit artifact collection is a possibility based on the site's proximity to a two-track (~10m south) and the presence of cans at the site. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as not eligible for inclusion on the NRHP. It is believed to be a surface manifestation with no potential for buried cultural material. Additionally, no diagnostic artifacts or features are present. No further work is recommended.

Site **5EA3228**, a multi-component site including both prehistoric and historic components, is located on a small finger ridge just south of Pisgah Mountain at an elevations between 7860 and 8080 feet. Vegetation consists primarily of sagebrush and rabbitbrush with stands of pinyon and juniper to the north. Ground visibility is good (80 percent ground visibility). Soils are classifiable as Evanston loam (25-45 percent slopes), Kobar silty clay loam (6-12 percent slopes), Tanna-Pinelli complex (12-25 percent slopes), and Tridell-Brownsto stony sandy loams (12-50 percent slopes) (USDA SCS 1984:38, 54, 70, 72). These soil units are comprised of well-drained, moderately deep or deep (40 to >60in [102 to >152cm]) alluvium, residuum and/or colluvium found on alluvial fans, terraces or the sides of valleys.

The site is situated on a south-sloping plain of a saddle in an area 465 (NW-SE) by 265 (NE-SW) meters. Five spatially distinct areas of cultural material, designated Loci A through E, are present. Artifacts and features are also located adjacent to the different loci. Importantly, it is stressed that the divisions made for the loci are based largely on the spatial distribution of cultural material and are not intended to represent temporally or culturally discrete occupations. Cultural material grouped within the different loci represents or may represent multiple or single site occupations by various cultural groups.

Prehistoric cultural material is located within Loci A, C, D and E as well as outside these spatially distinct areas. Locus A is bounded on two sides by man-made features–a small, modern reservoir and a historic fence. Locus C and D lie east of the reservoir. Artifacts and/or features within these two loci define the easternmost extent of the site. Locus E lies south of

the reservoir and contains the greatest density and diversity of prehistoric cultural material at the site.

Locus A

Locus A is the smallest of the loci. Artifacts are concentrated within an area 50 by 35 meters. The artifacts include two formal, non-diagnostic chipped stone tools and a low density of lithic debitage. Artifact density is greatest within erosional rills and areas of man-made disturbance, indicating redistribution or exposure of cultural material by post-depositional processes. No *in situ* thermal features, or artifacts indicative of their presence, are visible.

Formal tools include a disto-lateral scraper and a biface fragment manufactured from local cherts. The scraper is a bifacial tool and exhibits unifacial retouch along its lateral margins, possibly indicating intentional edge preparation for hafting. As is typical of these scrapers, the distal margin of the artifact is also unifacially retouched. The biface–a small triangular-shaped fragment missing its tip and base–exhibits incurvate lateral blade margins and a nearly diamond-shaped cross-section indicating potential use as a drill.

Locus A contains a total of 32 unmodified flakes of various local lithic material (45% chert, 40% chalcedony, 9% porcellanite, 6% siltstone). All stages of lithic reduction are present; however, interior flakes are the most prevalent and primary flakes are the least. The presence of all three flake stages suggests that both early and late stage lithic reductive activities occurred; however, the low occurrence of cortex in the assemblage appears to indicate emphasis toward the final stages of tool manufacture.

Locus C

Locus C contains a greater density and diversity of cultural material compared to Locus A. Artifacts are located within an area roughly 125 by 70 meters and include chipped and ground stone indicative of a limited range of activities which includes tool manufacture and/or maintenance, hunting, and faunal and floral processing. The latter three activities (i.e., hunting and faunal and floral processing) may not have taken precedence over tool manufacture/maintenance based on rudimentary artifact ratios and percentages.

Locus C contains a total of five non-diagnostic chipped stone tools. Four of the tools are small to medium-sized, crude biface fragments. Three of the artifacts may be remnants of the same tool based on size, craftsmanship, lithic material and provenance. The remaining tool in the toolkit is a medium-sized interior flake exhibiting bifacial retouch. Macroscopic evidence of edge modification resulting from use is not present. However, such modifications are difficult to discern at the macroscopic level and, moreover, can be produced by natural, taphonomic processes such as trampling.

Lithic debitage includes a total of 71 unmodified flakes and one piece of angular shatter. Most of the flakes cluster in an area 60 by 45 meters. Reduction stage percentages are similar to those at Locus A; the majority of the flakes lack dorsal cortex. Flake size is also variable. Again, the predominance of interior flakes in the assemblage, as also seen at Locus A, suggests that preliminary tool manufacture was not the primary technological activity at the site. Instead, it appears that emphasis was placed on the latter stages of tool manufacture which is further supported by the general lack of tested cobbles (one tested cobble is present), cores and angular shatter throughout the site.

At this locus, ground stone is associated with a dense flake concentration. Five manos, or fragments thereof, and two metate fragments are present. Most of the manos are ovoid to sub-rectangular, bifacially ground and pecked handstones. Secondary functions are suggested by battering and/or heat-induced fractures.

The remaining two ground stone artifacts, metate fragments, are located in the general vicinity of the manos and are separated by approximately 24 meters. Both artifacts are small, angular fragments of slab metates. Proximal surfaces are ground, but not pecked. No other modifications to the metates are apparent.

Chert is the only lithic material at this locus and is present in a variety of different colors–white, gray, light yellowish gray, and a red or reddish orange. Most of the material is white or gray in color. The type of toolstone present, the different colors in the assemblage, the abundance of the materials observed, and the uniformity of the assemblage with other assemblages at nearby sites is suggestive of intensive local lithic procurement.

Locus D

Locus D, a sparse lithic scatter, lies roughly 10 meters south of Locus C. Artifacts present may actually represent a broader distribution of cultural material associated within Locus C. Artifacts include both formal and informal chipped stone tools and a low density of lithic debitage scattered within an area 80 by 45 meters.

Formal chipped stone tools include one non-diagnostic projectile point midsection of red chert and an eclectic point of white chert (5EA3228.s1, Plate 10). It is temporally unassigned, although its size and relatively thin nature could place its construction in the Late Prehistoric period. This point may be a fetish. In his ethnographies of the Zuni, Frank Cushing demonstrated that projectile points carried symbolic meaning with functions beyond that of utilitarian tools of hunting or warfare (Cushing 1883). As well, he discusses several Zuni fetishes associated with the Bow Priesthood and those of "prey gods" onto which projectile points were attached.

Plate 10. Eclectic point recorded at 5EA3228 (.s1).

The informal tool is a large secondary flake of white chert. It appears to have been briefly used. The tool shows evidence of patterned edge damage in the form of a cluster of tiny flakes removed from one or more edges. As mentioned earlier, tools used expediently like this can be difficult to distinguish from unused tool-making debris modified by natural, taphonomic processes.

Plate 11. Early Plains Archaic side-notched point recorded as 5EA3228.s2.

The remaining artifacts at the site include four unmodified flakes of white chert. Two of the flakes lack dorsal cortex, the third is characterized by less than 50 percent dorsal cortex, and the fourth exhibits complete dorsal cortical coverage. Flake size varies greatly (1-35mm).

Locus E

Locus E is the largest of the loci, measuring roughly 180 by 40 meters. It also contains the greatest density and diversity of prehistoric cultural material at the site and, perhaps, the greatest amount of man-made disturbance. Artifacts are concentrated along the perimeter as well as within its east-half, largely within areas of man-made disturbance and within erosional rills.

Chipped stone tools present include one diagnostic projectile point (5EA3228.s2, not collected) and two possible flake tools. The diagnostic point, a low side-notched specimen of white chert, is missing a portion of its left distal lateral edge as well as its right shoulder and a small portion of its left tang (Plate 11.). Broad, shallow side-notched point like these compare well with Early Plains Archaic types recovered from the Medicine Lodge Creek site in Wyoming (Kornfeld et al. 2010:111). The dates for the Early Archaic sites range from about 7000 to 3850 BC.

The flake tools include one large interior flake of pink/brown variegated chert and one small interior flake of light gray chert. It appears that the tools were expediently used and discarded. Attrition such as micro-chipping and/or edge rounding is visible along one or more of the lateral edges of the flakes, but may have been created by natural, taphonomic processes. Polish from use is not visible; however, most expedient tools utilized for short periods do not have time to develop distinctive wear patterns or polishes indicative of residue build-up.

Lithic debitage at Locus E includes a total of 42 unmodified flakes and one piece of angular shatter (88% chert and 12% siltstone). Most of the flakes are without cortex on their dorsal surfaces, and comparable frequencies of primary and secondary flakes are present. Almost all of the flakes are either small or medium in size (9-18mm and 18-25mm). As concluded at Locus A and Locus C, the latter stages of tool manufacture appear to have taken precedence over the earlier stages of lithic reduction.

Two ground stone artifacts are also present at the locus. The artifacts include one complete mano and the proximal or distal portion of another. The complete mano is ovoid in shape and heavily oxidized. Due to its friable nature, only one ground surface remains intact. Sloughing has also made it difficult to discern battering indicative of alternative use.

Prehistoric Cultural Material Extraneous to Loci

The remaining prehistoric cultural material at the site lies outside the designated loci. The artifacts, which are predominantly located west of the dam between Loci A and E, include at least 10 unmodified flakes, one piece of angular shatter, and three manos or fragments thereof. One thermal feature is also present. The feature, exposed in a shallow rill, lies at the edge of the disturbance surrounding the small reservoir/pond. It consists of an 80-centimeter diameter concentration of ash, charcoal and fire-cracked rock. Due to the presence of charcoal, the feature possesses good potential to yield chronometric data.

Historic Component

The historic component, like the prehistoric component, appears to be indicative of multiple, unrelated and/or related temporal occupations. It includes a historic habitation (Feature 2), fire-pit or hearth (Feature 3), a fence of probable historic origin, and a wide variety of trash. The cultural material lies predominantly within Loci A, B and E as well as outside these spatially distinct areas of cultural material.

Feature 2, located within Locus E, is a collapsed, single-story, one room log cabin measuring roughly 19 by 20 feet. The structure is erected upon a continuous course of flat stones. Walls are constructed of logs with one side hewn flat and are fastened to vertical corner planks with wire nails. The use of chinking to fill the horizontal spaces or joints between logs is not apparent; however, a small half-moon shaped irregularity in one of the members was patched with clay and other local material.

The structure is poorly preserved. The cabin walls and roof are collapsed–the northwest and southwest walls are the best preserved. Logs are decomposing and the structure is overgrown with large sagebrush.

Associated artifacts include shards of glass (40+ shards of window glass and 10+ shards of clear bottle glass), a piece of stove pipe, wire nails and one cobalt blue glass bottle found underneath the south corner of the cabin amongst other unidentified trash. The glass bottle is a possible liquor flask based on an unusual closure rarely seen on other types of bottles. It has an externally threaded screw cap that is very similar to a patent obtained by Carlton Newman on October 17, 1876. Although the bottle shares some similarities to C. Newman's liquor flask, it cannot be definitively identified as such. The bottle is not mouth-blown; it lacks the embossed patent; it is sealed with a cork; and the coloring agent–which possesses limited typing and dating utility due to its wide application in other products–is not typical of such liquor flasks.

Feature 3, the fire-pit or hearth, is also within Locus E. It is located along the right shoulder of the road near the southern periphery of the site. The feature, which measures roughly 2 feet in diameter, consists of several large rocks arranged in a circular fashion. Charcoal and ash are not present. A fence post lies on the ground a few meters north of the feature.

The fence, a post and wire fence, is located north of the modern, man-made reservoir. The fence has undergone maintenance over the years; several of the stays have been replaced. It is constructed around the BLM Piskey Spring No. 1 and 2 as well as items or features associated with livestock grazing.

A wide variety of trash is scattered across the site's surface within Loci A, B and E as well as outside these spatially distinct concentrations. Loci A and B encompass sparse trash scatters, and Locus E is characterized by a greater density and diversity of discarded items.

The items present at Loci A, B and E as well the extraneous items (i.e., items located outside the loci) generally indicate a broad date range for the site. Most of the items appear to be more recent and are possibly associated with the brief ownership and occupation of the land by the Double J. Land and Cattle Company between 1986 and 1987, and trespasses associated thereafter by that ranching company. Several of the items are associated with lengthy histories of manufacture, rendering them unreliable or poor temporal makers. The sanitary and hole-in-top cans are good examples. Sanitary cans became available in 1897 due to innovations in seam crimping technology (Horn 2005:14). By 1904, sanitary cans were in full production and continue to be the can used today. Hole-in-top cans were introduced a few years later in 1900 (ibid). Their manufacture ceased in the early 1990s.

The best temporal maker for a historic occupation at the site is purple glass, or more appropriately colorless or manganese dioxide decolorized glass. Bottles with manganese dioxide as the decolorizing agent turn light pink or lavender to moderately dark amethyst depending on the amount of manganese and the amount of exposure to ultraviolet light. The vast majority of this glass was manufactured between about 1890 and 1920, given the main source of manganese dioxide, Germany, was cut-off as a result of WWI. According to Horn (2005), it may date as early as the 1820s or as late as the 1930s.

Historical and/or Relevant Information

A GLO records search identified two relevant land patents. The earliest is a patent issued to John Little on the 10th of April 1940 under the Stock-Raising Homestead Act of 1916. A total of 555.96 acres was issued of which 240 are located in the vicinity of the site (S½ of the S½ of Section 23 and the N½ of the NE¼ of Section 26, T2S R84W, 6th P.M.). The second land patent was issued for the same acreage in the exact same aliquots to Double J. Land and Cattle Company, USA on the 12th of August 1986 under the Exchange-Alaska Act of 1971.

A year later, on the 3rd of June 1987, Double J. Land and Cattle Company participated in a land exchange that they believed would remedy accusations of trespass, or unauthorized occupancy and enclosure of public lands, against them made by the BLM. In turn, the exchange would allow the BLM to provide access to approximately 12,000 acres of previously inaccessible public lands. The exchange involved the trade of the 555.96-acre parcel obtained by Double J. in 1986 for a total of 489 acres of public land adjacent to the main ranch, and 60 additional acres in Garfield County.

Two years later, the BLM received notice from a neighboring landowner that "the Jaffees" or Double J. Land and Cattle Company may be building a ditch on a small section of land obtained by the BLM through the 1987 exchange. A field inspection conducted by the BLM confirmed unauthorized changes to the property in the form of: 1) the construction of a small reservoir on the Albertson Ditch, 2) the construction of a bypass ditch around the above reservoir, and 3) cultivation of approximately five acres of public land adjacent to the northwest corner of the ranch. On the 13th of December 1989, the BLM issued its decision ordering Jaffe and Double J. to remove the dam and all water control gates, to restore the affected land surfaces, and to remove the diversion intake structure at the head of the bypass ditch as well as fill the ditch and re-contour the surface. The BLM also demanded payment of administrative costs incurred by it as a result of the trespass in the amount of $2,660.75. No penalties were imposed, however. Double J. and Jaffe filed a timely notice of appeal of the BLM's decision.

The appellant's claim of estoppel was rejected for several reasons and the propriety of the BLM's decision ordering the removal of the trespass structures was affirmed. It was also stated that the BLM may issue a right-of-way for the pond which would cure the trespass, allowing time to negotiate another land exchange.

Upon inspection of the site during the present project, all trespass structures have not been removed from the premise. The reservoir or pond remains, but the ditch circumventing the water feature is not apparent.

The site is heavily disturbed by modern up-grades: the construction of a small reservoir and bypass ditch around the reservoir (no longer visible), the development of a spring (BLM Piskey Spring No. 1 & 2) and the construction of roads through the property. Clearing, grading or the altering of the previously undisturbed land has contributed to man-made erosion which, in turn, has increased the natural erosion process. Artifacts cluster predominantly in areas of man-made disturbance and within erosional rills. In addition, past and present-day use of the land poses the threat of illicit artifact collection.

Evaluation and Management Recommendations

Although the site is heavily disturbed, it is field evaluated as eligible for inclusion on the NRHP under Criterion D. Prehistoric artifacts at the site have yielded important cultural and temporal information. Feature 1, a prehistoric thermal feature, possesses the potential to

yield additional significant chronometric and economic data. Evidence for subsurface cultural material is demonstrated in the clustering of artifacts within areas of man-made disturbance and within erosional rills. Accordingly, protection and preservation are recommended.

Site **5EA3229**, a newly recorded prehistoric open lithic scatter, lies south of Pisgah Mountain at an elevation of 7980 feet. Vegetation is very sparse and consists of grasses and occasional small sagebrush. Ground visibility is good (at least 90 percent ground visibility). Soils are classifiable as Torriorthents-Rock outcrop complex–a shallow or moderately deep, well-drained soil occurring on steep or extremely steep, mainly south-facing mountainsides, hills and ridges (USDA SCS 1984:71). It is formed in residuum and colluvium derived from sandstone, shale, and basalt. The surface of this soil unit is generally covered with small stones.

Cultural material is located within an area 22 (NE-SW) by 19 (NW-SE) meters. The artifacts include a fragment of a formal chipped stone tool and a small concentration of lithic debitage. The formal tool is a biface midsection of brown chert. It appears that the tip was broken and re-sharpened for use as a small scraper. A concentration of 18 chert and chalcedony flakes defines the southern periphery. The majority of the flakes are small or medium in size and lack cortical coverage, and are possibly suggestive of emphasis toward the latter stages of tool manufacture. Two colors of chert (brown and gray) are present and were both likely procured locally.

The site is in good condition. Minor erosional processes are present. No disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site lacks datable features and does not contain temporally diagnostic artifacts. Based on the nature of the observed artifacts, it appears that the site was a single, short-term occupation for the purpose of lithic reduction. Due to the limited research potential of the site, it is field evaluated as not eligible for inclusion on the NRHP. No further work is recommended.

Site **5EA3230,** a newly recorded prehistoric open camp, lies south of Pisgah Mountain along a small finger ridge at elevations of 7960 to 8000 feet. Vegetation consists of grasses and low-lying sagebrush with pinyon/juniper stands along the alluvial ridges. Ground visibility is 80 percent (or better) in the grassy areas to less than 60 percent in the sage flats. Soils are classifiable as Tanna-Pinelli complex and Torriorthents-Rock outcrop complex (USDA SCS 1984:69 & 71). Tanna-Pinelli complex soils are a moderately deep and well-drained soil formed in alluvium and colluvium, and are found on fans and valley sides. Torriorthents-Rock outcrop complex is a shallow or moderately deep, well-drained soil formed in residuum and colluvium derived from sandstone, shale, and basalt. This soil unit occurs on steep or

extremely steep, south-facing mountainsides, hills and ridges. The surface of this soil unit is generally covered with small stones.

The cultural assemblage consists of an array of artifacts and features: a possible storage cist, two thermal features, three concentrations of fire-cracked rock, five manos (or fragments thereof), two projectile point fragments (non-diagnostic), a biface preform, a scraper, a core, and lithic debris are present. *In-situ* activity areas are suggested within the central portion of the site. An unrefined biface preform and a scraper, both of gray chert, are located within the central portion of the site. A core of brown chert was found eroding from a small rill near Feature 2.

An area of lithic debris (approximately 150 flakes and one piece of angular shatter) is defined by a transition in the character of the soil along the edge of the low-lying sage flat. The artifacts lie on rocky/pebbly soils. Lithic materials consist predominantly of chert; however, quartzite and siltstone are also present. Flakes are also sparsely scattered through the site, outside of the main concentration (11 flakes). Two flakes exhibit evidence of utilization.

The ground stone assemblage consists of three manos and two mano fragments. All of the manos exhibit grinding on at least one surface, are pecked, and have undergone some degree of weathering. The two most heavily weathered ground stone artifacts are of sandstone material that exhibits evidence of heating. All of the ground stone was observed in the eastern-half of the site.

A circular arrangement of small basalt boulders (Feature 1) is located within the densest concentration of lithic artifacts. No ash or charcoal is present in relation to this feature. The feature may represent the remains of a storage cist or the deflated remains of a thermal feature. Features 2 and 3 are thermal features located along the eastern periphery of a flake concentration. Feature 2, a possible roasting pit, consists of a large concentration of fire-cracked rock and ash. It possesses limited research potential due to its disturbed and deflated nature, and due to its lack of charcoal. Feature 3, a shallow basin hearth, appears to be mostly intact and has good potential for subsurface cultural fill. Three concentrations of fire-cracked rock were also observed; none of which possess the potential to yield a radiocarbon date, and are washing out due to small alluvial rills that bisect the site.

The site is in fair condition. Erosional processes have affected the site to some degree. Cultural material is spread along the edge of a hillslope, perpendicular to several rills that are further exposing and washing out artifacts and features. In addition, a modern fence bisects the northern portion of the site and a two-track road lies in close proximity. As a result, illicit artifact collection is a possible threat. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site may yield radiocarbon data and is associated with a diagnostic projectile point. In addition, artifacts and features are eroding from subsurface contexts, suggesting that the site may further yield information important to the prehistory of the area (Criterion D). Therefore, the site is field evaluated as eligible for inclusion on the NRHP. Protection and preservation are recommended.

Site **5EA3231**, a newly recorded prehistoric open lithic scatter, lies along the southeast side of Pisgah Mountain at an elevation of 8180 feet. The onsite vegetation consists predominantly of sagebrush, prickly pear cactus and native grass. Ground visibility is between 50 and 70 percent. Two different soil units are present–Jerry-Millerlake loams and Tanna-Pinelli complex (USDA SCS 1984:52 & 70). These soils are formed in alluvium and/or residuum and occur on alluvial fans and valley side slopes. Soil depth may be up to 40 or greater than 60 inches (102-152cm).

The site measures roughly 50 (NE-SW) by 30 (NW-SE) meters and consists of a small, non-diverse artifact assemblage indicative of an ephemeral occupation characterized by a limited range of activities. Chipped stone tools suited for floral and faunal processing activities are present as well as lithic debitage. The artifacts cluster primarily along a well-defined game/livestock trail traversing the west-half of the site. Although erosion has likely contributed to artifact clustering, the site appears relatively intact and *in situ* activity areas are present.

Five chipped stone tools are scattered across the site's surface. The tools include two scrapers and three biface fragments. The bifaces are small to medium-sized artifacts with random flaking patterns and lenticular cross-sections. Bending fractures–lateral breaks produced as a result of force exerted perpendicular to the ventral and dorsal surfaces–are present on the blades of the artifacts.

The remaining artifacts at the site include one piece of angular shatter and roughly 37 unmodified flakes of chert, quartzite and siltstone. All of the flakes, except for two, cluster within the west-half of the site in an area 20 by 25 meters (~461m²)–flake density is less than one per meter-squared. Within this concentration, the percentage of interior flakes is significantly greater than the percentages of secondary and primary flakes. Similarly, lithic material percentages are drastically greater for chert compared to the other lithic materials at the site (quartzite and siltstone). Based on the large quantity of interior flakes, the concentration may represent an *in situ* lithic workstation oriented toward the latter stages of tool manufacture.

The site is in good condition. Minor erosional processes are present and are most pronounced in the vicinity of the game/livestock trail. Disturbance attributed to use of the trail by game/livestock is very minor. Erosion along the trail is possibly redistributing artifacts or

exposing artifacts from subsurface contexts. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as need data for inclusion on the NRHP. Erosion in the vicinity of the trail may be exposing artifacts from subsurface contexts. The possibility of subsurface cultural material demonstrates the site's potential to possibly yield information important in prehistory. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA3232**, the Holed-Pole Site, a prehistoric open architectural site, is located in the valley of an unnamed intermittent tributary of the Colorado River northwest of Pisgah Mountain (Figure 7). The site is 1.35km south of the river at an elevation of 7000 feet. The vegetation is sparse (70-80 percent ground visibility) and consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. The soils are classified as Southace cobbly sandy loam—a deep, well-drained soil present on 12-25 percent slopes (USDA SCS 1984:67). This soil is formed in alluvium and colluvium derived dominantly from sandstone and shale intermixed with gypsiferous material. The site, which is situated on the northwest side of a shallow, southeast-trending wash, measures 75 (NE-SW) by 30 (NW-SE) meters.

The Holed-Pole site, named after a cache of two wooden poles at the southwest end of the resource, is a unique and interesting "companion" site to the Pisgah wickiup village (5EA2740), which is located approximately 800 meters to the south in the same valley. Considering the paucity of cultural resources of any age in the valley, the proximity of these two protohistoric Ute sites of approximately the same age is noteworthy.

In addition to three large thermal features of charcoal and ash, the site contains three manos and a pestle, a scatter of lithic flakes, a concentration of gun parts, a cartridge case, and an iron projectile point. In the southwest end of the site was found a cache of two slender juniper poles with a round hole drilled through each near one end, which appear to be tent poles, and a third less-modified cultural pole (Feature 4) (Figure 8).

The lithic materials noted on the site surface consist of eight small to medium sized interior chert flakes—widely scattered throughout the site, two complete manos and a mano fragment, a pestle, and two unmodified oxidized river cobbles. One of the flakes exhibits retouch and utilization along one edge. The complete manos consist of an unshaped granitic river cobble that exhibits grinding on one end, one edge, and one face (measuring 12 x 10 x 5cm) and a shaped, bifacial, sandstone specimen with peck marks on both ends (10.5 x 8.5 x 5cm). The fragment consists of approximately half of a shaped, ovoid, bifacially ground granitic tool measuring 12+ x 10.5 x 5cm. The pestle is an unshaped, elongated granitic river cobble with heavily pecked ends and additional peck marks near the center of each of the two largest faces (Plate 12). It measures 17.5 x 8.5 x 6.5cm.

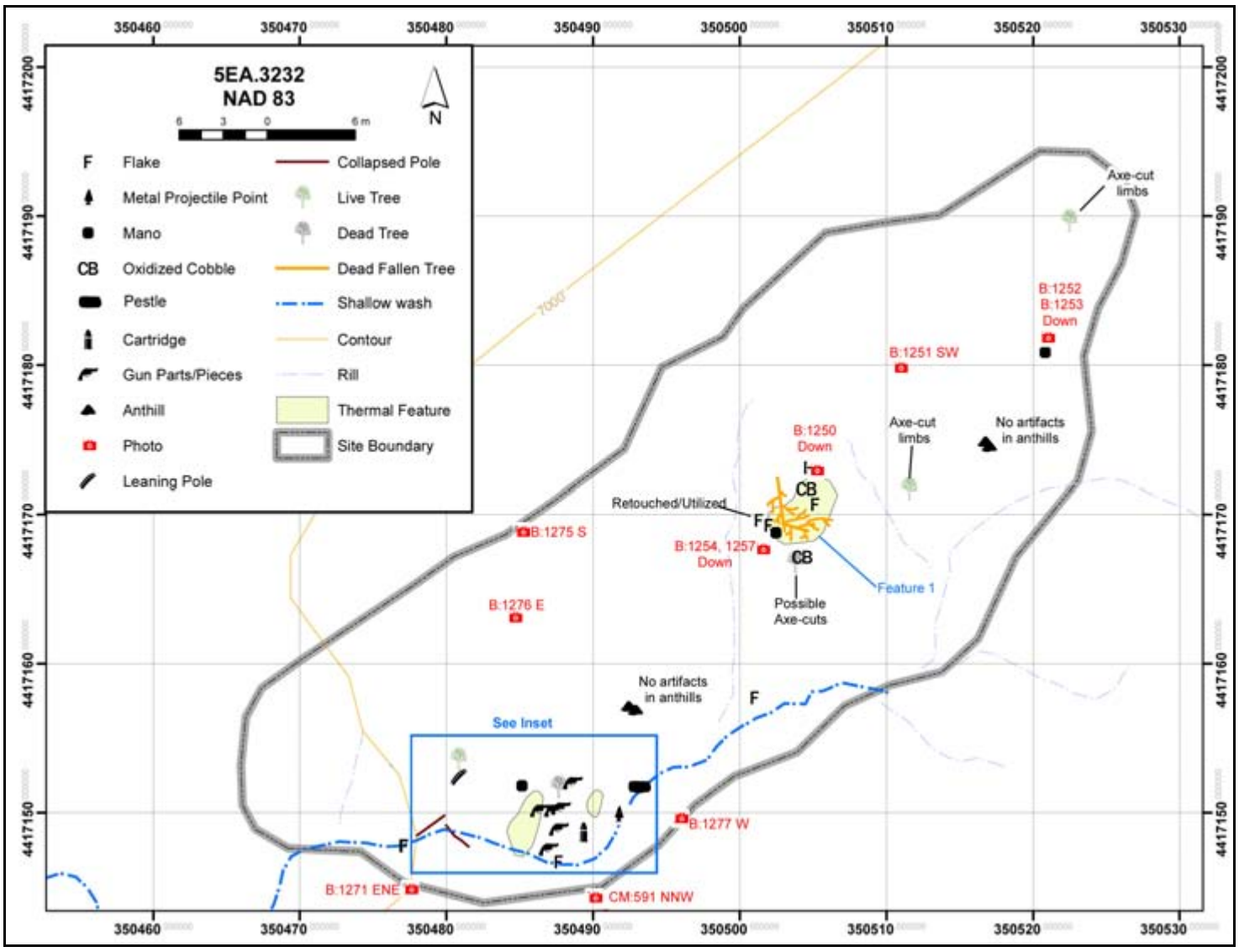

Figure 7. Plan view of site 5EA3232, the Holed-Pole site.

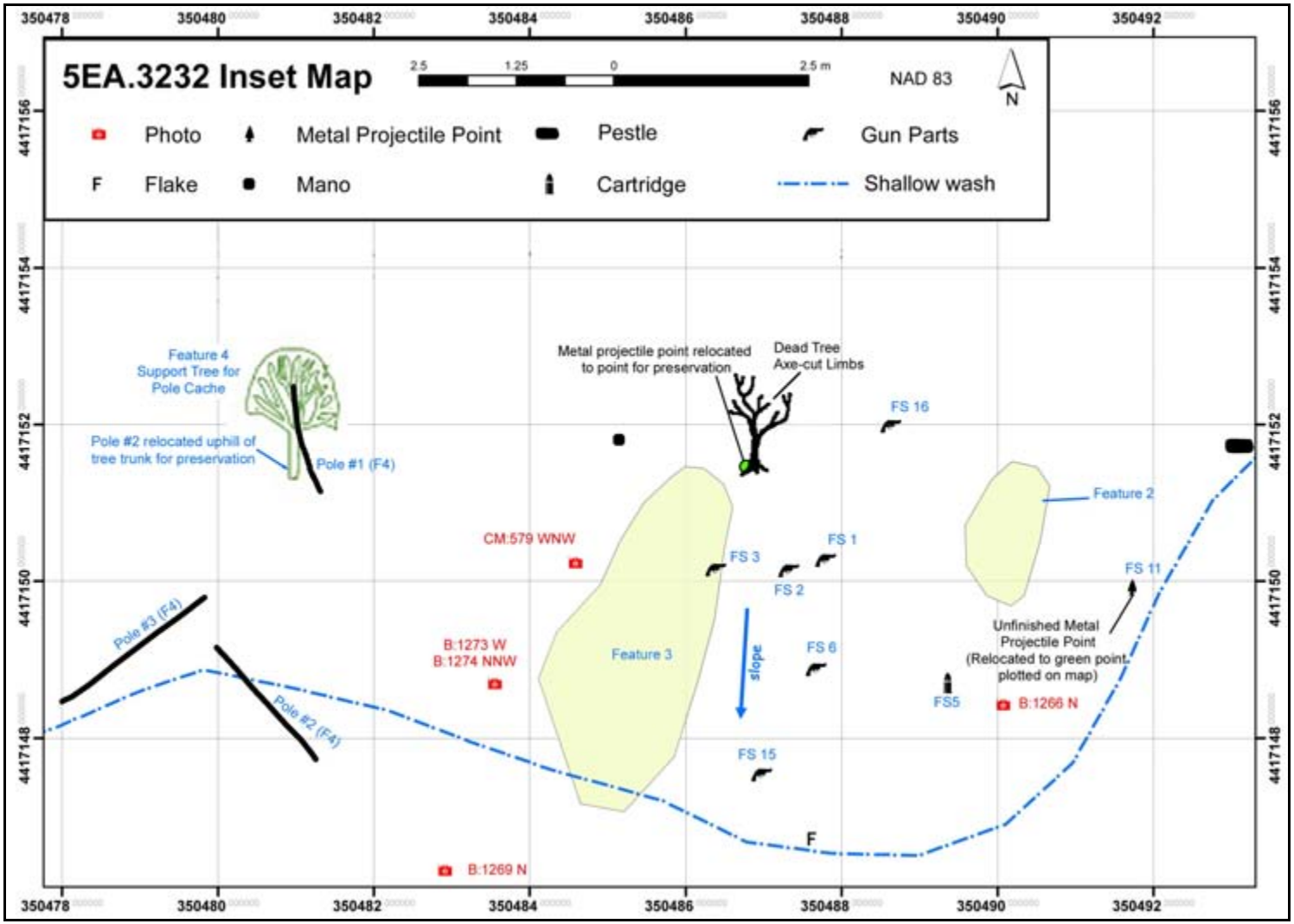

Figure 8. Inset map showing details of Features 2, 3, and 4 in the southern part of 5EA3232.

Plate 12. Granitic pestle, 5EA3232. Photo B1264 (9/24/15).

Three relatively large thermal features were documented on the surface: Features 1 through 3. Feature 1 is the most conspicuous of the three and is located near the center of the site. It measures approximately 4.5m by 4.0m and consists of a concentration of ash and a considerable number of charcoal fragments with a potential depth of 20cm or more. Three of the chert flakes and two of the oxidized cobbles were found within or adjacent to this feature. Features 2 and 3 are situated on either side of the concentration of metal gun parts at the south end of the site and are washing downslope to the south. Feature 2 is a concentration of ash and charcoal that measures 1.4m x 80cm and Feature 3, to the west of the gun parts, consists of a concentration of angular basalt fragments with several small areas of ash-stained soil. Feature 3 measures 4.3m north-south by 1.5m east-west.

The northern portion of the site is defined by the presence of two live juniper trees that exhibit metal ax scars on several branch stubs. Although it is difficult to estimate the age of these limbing incidents without dendrochronological analysis, it is possible that they are associated with the historic artifacts concentrated at the south end of the site (Figure 7). Furthermore, it is difficult to ascertain the association between the lithic artifacts on the site and the historic trade goods. Although chipped stone technology, more than groundstone tools, was quickly abandoned in favor of metal and glass tools once trade goods were obtainable (Martin 2016), a number of protohistoric sites in western Colorado contain both traditional and trade ware artifacts, including the nearby Pisgah Mountain Wickiup Village (5EA2740); however, at many multi-component sites, the presence of these types of assemblages reflects separate occupations that took place hundreds or thousands of years apart.

The artifacts that initially alerted the field crew to the presence of a historic component at 5EA3232 are three long, narrow juniper poles near the base of a live juniper tree, two of which are heavily culturally modified—Feature 4 (Plate 13). The modified poles are of the exact same length at 7.8 feet (2.37-2.38m) with diameters of 1 to 1.2 inches (2.5 to 3.0cm) and the drilled holes are exactly 5.1 inches (13cm) from one end. The ends nearest the holes have been intentionally rounded off, not unlike the ends of shovel or broom handles (Plate 14). The opposite ends, however, are unmodified and somewhat deteriorated, likely due in part to their lengthy contact with the ground surface assuming both artifacts were originally cached upright against the tree trunk.

Pole #1 remains standing, leaned against the trunk of a live juniper tree, while Pole #2, the other modified specimen, rests on the ground nearby. A third, apparently cultural, juniper branch also rests on the surface adjacent to the latter "collapsed" pole—Pole #3; however it is not as straight as the modified poles, is slightly shorter, and has no rounded end or drilled hole. It is apparent that these three wooden artifacts represent a cache of poles that originally were leaned against the south side of the live juniper support tree–two of which subsequently fell to the ground surface.

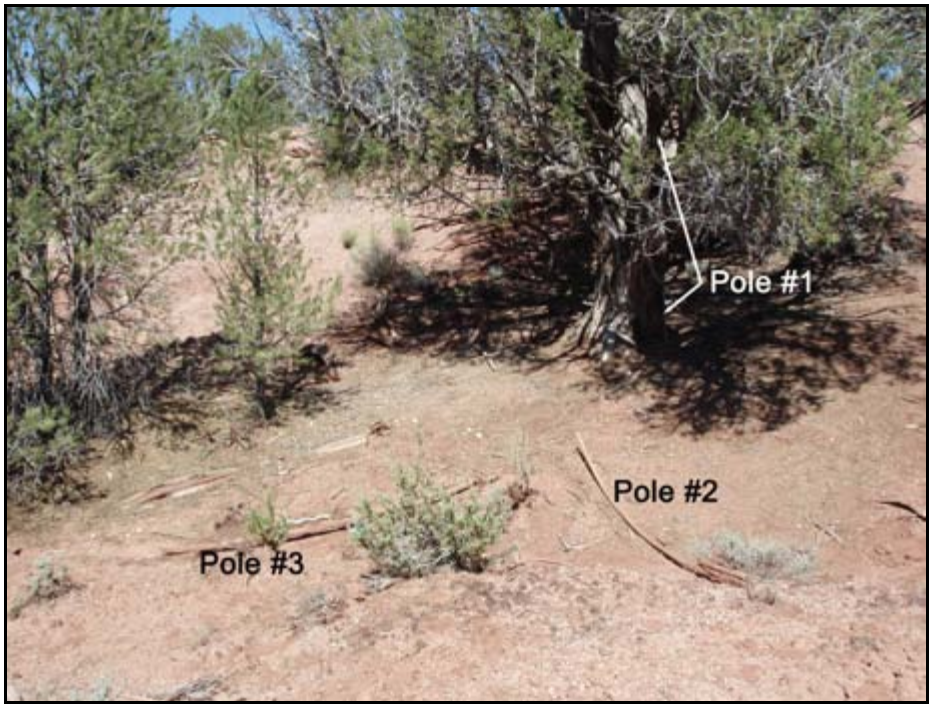

Plate 13. Overview of Feature 4, apparent tent pole cache looking north. Pole #1 remains leaning against the juniper support tree and Poles #2 and #3 are visible in foreground. Photo CM582 (9/24/15).

Plate 14. The rounded and drilled ends of Poles #2 and #3—apparent tent poles. Photo CM597 (9/24/15).

Initial speculative functions for the modified poles included elements of a tripod—although there is no sign of a third *matching* pole, lean-to shelter poles, or canine travois or "drag-sled" poles; they appear too narrow and delicate for digging sticks. Further research appears to indicate that they represent a cache of tent poles for a pyramidal canvas Biddle or "range" tent that were common during the late 19th and early 20th centuries (Figures 9 and 10 and Plate 15). Biddle tents were patented in 1895 by Spencer F. B. Biddle as a lightweight shelter—akin to modern backpacking tents—and easily packed on horseback. Although the manufactured poles that were sold with the tent were square and designed to fold in the middle for easier transport, the specimens found at 5EA3232 appear to be "camp-made" versions fashioned from local juniper branches and hand-drilled with either a stone or, more likely, metal drill, in order to secure the poles together near their apex. As described in the catalog listing for the American Tent and Awning Co., the base of the canvas or duck tent would be pegged to the ground and the peak clipped or tied to the two poles and then erected.

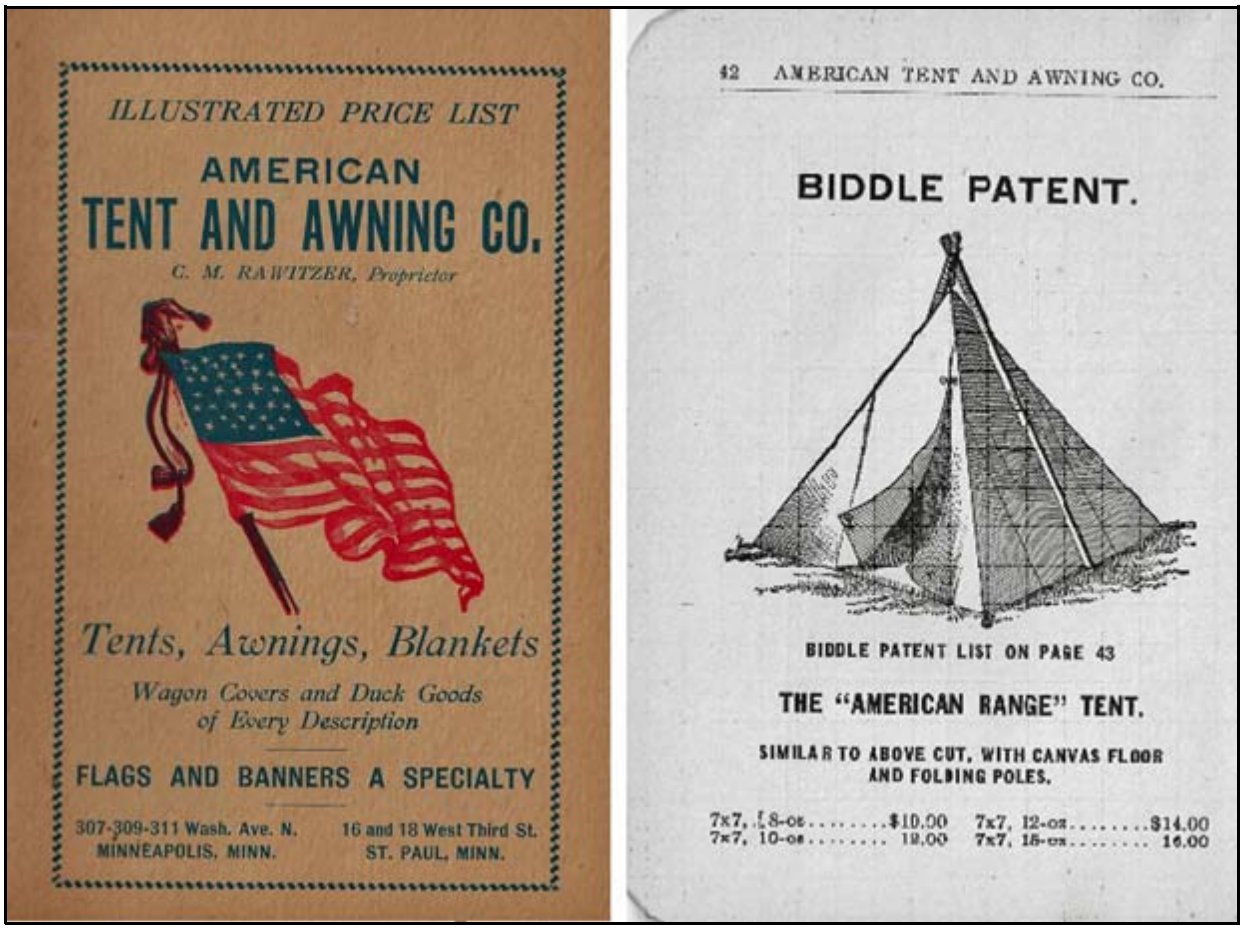

Figure 9. Turn-of-the-century American Tent and Awning Company catalog cover and listing for Biddle or "Range" tent patented in 1895 by Spencer F. B. Biddle (Rawitzer 1912).

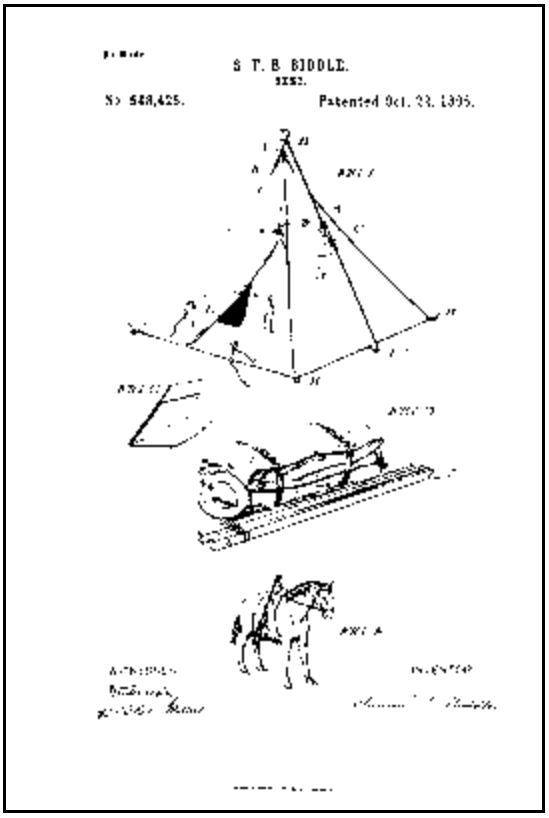

Figure 10 and **Plate 15.** Illustration from the original with instructions for setting up and taking down tent. An undated historical photograph of a two-pole Biddle or Range tent (Rawitzer 1912).

The purpose of the third, limbed but otherwise unmodified, wooden element – Pole #3 – remains unclear. It measures 2.15m in length (slightly shorter than Poles #1 and #2) with a diameter ranging from 3.0 to 3.5cm (slightly thicker than the modified poles). Hypothetically, this pole could have served as a stabilization element for what appears to have been a somewhat unstable tent design, however, no holes, grooves, or notches were present on this artifact to aid in securing it to the tent or other poles.

Approximately five meters to the southeast of the poles and downslope from the dead tree, a concentration of rusted metal cap-lock muzzle-loader gun parts was found—via metal detection—including elements of the gun's firing mechanism and a flat-head screw. In the same scatter of artifacts a rim fire cartridge case was located that is apparently contemporaneous with the muzzle-loader, although obviously associated with a separate firearm. It is undetermined as to why the rifle fragments lie scattered downslope from a dead standing juniper tree, and why other parts of the weapon such as the barrel and stock are missing. It is possible that the gun had been abandoned—leaning against the tree trunk or

suspended in its limbs—and was discovered and collected at some later date after it had deteriorated and parts of the weapon had become detached and washed downslope.

Photographs of the muzzle-loading rifle pieces were taken to Phil Born, Assistant Curator of the Museum of Western Colorado in Grand Junction, a respected antique firearms enthusiast, for analysis (collection was not permitted by the terms of the project). The gun parts compared favorably to those from a cap lock (percussion lock) rifle in his collection dating from the 1840s to 1850s. The maker of Born's piece is unknown; however, it is typical of specimens made by individual rifle makers of the period. Individual gunsmiths of the time applied a great deal of personal variation in the making of civilian muzzle loading rifles—each maker using their own preferences regarding the outline of the trigger guard, trigger plate, stock, and so forth. The trigger plate from the Holed-Pole specimen (Plate 16) is a warranted plate style that was commercially available to individual rifle makers and the triggers were typical double-set type (Phil Born, personal communication 10/5/15).

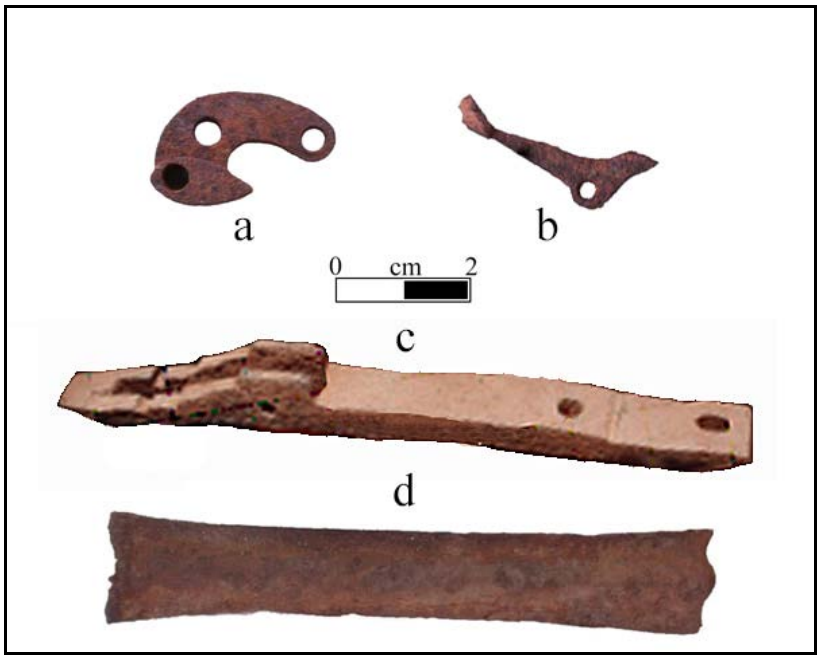

Plate 16. Metal artifacts: a) FS1 tumbler, b) FS2 sear, c) FS3 double-set trigger plate, d) FS16 possible trigger guard fragment.

Plate 17. Firing pin mark on case.

Photographs of the spent cartridge case (Plate 17) were submitted to Dr. Douglas Scott, Visiting Research Scientist, Colorado Mesa University and munitions expert. Upon comparing the firing pin imprint from the specimen at 5EA3232 with those in his database it was determined that the mark is consistent with those fired with Colt Richards conversion Model 1860 Army revolvers converted to .44 caliber rimfire after the Civil War. These were issued to troops for

field trials in 1871. The conversion was not accepted by the army, but it was popular for several years until the Model 1873 became available on the commercial market. Scott concluded that the firing pin mark on the Holed-Pole specimen cannot predate 1871 (Doug Scott personal communication 11/8/15).

An unfinished, camp-made, iron projectile point was found on the site surface four meters to the east of the gun part concentration (Plate 18). It measures 12.3cm (4-7/8") long by 1.4cm (9/16") wide by 2.5mm (3/32") thick. The last 3.6cm of the tip is bent sideways at a 23° angle. Due to its unusual length, it has been categorized as a lance tip rather than arrow point. Although rare, such metal lance tips are known ethnographically and have been found in archaeological contexts in Colorado and elsewhere (Kennedy 2009; Kornfeld et al. 2010; and Yentsch 2013).

One of the longitudinal edges of the point blade is a manufactured edge—likely from a factory-made barrel hoop or box band. The other blade edge, as well as the edges of the stem, are rough and unfinished and give the impression that the artifact was being cut out of the iron stock with a cold chisel to score the outline, and then being snapped off. None of the edges have been filed to sharpen or are otherwise modified and the point was obviously in the process of fabrication when lost or discarded.

As at the nearby Pisgah Mountain Wickiup Village (5EA2740), this site clearly dates to the nineteenth century transition period when bow and arrows (and lances) with metal points were giving way to firearms. It was originally hypothesized that, given the general paucity of

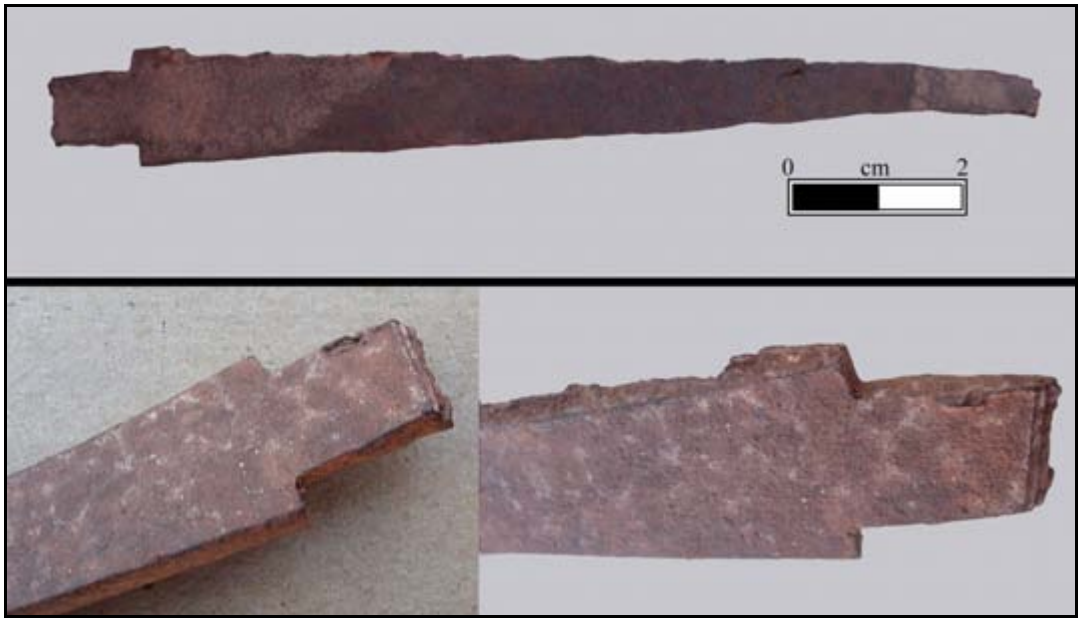

Plate 18. Metal Artifact: FS11, iron lance tip with details of machined edge (lower left) and chiseled edge (lower right).

cultural resources in the area and the rare pairing of metal projectile points and black-powder ordnance at both sites, these two resources are possibly affiliated and contemporaneous—the Pisgah site has been tightly tree-ring dated to the fall and winter of 1853 (Martin and Brown 2010). However, assuming that the cartridge case from 5EA3232 is contemporaneous with the tent poles, gun parts, and other trade wares represented at the site, the occupation at the Holed-Pole site can be no earlier than 1871, nearly two decades later than Pisgah.

As with many contact period sites, without the aid of metal detection this site might likely have been written off as a couple of Euro-American wooden artifacts inadvertently left to rest at a small prehistoric lithic and groundstone scatter.

The field crew, in the interest of protection and preservation for the rare and unusual artifacts found at 5EA3232, relocated the lance tip (FS11) from the edge of the shallow wash to a point immediately uphill of the nearby dead juniper tree, and collapsed Pole #2 from the wash to immediately uphill of the Feature 4 support tree.

Evaluation and Management Recommendations

Site 5EA3232 is field evaluated as eligible. The site is considered by these researchers to be a unique and valuable resource with notable integrity. Only one other site is known in western Colorado providing evidence of canvas tent use by Native American inhabitants (5RB563). All efforts should be made to preserve, protect, and periodically monitor this site in the future. Collection and curation of the highly perishable tent poles as well as the rare metal lance tip and gun parts is recommended as is test excavation.

Site **5EA3233**, a newly recorded prehistoric open lithic scatter, is located on a ridge less than a mile west-northwest of the town of Dotsero, Colorado, and overlooks the Colorado River to the south and east. The elevation is 6840 feet. Vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Cushool-Rentsac complex which is found on mountains and mesas with slopes of 15 to 65 percent (USDA SCS 1984:30). Soils are formed in residuum derived from sedimentary rock and are well-drained. Soil depth is variable. The Cushool soil is moderately deep (20-40in [50-102cm]) and the Rentsac soil is shallow (8-20in [20-50cm]).

The site consists of a low density lithic scatter on a deflated, gradual slope armored by small pebbles. The artifacts–two formal chipped stone tools, three expedient flake tools and a sparse scatter of lithic debitage–are concentrated within an area 65 (NE-SW) by 45 (NW-SE) meters. The artifacts cluster predominantly in a northeast-southwest linear alignment along the western periphery of the site. The spatial distribution of the artifacts appears to be partly indicative of cultural patterning as well as the downslope shifting of material due to slope wash.

The formal chipped stone tools, a biface tip (5EA3233.s1, not collected) and the haft element of a projectile point (5EA3233.s2, not collected), are scattered 10 meters downslope of one another. Both artifacts are small, well-worked, morphologically similar specimens of the same lithic material (a local black chert) and may represent remnants of a single projectile point. Bending fractures–lateral breaks produced as a result of force exerted perpendicular to the ventral and dorsal surfaces–are present on the blades of the artifacts. Bifacial retouch is visible along the distal margin of the fractured point, suggesting sequential use as a hafted scraper.

The diagnostic projectile point base (Plate 19) is a deeply corner-notched variety that is comparable to ones found at the Koch Site (5ME635). There, five projectile points were collected from the surface, and were associated with a conventional radiocarbon age of 2717±82 BP, CAL BC 970-803 [1 sigma] (Alexander and Martin 1980: 39). Deeply corner-notched points called Pelican Lake are in the region as well. This is a Late Plains Archaic variety that replaced McKean Complex points by ca. 3100 BP (Frison 1991:101).

Plate 19. Deeply corner-notched point recorded at 5EA3233.

The expedient flake tools are utilized flakes that exhibit edge modification indicative of use as cutting or scraping implements. The visible damage is unintentional and, in general, is characterized by one or more irregular or roughened lateral edges. Importantly, this type of "use-wear" can also be produced by taphonomic processes.

Lithic debitage exposed on the site's surface includes at least 27 unmodified flakes and two pieces of angular shatter. Interior or tertiary flakes are the most abundant, but primary flakes are also present. Flake size is predominantly between 9 and 18 millimeters. Together, reduction stage and size percentages may suggest that the latter stages of tool manufacture, including tool retouch and re-sharpening, took precedence over the earlier stages of lithic reduction.

All of the debitage, except for two specimens of chalcedony, is derived from local cherts of good quality. The different cherts at the site occur in a variety of colors–brown, black, gray, and red. The types of toolstone present, the different colors in the assemblage and the uniformity of the assemblage with other assemblages at nearby sites is suggestive of intensive local lithic procurement.

The site exhibits minimal disturbance. Minor erosional processes are present. Deflation, a factor explaining (to some degree) the spatial distribution of artifacts at the site, has concentrated the coarse fraction or saltating load (coarse sediment particles) on top of the site's partially stripped surface, armoring it against further deflation. This area also appears to be more prone to slope wash which has contributed to the downslope shifting of artifacts. Although a large portion of the site's surface is deflated, subsurface cultural material is

possible in canopied areas characterized by a thick layer of detritus. In addition, a small area in a clearing near the eastern periphery of the site may contain buried cultural deposits as suggested by the presence of microflakes in an anthill.

Evaluation and Management Recommendations

The site is field evaluated as need data for inclusion on the NRHP. It has yielded important temporal and cultural information and, due to the likelihood of subsurface cultural material, it may possess the potential to yield additional data significant to the prehistory of the area. Accordingly, testing is needed before a final determination regarding eligibility can be made.

Site **5EA3234.1** is a newly recorded segment of the Gypsum to Willow Springs Road. The road ascends a ridge northwest of the town of Dotsero, Colorado. Elevations are between 6200 and 7880 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is good (70-80 percent ground visibility). Soil survey data for the area identify five different soil units: Cushool-Rentsac complex, Goslin fine sandy loam, Gypsum land-Gypsiorthids complex, Torriothents-Cambrothids-Rock outcrop complex and Zillman very flaggy loam (USDA SCS 1984:30, 44, 46, 71 & 80). All five soil units are well-drained and occur on slopes with grades less than 65 percent. Most are moderately deep to deep soils (20 to >60in [50-152cm]) and are either formed in alluvial, colluvial or residual parent material or a combination of two of the three.

Segment 5EA3234.1 is roughly a 2.85 mile-long, narrow road segment. The segment diverts west from the Colorado River Road in Section 32 of T4S R86W of the 6th Principal Meridian and follows an unnamed jeep trail depicted on the 1974/1987 Dotsero 7.5 minute quadrangle. Within the project area, the segment follows a westerly route steadily gaining elevation. The percent grade is gradual to moderately steep and the terrain is not difficult; however, portions of the roadbed are quite narrow (~4-6ft) and/or are largely covered with small to large pieces of angular sedimentary rock. Although the resource is clearly visible, it is not a maintained or frequently traveled road.

According to BLM GLO survey plats, the road segment appears to be the Gypsum to Willow Springs Road. The road is labeled and clearly depicted on the original and independent resurvey plats for T4S R86W of the 6th Principal Meridian. The approved/accepted date for the original survey, the 3rd of December 1887, indicates that the resource is at least 128 years old, while the independent resurvey, dated the 8th and 20th of November 1923, more accurately depicts the route recorded during the present project. The road is also depicted on the extension survey dated the 30th of January 1933 and the 21st of August 1933 in Sections 35 and 36 of T4S R87W of the project area.

Evaluation and Management Recommendations

The site as a whole can be recommended for inclusion on the NRHP under Criterion A;

the presence of this segment of trail was recognizable and mapped in the late 1800s and this would suggest that it may have played a role in the historic (and possibly prehistoric) settlements in the area and may have been a significant conduit by which trail users conducted commerce or maintained ties with family and community. It is not eligible under Criterion B, as it is not associated with persons significant in our past or Criterion C, as it does not embody the distinctive characteristics of a type, period, or method of construction. Because the road has not been fully documented, additional segments may yield information important to the history/prehistory of the area. Accordingly, the site is field evaluated as eligible under Criteria A and D.

The recorded segment lacks the qualities of integrity for which the entire resource is considered eligible. Thus, it is considered to be non-supporting. Accordingly, no further work is recommended.

Site **5EA3235**, a newly recorded aboriginal open architectural site, lies northeast of Pisgah Mountain at an elevation of 7220 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is between 70 and 80 percent. The soils are classifiable as Cushool-Rentsac complex which is found on mountains and mesas with slopes of 15 to 65 percent (USDA SCS 1984:30). Soils are formed in residuum derived from sedimentary rock and are well-drained. Soil depth is variable. The Cushool soil is moderately deep (20-40in [50-102cm]) and the Rentsac soil is shallow (8-20in [20-50cm]).

The site is located in an 8.5-meter diameter area several meters south of the Pisgah Mountain Wickiup Village (5EA2740). One aboriginal wooden feature, a hunting blind designated Feature 1, is present and overlooks an unnamed intermittent drainage which may have been utilized as a route or barrier to drive game. The feature is a linear arrangement of branches and uprooted trees consisting of four support trees, two brace trees, two canopy trees and associated poles. Five such poles are present that define the feature within the trees. The broken/bent branch (Pole 1) of a living juniper tree that forms the west "wall" of the blind is partially broken where it bends to the north. This pole has two small juniper sticks, with no peripheral twigs, ("Poles 4 & 5"), associated with it and they are broken. The main pinyon tree (Pole 2), "wall," of the linear hunting blind is uprooted and laying on the ground. "Pole 3" functions as a north-south "divider" wall within the blind. It has a deteriorated base. The bent branch and the two pinyon tree elements ("Poles 1, 2, and 3") are unlimbed. Metal ax cuts are present at the base of Brace Tree #2. No other features and/or artifacts are visible on the site's surface.

Disturbances to the site include the natural deterioration and weathering of the wooden features and erosion of the site’s surface which is minimal. Fire is a potential and imminent threat to the aboriginal wooden features at the site.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. Aboriginal open architectural sites are often characterized by very few visible artifacts; however, metal detectors have demonstrated that additional artifacts are often present, but are masked by a heavy layer of detritus. Thus, the potential for additional buried cultural material is considered likely and testing is needed before a final determination regarding eligibility can be made.

Site **5EA3236**, a newly recorded aboriginal open architectural site, lies northeast of Pisgah Mountain at an elevation of 7220 feet. The vegetation consists predominantly of pinyon, juniper, sagebrush, prickly pear cactus and native grass. Ground visibility is between 70 and 80 percent. The soils are classifiable as Torriorthents-Camborthids-Rock outcrop complex which occurs on moderately sloping to steep, mainly south-facing mountainsides, hills, ridges and foot slopes (USDA SCS 1984:71). These soils formed in residuum and colluvium derived dominantly from sandstone, shale or basalt and may be shallow or deep (~4 to 60in [10-152cm]).

The site is located in an area 12 (E-W) by 8.5 (N-S) meters. Two expediently designed aboriginal wooden features, hunting blinds designated Features 1 and 2, are present and are located approximately 9 meters apart. No other features or artifacts are visible on the site's surface.

Feature 1 is located near the base of a live juniper tree 9 meters east of Feature 2 and constitutes the east end of the site. It appears to be a hunting blind consisting of stacked juniper timbers situated at the base of a single live juniper tree. A total of five poles are incorporated within the structure. They have been partially limbed, but none are axe-cut, and range in lengths of 2.8 to 3.8m. The support tree is roughly 50cm in diameter and 4m in height.

Feature 2 is an apparent hunting blind, 9m west of Feature 1, and consisting of horizontally-placed juniper timbers intertwined in, and suspended by, the sub-trunks of a single live juniper tree. A total of five poles are incorporated within the structure and these range in length from 1.8 to 2.7m. The mid-pole diameters of the branches are variable, but measure between 8 and 18cm and they appear to have been partially limbed. The support tree is roughly 29cm in diameter and 2.5m in height.

Disturbances to the site include the natural deterioration and weathering of the wooden features and erosion of the site's surface which is minimal. Fire is a potential threat to the aboriginal wooden features at the site.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. Aboriginal open architectural sites are often characterized by very few visible artifacts. It is recommended that metal detecting occurs because this method has demonstrated its effectiveness for identifying metal

artifacts if present but are masked by a heavy layer of detritus. Additional buried cultural material is considered a potential and testing is needed before a final determination regarding eligibility can be made.

Site **5EA3237**, a newly recorded prehistoric isolated thermal feature, is located on a ridge south-southwest of Pisgah Mountain at an elevation of 7890 feet. Pinyon, juniper, sagebrush, prickly pear cactus and native grass is present. Ground visibility is good (70-80 percent ground visibility). The soils are classifiable as Tanna-Pinelli complex which occupies 12 to 25 percent slopes and is found on alluvial fans and the sides of valleys (USDA SCS 1984:70). These soils formed in alluvium and residuum and may be moderately deep or deep (40-60+in [102-152+cm]).

The isolated thermal feature, designated Feature 1, is located within an 8.5-meter diameter area south of a modern fence. The feature appears to be a simple, shallow basin hearth. It is eroding from a soft soil matrix of moderate depth (~40cm). Ash, fire-cracked rock and charcoal are present, and are exposed within an area 110 by 78 centimeters. The feature possesses good research potential as it is not completely deflated or disturbed, soil depth is good, and charcoal is present.

The site is in good condition. Minor erosional processes are present and the site is truncated by a modern fence. No other disturbances or potential disturbances are apparent.

Evaluation and Management Recommendations

The site is field evaluated as need data under Criterion D. The thermal feature may yield important chronometric and economic data. In addition, there is potential for subsurface cultural material which may yield additional information important to the prehistory of the area. Accordingly, testing is needed before a final determination regarding eligibility can be made.

8.3 Isolated Find Descriptions

Seventy-one isolated finds were discovered during the inventory. Table 2 provides a list of the finds.

Table 1. List of isolated finds.

Resource Number	Isolate Description
5EA3239	One medium-sized (18-25mm) tertiary flake of gray siltstone.
5EA3240	One medium-sized (18-25mm) secondary flake of gray and red chert.
5EA3241	One battered granite cobble utilized as a hammerstone.

Resource Number	Isolate Description
5EA3242	One large (25-35mm) tertiary flake of black chert.
5EA3243	One possible mano which is very weathered. The artifact measures 12.5x8.0x4.8cm
5EA3244	One tertiary microflake (1-9mm) of gray chert located in an anthill.
5EA3245	One medium-sized (18-25mm) secondary flake of white and pink chert.
5EA3246	One large (25-35mm) tertiary flake of white chert.
5EA3247	One small (9-18mm) tertiary flake of white chert.
5EA3248	One medium-sized (18-25mm) tertiary flake of mottled light gray chert.
5EA3249	One small (9-18mm) tertiary flake of white chert.
5EA3250	One tested cobble fragment of orange quartzite.
5EA3251	One complete metate. The artifact is a large, thick chunk of granitic sandstone with unifacial grinding. It measures roughly 33.0x22.0x6.0cm.
5EA3252	One mano–an unshaped cobble of quartzitic sandstone with a battered proximal end. The artifact measures roughly 13.2x8.0x5.2cm.
5EA3253	One bifacial mano fragment of sandstone. The artifact measures 10.0x9.0x4.5cm.
5EA3254	One multi-directional core of white chert. The artifact measures 8.1x4.9x3.5cm.
5EA3255	One endscraper of gray and brown chert. The artifact measures roughly 4.0x2.4x1.3cm.
5EA3256	One core of claystone. The artifact measures roughly 9.0x7.0x5.0cm.
5EA3257	Nine flakes–seven tertiary flakes of gray chert, one secondary flake of white chert and one tertiary flake of gray quartzite.
5EA3258	One tertiary microflake (1-9mm) of dark gray chert, one small (9-18mm) tertiary flake of white chert, and one medium-sized (19-25mm) tertiary flake of dark gray chert.

Resource Number	Isolate Description
5EA3259	One small (9-18mm) tertiary flake of black siltstone, one small (9-18mm) tertiary flake of white chert, one thumbnail scraper of dark gray chert and one complete biface of light gray chert. The biface is a large (7cm x 4cm) unnotched point. This type and two large, notched types were identified in Level II – the Basketmaker level – of Cave 7, a rockshelter site in southeast Utah (Hurst and Turner 1993: 160-162). Radiocarbon samples obtained from Cave 7 indicates two potential occupations dating between ca. AD 1 - 200 AD, with means of ca. AD 40 and AD 160 (Michael Berry, personal communication 12/2015). These dart points exhibit use-wear as knives. They are culturally, distinctly, Anasazi Basketmaker, and reflect their influence as an early Formative cultural presence in the region ca. AD 1 - 200 AD. 
5EA3260	One large (25-35mm) primary flake of gray quartzite.
5EA3261	One small (9-18mm) tertiary flake of light gray chert.
5EA3262	One medium-sized (18-25mm) tertiary flake of white chert.
5EA3263	One crushed sanitary can with a church-key opening.
5EA3264	Two tertiary flakes (one microflake [1-9mm] and one medium-sized [18-25mm] flake) of white chert, one utilized primary flake of white chert (medium-sized [18-25mm]), and one biface fragment of white chert (2.7+x1.4x0.5cm).
5EA3265	Three Coors Beer cans with pull-tab openings.
5EA3266	One small (9-18mm) tertiary flake of light gray chert.
5EA3267	One large (25-35mm) tertiary flake of orange and gray chert.
5EA3268	One large (25-35mm) tertiary flake of white chert.
5EA3269	One non-diagnostic projectile point (tip and midsection) of white chert. The artifact measures roughly 3.2x2.0x0.5cm.
5EA3270	One large (25-35mm) tertiary flake of white, black and red mottled chert.
5EA3271	Survey marker consisting of a rock cairn supporting a stick.
5EA3272	One small (9-18mm) tertiary flake of white chert.
5EA3273	Two tertiary microflakes (1-9mm) flakes of red chert and one medium-sized (18-25mm) primary flake of white chert.

Resource Number	Isolate Description
5EA3274	Two tertiary flakes of light gray chert (one microflake [1-9mm] and one medium-sized [18-25mm] flake).
5EA3275	One small (9-18mm) tertiary flake of yellow and brown chert and one medium-sized (9-18mm) secondary flake of white chert
5EA3276	One hammerstone of quartzite. The artifact measures roughly 13.2x8.5x8.7cm.
5EA3277	One historic cairn consisting of at least 25 small basalt boulders. The diameter of the cairn measures roughly 34x39cm. Height is 10.5cm.
5EA3278	Survey marker consisting of a rock cairn supporting a stick.
5EA3279	One medium-sized (18-25mm) tertiary flake of white chert.
5EA3280	One large (25-35mm) tertiary flake of light gray chert.
5EA3281	One endscraper of dark red and orange quartzite. The artifact measures roughly 4.0x3.6x6.0cm
5EA3282	One medium-sized (18-25mm) primary flake of rose and light gray chert.
5EA3283	One small (9-18mm) tertiary flake of light yellowish gray quartzite.
5EA3284	One biface tip of ostracodal pink chert. The artifact measures 3.9x2.9x0.6cm and has patinated to a slightly yellow color.
5EA3285	Six flakes, 2 pieces of angular shatter and one scraper.
5EA3286	One extra-large (35-50mm) tertiary flake of chalcedony.
5EA3287	One small (9-18mm) tertiary flake of light gray chert.
5EA3288	Two key-wind meat cans.
5EA3289	One biface tip of light yellow chert and one Desert Side-notched projectile point. 
5EA3290	Two small (9-18mm) tertiary flakes of white chert.
5EA3291	One tertiary microflake (1-9mm) of white chert.
5EA3292	One small (9-18mm) tertiary flake of white chert.
5EA3293	Two medium-sized (18-25mm) utilized flakes (one tertiary and one secondary).
5EA3294	One medium-sized (18-25mm) tertiary flake of light yellow and gray chert.

Resource Number	Isolate Description
5EA3295	One medium-sized (18-25mm) secondary flake of mottled light gray chert.
5EA3296	Two medium-sized (18-25mm) tertiary flakes of light gray chert and one small (9-18mm) tertiary flake of gray chert.
5EA3297	One medium-sized (18-25mm) tertiary flake of white chert.
5EA3298	Nine sanitary cans (milk and bean) and two can lids. Can openings are either geared or punched.
5EA3299	One pull tab beer can.
5EA3300	One historic rock cairn consisting of six basalt boulders.
5EA3301	Twelve flakes of gray and white chert that are mostly medium in size (18-25mm).
5EA3302	Eleven tertiary flakes of white chert and one secondary flake of light gray quartzite.
5EA3303	One projectile point midsection of white chert. The artifact measures roughly 1.8x1.4x0.2cm.
5EA3304	One medium-sized (18-25mm) tertiary flake of light gray chert.
5EA3305	One medium-sized (18-25mm) tertiary flake of light gray chert.
5EA3306	One projectile point midsection of white and mottled gray chert. The artifact measures roughly 1.5+x1.5+x0.3cm.
5EA3307	One mano of an unshaped cobble of sandstone. Pecking is apparent. Striations from grinding are not visible due to weathering. It may have served sequentially as a boiling stone due to evidence of heat-induced changes. The artifact measures roughly 11x7.7x4.9cm.
5EA3308	One unifacially ground and pecked mano of quartzitic sandstone. The artifact measures roughly 11.1x5.0x9.8cm.
5EA3309	One multi-directional core of local black chert measuring 6.0x4.0x3.0cm.

9.0 MULTIVARIANT ANALYSES OF THE PROJECTILE POINTS

Archaeological investigations for this project were guided by a framework of research questions that were drawn from the known cultural background and applied to specific sites and to the inter-relationship of sites within the geographically defined area of Northwest Colorado. One of the primary concerns during the data retrieval phase was the development of a cultural chronology. Despite the low sample number of diagnostic artifacts, when compared

with regional references, the ones recorded produced temporal associations relative to the known temporal distribution of types.

Diagnostic projectile points were sorely lacking from the surfaces of most of the sites and is attributed to lay person collections made during modern times. Despite the lack of diagnostic artifacts, these investigations did result in a substantial account of the past eight millennia, adding significantly new information to the known cultural sequence. Definable periods of the diagnostics represent occupations during the Archaic Era, and the Late Prehistoric and Historic periods (Figure 20). Absent were finds that correspond with the Formative Era. The reference that best provided comparable projectile point types was the 2010 *Prehistoric Hunter-Gatherers of the High Plains and Rockies* by Marcel Kornfeld, George C. Frison and Mary Lou Larson. Another significant reference for northwest Colorado is the 2011 *Synthesis of Archaeological Data Compiled for the Piceance Basin Expansion, Rockies Express Pipeline, and Uinta Basin Lateral Projects Moffat and Rio Blanco Counties, Colorado, and Sweetwater County, Wyoming, Volume 2,* Michael D. Metcalf, and Alan D. Reed, editors.

The projectiles recovered from the Pisgah Wickiup Village, 5EA2740, represent the Historic Numic period, post-1750. They appear to be hand hammered metal points, although their true origin (as to on-site manufactured or trade type) is shrouded due to deterioration by rust corrosion (Figure 20, a-e). Two types are present: stemmed with shoulders (a, c), and contracting stem (b, d and e). Notably, this site was dendrochronologically dated between AD 1822 and 1868 through a 2010 SHF grant (2010-AS-04), and was reported in: *A Further Assessment of 5EA2740, The Pisgah Mountain Wickiup Village in Eagle County, Colorado,* by Curtis Martin and Michael Brown.

One of the diagnostics is a metal lance point found at 5EA3232 (Figure 20, f). It was found in association with metal parts of a percussion cap, muzzle loading rifle. [First introduced in 1820, the percussion cap was a crucial invention that enabled muzzle-loading firearms to fire reliably in any weather. It came into common use by the 1860's (Fadala 2006:159-161)]. The lance point appears to have been hand hammered. This type is usually shaped, sharpened and smoothed with stone tools (Kornfeld et al. 2010:136). It, along with a metal knife found at 5EA2740, are the largest metal tools discovered during the inventory.

Representing the Late Prehistoric, Early Numic period are three points (Figure 20, g-i). These include an unnotched point commonly called a Cottonwood Triangular and two tri-notched points often categorized as Desert Side-notched in Northwest Colorado. These types have been found in association with Uncompahgre Brown Ware ceramics, which generally date post-AD 1350. Sites with Uncompahgre Brown Ware in Mesa, Garfield and Rio Blanco Counties have been luminescent dated: 5ME4970, AD 1508 - 1644; 5ME16097, AD 1400 - 1520; 5GF620, AD 1450 - 1528; and, 5RB144, AD 1510 - 1590. Also in the Northwest Piceance Basin, site 5RB2929 was radiocarbon dated AD 1350±85 (580±80 BP, Beta-37819). Further south in Western Colorado, at the Pioneer Point site located in the Curecanti National Recreation Area, over seven hundred sherds of Uncompahgre Brown Ware ceramics

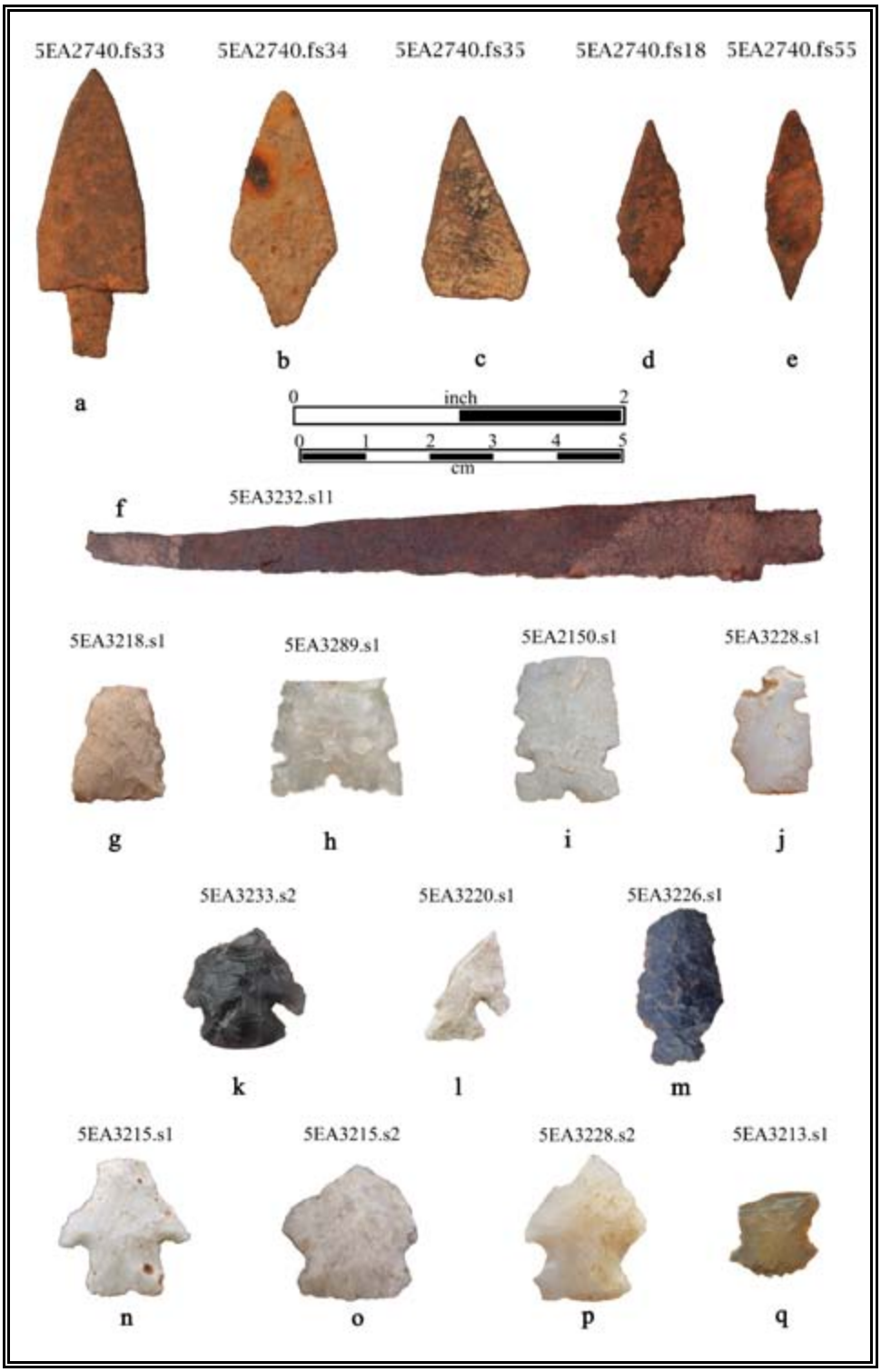

Plate 20. Projectile points recorded at sites along the Pisgah Section: a-f) metal points and a metal lance point from two sites representing the Historic Numic period occupation (ca. AD 1750-1880); g-i) Cottonwood Triangular and Desert Side-notched points representing the Early Numic period (ca. AD 1300-1750); j) eclectic point, possible fetish, Late Prehistoric?; k-l), deeply corner-notched points representing the Late Archaic period (1000 BC - AD 500); m) Duncan point type, Middle Archaic, McKean complex (BC 3000-1000); n) hafted drill, reworked from a bifurcated stemmed point, Early Plains Archaic (BC 6000-3000); o-q) low side-notched points representing the Early Plains Archaic.

(micaceous and non-micaceous tempered) were also recovered. These were associated with features dating ca. AD 1476 (474±70 BP) and AD 1466 (484±80 BP) (Dial 1989:19). Accordingly, the sites with Cottonwood Triangular and Desert Side-notched points most likely date post-AD 1300 in northwest Colorado (Conner et al. 2011:5-33, 5-34).

One eclectic point was found at site 5EA3228 (Figure 20, j). It is temporally unassigned, although its size and relatively thin nature could place its construction in the Late Prehistoric period. This point may be a fetish. In his ethnographies of the Zuni, Frank Cushing demonstrated that projectile points carried symbolic meaning with functions beyond that of utilitarian tools of hunting or warfare (Cushing 1883). As well, he discusses several Zuni fetishes associated with the Bow Priesthood and those of "prey gods" onto which projectile points were attached.

The Formative period is represented in the recorded diagnostics by a single artifact. It is a large (7cm x 4cm) unnotched point recorded at 5EA3259.IF and shown in Plate 21. This type and two large, notched types were identified in Level II – the Basketmaker level – of Cave 7, a rockshelter site in southeast Utah (Hurst and Turner 1993: 160-162). Radiocarbon samples obtained from Cave 7 indicates two potential occupations dating between ca. AD 1 - 200 AD, with means of ca. AD 40 and AD 160 (Michael Berry, personal communication 12/2015). These dart points exhibit use-wear as knives. They are culturally, distinctly, Anasazi Basketmaker, and reflect their influence as an early Formative cultural presence in the region ca. AD 1 - 200 AD.

Plate 21. Basketmaker II unnotched point.

The Late Archaic period diagnostics include two deeply corner-notched varieties (Figure 20, k-l) that are comparable to ones found at the Koch Site (5ME635). There, five projectile points were collected from the surface, and were associated with a conventional radiocarbon age of 2717±82 BP, CAL BC 970-803 [1 sigma] (Alexander and Martin 1980: 39). Deeply corner-notched points called Pelican Lake are in the region as well. This is a Late Plains Archaic variety that replaced McKean Complex points by ca. 3100 BP (Frison 1991:101). The date range for this point terminates about 2700 BP, and they have been identified in sites in the Rocky Mountains and western Great Plains region from as far north as south-central Saskatchewan Canada through Wyoming and into northern Colorado. Grand River Institute reports documenting these points during inventories on the Uncompahgre Plateau (Conner and Davenport 2002a; and, Conner and Davenport 2002b).

One Middle Plains Archaic point was recorded at 5EA3226 (Figure 20, m). Sites of this period date about 5000-3000 BP [ca. 3800 -1250 BC]. It is identified as a Duncan type, which is associated with the later levels of McKean complex (Kornfeld et al. 2010:114-116).

Four Early Archaic points were recorded at three sites (Figure 20, n-q). One is a stemmed variety with a slight basal notch that has been reworked into a drill (n), and two (o and p) are broad, shallow side-notched points. These three compare well with Early Plains Archaic types recovered from the Medicine Lodge Creek site in Wyoming (Kornfeld et al. 2010:111). The dates for the Early Archaic sites range from about 7000 to 3850 BC.

The Early Archaic point base recorded at 5EA3212 (Figure 20, q) compares well with a recently named type by Metcalf and Reed (ed. 2011:131-133) called "Narrow Series Points." They are similar to the aforementioned wider points with broad, shallow side-notches, but are narrow, convex-to-triangular in overall shape – sometimes grading into a stemmed appearance. The authors also identified a subset defined by shallow notches and a basal shape ranging from convex to very slightly concave. These points have been dated ca. 7100–5900 cal BP, [6000-4750 BC] (ibid.:132).

10.0 ETHNOGRAPHIC REVIEW

In order to develop a greater understanding of the ethnographic components of the Ute trails of Eagle County, Co-creation approach was utilized. Such approach values the expertise of all involved parties throughout the research process to create a deeper understanding of a project than individual components alone. Also, the Co-creation methodology, which has its roots in Community Based Participatory Research, prioritizes the continued active engagement of tribes in shaping the design and goals of the study throughout (Atalay 2012; Ferguson et al. 2015; Simon 2010). It is an applied anthropology approach that actively engages tribal representatives as research leads and ensures that the project meets their vision and goals, in addition to maintaining scientific goals (Ferguson et al. 2015; Hallowell and Nichols 2009). In this way, this type of study provides not only a more in-depth view from multiple perspectives, but it does so in a way that is appropriate and beneficial to the descendants of the people who created them.

According to Simon (2010), the goals of Co-creation projects are: 1) To give voice and be responsive to the needs and interests of local community members; 2) To provide a place for community engagement and dialogue; and, 3) To help participants develop skills that will support their own individual and community goals. Ferguson et al. (2015) emphasize that in Co-creation studies the community maintains intellectual property rights and raw data, and that the research team disseminates findings to the community.

As part of the Co-creation approach, the research team for this project maintained an iterative approach. Such requires regular evaluation and refining of research questions, methods, and analysis, to ensure data saliency and relevance, both for the researchers and the tribe (Rubin and Rubin 2005). Notably, findings using this approach will be expanded upon in future projects.

Throughout the study, the American Anthropological Association's Principles of Professional Responsibility served as a guide for ethics considerations. These principles focus on minimizing harm, transparency, informed consent, weighing ethical conflicts in favor of vulnerable populations, disseminating results, confidentiality for participants and of data, as well as maintaining professional and ethical relationships (American Anthropological Association 2012:1-12). Ethics discussions continued throughout the research process.

DARG recognizes that some of the information provided by tribal representatives and federal agency staff was deemed inappropriate to share based on cultural and resource sensitivity issues (NHPA; Parker and King 1998). Accordingly, data sets deemed too sensitive were excluded; but where approved by the tribes, this data will be made available to appropriate federal and tribal staff.

Some of the areas of concern identified by the Utes included access to data from federal agencies, appropriate recording methods for future field visits, the focus and appropriateness of various mapping and database options, the sensitivity of certain places within the study area, and confidentiality issues. They feel that access to data is important in making appropriate and informed recommendations, as well as working towards the creation of a history that adequately represents them. Areas of interest for access include archaeology data, historic data from archives, and federal records from field visits and meetings. Tribal representatives would like field visits to be adequately recorded, and that future oral histories/ethnographic studies record as much tribal knowledge as possible. They feel recording field visits would be an effective application of their time, would reduce the number of repeat visits to the same place, and would ensure their comments are appropriately included in a record for agency, company, and/or tribal use.

In addressing these issues, the DARG team has begun the creation of a digital reference library for the tribes. As part of this effort, a field visit was made to the Bureau of Land Management Colorado River Valley Field Office to identify any potentially relevant ethnographic data. Due to the inaccessibility and sensitive nature of the project area, no section 106 compliance has been completed within the area. Some pro-active tribal consultation has been conducted for that area, but all of that information has been deemed too sensitive for inclusion in this report; however, access to these notes will be provided to the Tribal representatives as per their request. A file search was also conducted at the White River National Forest (WRNF) office in Glenwood Springs, because the Ute Tribal representatives correctly noted that the trails in Eagle County are connected to the those in the Flat Tops on the Forest. Discussions with the Forest archaeologists about the Flat Tops Ute Trails Study revealed that report contained information previously identified by Tribal representatives as sensitive, and thus was not examined during the White River National Forest literature search.

Importantly, as per the Co-creation process, this project focused on the creation of appropriate methods and ethics for this and future projects. Having this information as a base

will allow future projects to delve further into cultural landscapes from multiple perspectives in an effective, respectful, and mutually beneficial manner.

11.0 SUMMARY OF FINDINGS

The Ute Trails of Eagle County project employed a landscape archaeological perspective to examine how prehistoric, protohistoric and historic Native Americans modified, utilized and perceived the natural environment of Colorado's Western Slope and adjacent areas. The project selected trail systems as a basis for the research because these corridors appear to tie together subsistence resources, activity loci, camp sites, and possible rock art panels and ceremonial sites. These conjoined systems constitute cultural landscapes that were, and continue to be, significant in the world view of the Numic speaking groups of western Colorado.

Segments of two aboriginal trail systems within the Colorado River corridor were selected for study: Dotsero Section (~2.75 miles); and, Pisgah Mountain Section (~9.0 miles). Centrally located in the Northern Utes' aboriginal territory, these two segments are part of the Sawatch Mountains (Pisgah Mountain Section) and White River Plateau (Dotsero Section) Trails systems, which are important corridors linking key river crossings and seasonal destination locales for aboriginal inhabitants in central Colorado. The two trail segments were buffered to a width of 2000 feet (centered on the suspected trails), which resulted in a total of 2500 acres that were included in a reconnaissance survey for cultural resources. The project areas were confined to BLM administered lands. Fieldwork was conducted between 6 August and 9 September 2015.

The Pisgah Mountain Section located on the south side of the Colorado River connects to a trail leading south toward a crossing of the Eagle River at Wolcott. It also connects to a northern extension that crosses the Colorado River and heads toward the Yampa River area. During the reconnaissance a total of 90 cultural resources (29 sites and 61 isolated finds) were recorded. Many of the sites located along the east-west section of the study area are associated with springs and exhibit diagnostics from the Early Archaic (ca. 5500-3750 BC) and possibly Foothill-Mountain complex (ca. 9500-7000 BC), which indicates this trail was used for a long period of time. Besides the Pisgah Mountain Wickiup Village, which was revisited during the project, newly recorded sites indicating the Early Numic, and Protohistoric/Historic Ute occupation of the area include: diagnostic Desert Side-notched and Cottonwood Triangular points and a Leaf-shaped knife; a campsite with gun parts and EuroAmerican tent poles associated with a metal lance point and other Ute artifacts; four brush game blinds associated with game trails, and, several other sites with the configuration of Numic camps (but no definitive diagnostics).

The somewhat shorter Dotsero Trail section follows a relatively steep ridge north of the Colorado River and ultimately joins a trail that transects the Flat Tops and continues to the

White River. Despite the length of the trail sections studied, the Dotsero section proved less productive based on a low number of sites (4) and isolated finds (10), and the lack of diagnostic artifacts. The low site density may be attributable to the lack of springs in the immediate vicinity and to the high relief of the terrain. However, at a point where the ridge benches out, one large site was identified that exhibits characteristics of other Numic sites in the region. These characteristics are a low density of artifacts scattered across a relatively large area, within an old growth forest of pinyon/juniper trees. The lack of diagnostics and aboriginal wooden features is directly attributable to fence post procurement by early Historic EuroAmerican ranchers, as evidenced by the large quantity of slash observed throughout the area. In addition, the trail has been used for many years by recreational hikers and campers, who likely contributed to the surface collection of diagnostics and potentially to the burning of old wickiup poles for firewood. Notably, the Pisgah Mountain Trail section exhibited fewer historic and modern EuroAmerican impacts and produced more sites with aboriginal diagnostics and wooden features.

The present study has revealed a distinct lack of rock art sites within the inventory corridors. This may be directly attributed to the lack of suitable surfaces for such art work. Generally, rock art is most often found on near vertical surfaces along the base of cliffs, within caves, or on large boulders. As the suspected trails selected for this study, for the most part, travel along the ridgetops, away from the canyons and river cuts such geologic exposures simply did not present themselves.

The corridors were chosen based on suspected prehistoric travel routes. The presence of numerous prehistoric sites along or near the existing paths supports this belief. However, based on the upgrading and continuous use of the routes over the years and the lack of visible, direct evidence of prehistoric travel or construction on the landscape, the recording of the routes as prehistoric linear sites is not warranted. However, the routes, based on the evidence of the GLO maps and older quad maps, have been recorded by this project as historic travel ways.

Overall 33 sites and 71 isolated finds were addressed with the present study. Five sites, 5EA2147, 5EA2148, 5EA2150, 5EA2689 and 5EA2740 had been previously recorded - these were relocated and reevaluated. Newly recorded were sites 5EA3210 through 5EA3237. Of these resources, 10 sites: 5EA2147, 5EA2148, 5EA2689, 5EA2740, 5EA3224, 5EA3226, 5EA3228, 5EA3230, 5EA3232, and 5EA3234, are field evaluated as eligible and protection and preservation is recommended. Twelve sites: 5EA2150, 5EA3210, 5EA3213, 5EA3214, 5EA3217, 5EA3218, 5EA3219, 5EA3231, 5EA3233, 5EA3235, 5EA3236, and 5EA3237, are deemed need data by the field study and testing is recommended before a final determination of eligibility can be made. The remaining eleven sites: 5EA3211, 5EA3212, 5EA3215, 5EA3216, 5EA3220, 5EA3221, 5EA3222, 5EA3223, 5EA3225, 5EA3227, and 5EA3229, are field evaluated as not eligible and no further work is advised for these.

The newly recorded isolates, 5EA3239 through 5EA3309 are a mix of prehistoric (61) and historic (10) artifact(s). As isolates, they are not eligible because they are considered a single, isolated occurrence with no diagnostic potential or potential to yield additional information regarding the prehistory/ history of the area. Accordingly no further work is recommended for these isolated occurrences.

12.0 MANAGEMENT RECOMMENDATIONS

The two trail segments selected for study are increasingly at risk from recreational hiking, hunting, OHV, and cattle grazing activities. The recent documentation of Pisgah Wickiup Village points to the need for making a detailed, archival level record of a vanishing cultural resource.

The Dotsero Section was designated a recreation trail more than 20 years ago by the BLM Glenwood Springs Field Office and has frequent visitation. A deteriorated sign at the beginning of the trail advises visitors to look for wickiup structures in the nearby pinyon-juniper forest. No inventory had been conducted prior to the trail's designation and signing, nor had any assessment been made of the potential damage to its related sites. Notably, as part of this project a new sign is being designed with the assistance of the Ute Tribal consultants.

The Pisgah Mountain Section stands in contrast to the Dotsero Section where access is by a designated trail. At Pisgah, access to the north portion is very difficult, which is by a rough trail from the south, and the northern access to the study area is another two track road, but it is restricted by private landowners. The impacts from hunting and cattle grazing are predominant in that portion of the trail. The south portion is more susceptible to impacts from recreational camping and surface collection. In the new Resource Management Plan, the Pisgah Mountain Section may be designated as a full-size vehicle route. The Ute Trails of Eagle County project has contributed timely and highly valuable information toward these efforts by identifying and interpreting important historic trails, archaeological sites and cultural landscapes certain to be impacted by public uses.

The fieldwork for the project included the active engagement of CAS volunteers and archaeologists from the Office of Archaeology and Historic Preservation, which added new dimensions to the project. Also, the participation of Ute Tribal members in the review of documentation aspects was especially important and timely. Consultation for this project will be enhanced by the password controlled, on-line database and document review at dargnet.org.

In significant respects, this project was designed to implement many of the recommendations resulting from the Ute Ethnohistory Project that DARG conducted for the BLM and the Utes Tribes in 2008-2009 (Ott 2010). The urgent need for integrated, landscape-scale, multi-disciplinary studies was clearly articulated by Ute participants during

that project, and the Ute Trails of Eagle County Project has been a significant advancement toward that goal.

Overall 33 sites and 71 isolated finds were addressed with the present study. Five sites, 5EA2147, 5EA2148, 5EA2150, 5EA2689 and 5EA2740 had been previously recorded - these were relocated and reevaluated. Newly recorded were sites 5EA3210 through 5EA3237. Of these resources, 10 sites: 5EA2147, 5EA2148, 5EA2689, 5EA2740, 5EA3224, 5EA3226, 5EA3228, 5EA3230, 5EA3232, and 5EA3234, are field evaluated as eligible and protection and preservation is recommended. Twelve sites: 5EA2150, 5EA3210, 5EA3213, 5EA3214, 5EA3217, 5EA3218, 5EA3219, 5EA3231, 5EA3233, 5EA3235, 5EA3236, and 5EA3237, are deemed need data by the field study and testing is recommended before a final determination of eligibility can be made. The remaining eleven sites: 5EA3211, 5EA3212, 5EA3215, 5EA3216, 5EA3220, 5EA3221, 5EA3222, 5EA3223, 5EA3225, 5EA3227, and 5EA3229, are field evaluated as not eligible and no further work is advised for these.

The newly recorded isolates, 5EA3239 through 5EA3309 are a mix of prehistoric (61) and historic (10) artifact(s). As isolates, they are not eligible because they are considered a single, isolated occurrence with no diagnostic potential or potential to yield additional information regarding the prehistory/ history of the area. Accordingly no further work is recommended for these isolated occurrences.

13. DOCUMENTATION OF UTE CONSULTATION

The information regarding the recorded sites from this project has been incorporated in a database for the Ute Trails of Colorado which is accessed through the DARG website under a password. This database operates similar to a search engine which, based on selected criteria can be readily accessed via a number of criteria: site location on a map, site number, site type, diagnostic artifact type, etc. In this program a simple click on the map brings up a wealth of information, including the site map, artifact location, photographs etc. Valuable to this digitization is the ability to view culture history collectively, in a more encompassing manner as well as on a "site by site" basis. The data can be reviewed geographically allowing for the determination of landscapes or districts based on various criteria.

This digitization and its on-going development have been reviewed by Ute tribal representatives on several occasions at the office of DARG. Although an official consultation with BLM and Ute tribal representatives has yet to occur, the initial Ute response has been positive and well received. Viewed as particularly beneficial is the accessibility of records which essentially belong to the tribe and yet were difficult for members to access. Continuing such review processes with the tribes can only be beneficial for all parties as open communication leads to a synthesis of ideas, progress and positive development. Going forward it is anticipated that DARG will be able to implement additions to the database as data is collected and submitted by other entities including but not limited to government agencies,

museum collections and private contractors. Additional involvement is expected during official consultation and specific site visitations that will be co-sponsored by BLM.

As stated earlier, since the existing BLM sign within the Dotsero portion of this project is deteriorating, a new, replacement sign is in the planning stages and its design is being created with the assistance of the Ute Tribal consultants. The context of the sign has yet to be determined, however, it will rely primarily upon the vision and dictations of the Ute Tribal representatives. Additional information concerning consultation is addressed in Appendix B.

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Appendix B: **Ute Trails of Eagle County: A Co-creative Approach for Integrating Ute Perspectives into Western Colorado Cultural Resource Research**

UTE TRAILS OF EAGLE COUNTY: A CO-CREATIVE APPROACH FOR INTEGRATING UTE PERSPECTIVES INTO WESTERN COLORADO CULTURAL RESOURCE RESEARCH

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OVERVIEW

The Ute Trails of Eagle County Project (SHF #2015-02-024) builds on more than a dozen years of archaeological and anthropological research organized through Dominquez Archaeological Research Group (DARG) to document and help preserve Ute heritage sites and cultural landscapes in western Colorado. As discussed in the main body of this report, the project conducted a landscape-scale study of two sections of aboriginal Ute Trails in Eagle County Colorado, incorporating archaeological and ethnohistorical data and contemporary Native American perspectives. The general goals of the project were to conduct a field survey of sites and suspected prehistoric and historic trails in the study areas. The project design emphasized collaboration and information sharing with cultural representatives and other members of the Ute Tribes, and the development and testing of a prototype online digital repository for project data including integration of structured data into DARG's online relational database for archaeological research.

Ute Tribal representatives participating in the project included Betsy Chapoose, Director of Cultural Rights and Protection Department for the Ute Indian Tribe of the Uintah & Ouray Reservation in Ft. Duchesne, Utah; Brock Chapoose, Cultural Rights & Protection Department, Ute Tribe of the Uintah & Ouray Reservation; Terry G. Knight, Sr., Tribal Historic Preservation Officer and NAGPRA Coordinator for the Ute Mountain Ute Tribe in Towaoc, Colorado; Lynn Hartman, Ute Mountain Ute Tribe Reserved Treaty Rights Lands Project Lead, Towaoc, Colorado; Alden Naranjo, NAGPRA Coordinator for the Southern Ute Tribe, Ignacio, Colorado; and Cassandra Naranjo, NAGPRA Coordinator Apprentice, Southern Ute Tribe Culture Department, Ignacio, Colorado. Richard Ott served as DARG's Ute Coordinator for the project. Jessica Yaquinto, founder and Principal Investigator for Living Heritage Anthropology, served as an advisor for ethnography and applied anthropology. She additionally conducted files searches for ethnographic data at Bureau of Land Management Colorado River Valley Field Office in Silt, Colorado and at White River National Forest offices in Glenwood Springs, Colorado.

This discussion presents a brief summary background to provide context for Ute Trails Project research goals and objectives in relation to Ute research partners, summarizes results from project activities to date, and discusses recommendations and plans for future work. Finally, an introduction is given to DARG's archaeological relational database and online repository for project data sharing and digital curation.

BACKGROUND

In 2003 Colorado Preservation, Inc. listed Native American Arboreal Wickiup and Teepee Sites as one of Colorado's Most Endangered Places. In the fall of that year Dominquez Archaeological Research Group (DARG) was founded and immediately commenced work on an archaeological assessment of a large wickiup village site (5GF308), funded in part by the State Historical Fund and the Bureau of Land Management Glenwood Springs Field Office. The assessment project was conceived as a demonstration of a research strategy DARG was developing which focused on intensive documentation of at-risk, poorly recorded and under-studied archaeological resources.

With the support of Colorado Preservation, Inc., the State Historical Fund, and federal land management agency partners, DARG's wickiup study established itself in 2004 as the Colorado Wickiup Project (CWP), a comprehensive documentation and information sharing project for aboriginal wooden structures in the state of Colorado. The project soon began to attract a growing network of preservation partners. Significantly, DARG proactively reached out to the Ute Tribes in the early phases of the Colorado Wickiup Project, seeking ways to add the Utes' indigenous perspectives on the archaeological and ethnohistorical records that the CWP was compiling. The project has gone on to intensively document hundreds of aboriginal wooden features, creating a lasting record of the Ute's cultural history in Colorado. The project continues to expand the documentary record with on-going series of archaeological assessments of aboriginal wooden features and the development of wickiup databases and digital archives. In 2014 the Colorado Wickiup Project shared the 12th Annual Governor's Award for Historic Preservation with the Ute Mountain Ute Tribe, Southern Ute Tribe, Ute Indian Tribe of the Uintah and Ouray Reservation, Bureau of Land Management, US Forest Service, and National Park Service. The project was cited as an outstanding example of research that combines archaeology, ethnography, history, and technological innovation. The project was awarded History Colorado's 2014 Governor's Award for Historic Preservation (History Colorado 2014).

In 2006 DARG research associates initiated a series of informal discussions with Clifford Duncan, a Northern Ute Elder and Cultural Advisor, regarding the Colorado Wickiup Project, Ute rock art, and Ute cultural resources in western Colorado in general. This outreach, along with the success of the Colorado Wickiup Project, in part, led to DARG's participation coordinating a Ute Ethnohistory Project conducted by three western Colorado Bureau of Land Management (BLM) field offices in west-central Colorado in collaboration with the three Ute tribes (Ott et al. 2010).

The Ute Ethnohistory Project project brought together BLM field office cultural resource staff and managers with tribal cultural representatives in the field, visiting Ute heritage sites and locales in the study areas. The project was initiated in part based on experience gained through a Ute Ethnobotany project conducted and sponsored by the BLM Grand Junction Field Office and the Grand Mesa Uncompahgre National Forest Office (McBeth 2008), and presented an explicit effort to include indigenous perspectives on many long-standing archaeological and cultural resource management questions. The collaborative relationships established in the course of the

project have since become an on-going, collaborative research partnership with DARG, the three Ute Tribes, and various state and federal public land management agencies.

Results and recommendations from the Ute Ethnohistory Project, and subsequent on-going collaborative projects with the tribes and BLM (DARG Publications 2016), led DARG to consider a proposed model for Ute studies that would 1) more effectively integrate Ute perspectives into established cultural resource research management frameworks by 2) developing integrated, multi-disciplinary and collaborative research partnerships and 3) creating more efficient and equitable information sharing processes and platforms.

This current project, Ute Trails of Eagle County (SHF Project No. 2015-02-024) is the third in a series of four projects conducted by DARG, and funded in part by BLM grants and assistance agreements and State Historical Fund grants, that were designed to test the aforementioned proposed research model. Additional background and project results from these efforts is being developed online (Ute Trails Online 2016).

CURRENT RESULTS AND ON-GOING ACTIVITIES

DARG's online project data repository continues in active development. Initial archaeological data from the Ute Trails of Mesa County Project (SHF Project No. 2014-01-054) and this current Ute Trails of Eagle County Project (SHF Project No. 2015-02-024) are online and currently in review by Ute and agency partners. Archaeological data from these projects are now integrated into DARG's relational research database, and ethnohistorical reference data, and visual data for selected rock art sites is in final development following internal review and testing. A password protected gateway page with content descriptions and links to protected data and public content can be accessed via the DARG website (Ute Trails Online 2016). A unitary password for accessing these data has been distributed directly to research partners and project team members.

DARG has also completed work under the first round of funding for an Ethnographic Study of the Northwest Piceance Creek Basin for the Bureau of Land Management White River Field Office. The project was designed to continue for two additional years pending subsequent funding and includes explicit efforts to conduct participatory community-based ethnography in collaboration with Ute cultural representatives and interested tribal members. Archaeological data from this project is now integrated into DARG's relational database and ethnohistorical data and references are currently being added to the online repository for Ute Trails Project data sharing and review by tribal and agency partners. Information about this project and links to project data will be available at the Ute Trails Project online gateway at the web address noted above.

DARG was recently awarded an SHF grant to conduct the first phase of a Ute Trails of the Southern Uncompahgre Plateau Project (SHF #2017-01-049). This phase of the project began under contract on November 21, 2016 and will be conducted through November 21, 2018. The

project will focus on an aboriginal trail route crossing the southern end of the Uncompahgre Plateau connecting the San Miguel and Dolores Rivers with the Uncompahgre River near Montrose. This phase of the project is funded in part with matching funds from Ute Mountain Ute Tribal Historic Preservation Office (THPO) and BLM's Uncompahgre Field Office. The Ute Mountain Tribe funding is part of a larger Ute Landscape Partnership created through new fuels reduction initiative funds from the Bureau of Indian Affairs and includes collaboration with BIA representatives and Fire and Cultural Resource staff from BLM and Forest Service districts. Initial project kick-off meetings with SHF staff and Ute Mountain Ute THPO staff and Ute Landscape Partnership members are being held December 14 and 15, 2016. The project will include collaboration and project data sharing with Ute Mountain Ute THPO, the Southern Ute and Northern Ute Tribes, PaleoWest Archaeology, BLM Uncompahgre Field Office, Grand Mesa Uncompahgre and Gunnison National Forest, and the State Historical Fund. The project will also include funding for Ute interns from each of the Ute tribes, and the collaborative development of a training plan that will introduce them to a full array of archaeological tasks in the archives, the field, and the lab.

Additionally, DARG is participating in a History Colorado NSF-STEM grant application which was awarded for start up on October 1, 2016. DARG's participation in the project will continue to test and adapt its approach to Ute Trails studies and will include a trail corridor survey along Gunnison Gulch within the Dominguez Canyon Wilderness Area. The area has numerous Ute sites with a variety of aboriginal wooden features, including reported but undocumented wickiup sites. Another component of this project will involve History Colorado exhibits and education staff and project archaeologists interacting in the field with Ute students. Documentary products from the project will be used in support of new exhibits at the Ute Indian Museum in Montrose, and other History Colorado interpretive and educational initiatives, including Ute community presentations and exchanges.

Work on an in-depth discussion of the lessons learned in DARG's Ute Trails Project work to date, and it's collaborative research partnerships with the Ute Tribes and management agencies is currently in draft form and is in internal review by project team members. A release draft will be posted on the Ute Trails website by the end of December, 2016, along with archival and reference research resources developed in Ute Trails Project work to date (Ute Trails Online 2016).

MORE INFORMATION AND REFERENCES

DARG Publications

2016 Online publications from the Colorado Wickiup Project, Ute Ethnohistory Project, and Ute Trails Project: http://www.dargnet.org/publications.html.

History Colorado

2014 2014 Governor's Award for Historic Preservation - Colorado Wickiup Project. Online video: https://vimeo.com/86665241.

McBeth, Sally

2008 Ute Ethnobotany Project: Summary Report. A cooperative project of the Grand Mesa, Uncompahgre, and Gunnison National Forests and the Grand Junction Field Office of the Bureau of Land Management. Unpublished document.

Ott, Richard, with Betsy Chapoose, Clifford Duncan, Terry G. Knight Sr., Lynn Albers, and Carol Patterson

2010 Perspectives on Ute Ethnohistory in West Central Colorado. Prepared for Ute Indian Tribe of the Uintah and Ouray Reservation, Ute Mountain Ute Tribe, Southern Ute Indian Tribe and Bureau of Land Management Glenwood Springs, Grand Junction and Uncompahgre Field Offices. Electronic document, http://www.dargnet.org/pub/ute_ethno_perspectives.pdf.

Ute Trails Online

2016 Ute Trails Online Gateway to project data: http://www.dargnet.org/utetrails/.