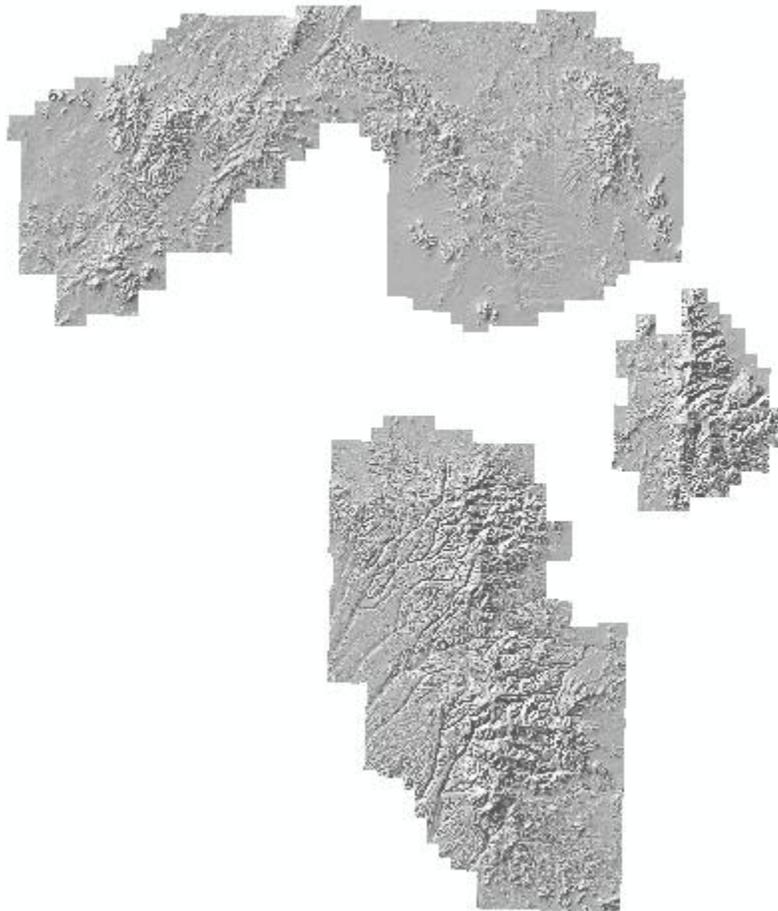


MAGDALENA RANGER DISTRICT BACKGROUND FOR SURVEY

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I. INTRODUCTION

Cultural resources are the remains of past human activity and provide a record of human behavior within the ecosystem and a meaningful context for resource managers to assess the existing condition of a landscape. Cultural resources represent tangible evidence of community heritage, and by extension are integral to modern-day cultural identities. As of January 2011, the Magdalena Ranger District (Figure 1) has 1,118 cultural resources recorded in the New Mexico Cultural Resources Inventory System (NMCRIS). The sites are widely distributed across the district with concentrations occurring in certain parts of the district that were suitable for occupation.

The heritage resources on the district are diverse and representative of nearly every prominent human evolutionary event known to anthropology. Evidence for human use of district lands date back 14,000 years to the Paleoindian period providing glimpses into the peopling of the New World and megafaunal extinction. There is a pronounced archaic component and evidence of the transition to agriculture when early humans abandoned hunting and gathering and adopted new subsistence strategies. The district lies in a cultural transition zone between the prehistoric Anasazi and Mogollon cultural areas providing insight into the process of transcultural diffusion and early southwestern political economies. People living at the Goat Springs pueblo witnessed the Spanish incursion in the 1540s and the abrupt cultural changes that accompanied European contact. The people living in and around Magdalena have been governed by Mexico, and experienced early U.S. statehood, westward expansion, and the Apache Wars. Most recently, the people of Magdalena have experienced globalization and the effects of losing jobs to newer methods of transporting cattle. Yet beneath all of the cultural transformations lies a resilient continuity whereby human beings have continued to live in and around Magdalena, New Mexico.

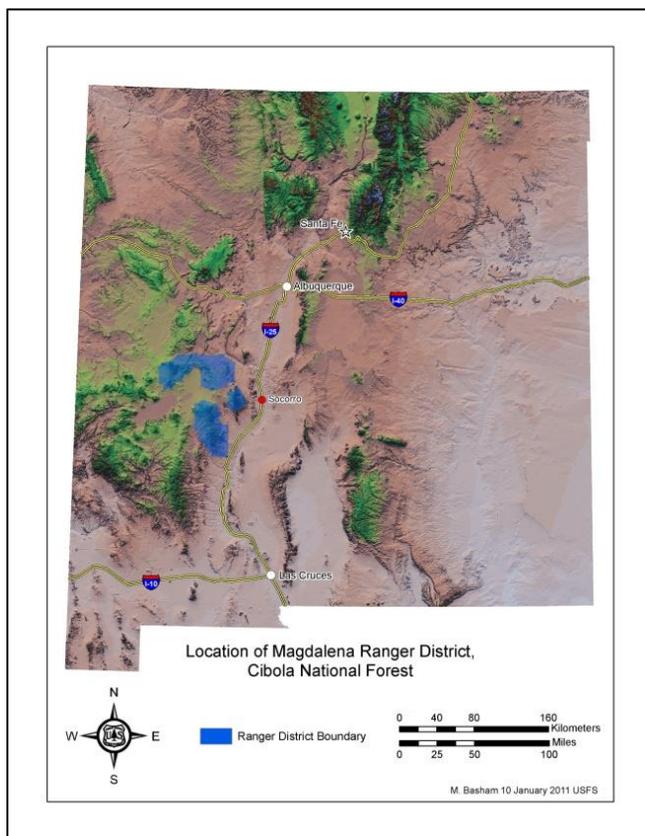


Fig. 1. Location of Magdalena Ranger District.

Anthropologically, the cultural resources of the Magdalena Ranger District can help answer some very significant questions plaguing the discipline.

The Magdalena Ranger District Heritage Program's primary purpose is to protect and preserve the heritage resources in and around the communities in which the Cibola National Forest does business. These heritage resources hold clues to past ecosystems, add richness and depth to our landscapes, provide links to living traditions, and help transform a beautiful walk in the woods into an unforgettable encounter with history (USDA Forest Service 1998). Cibola National Forest archaeologists strive to protect significant heritage resources, share their values with the American

people, and to contribute relevant information and perspectives to natural resource management. In so doing we will ensure that future generations will have an opportunity to discover the human story etched on the landscapes of our national forests and grasslands; make the past come alive as a vibrant part of our recreational experiences and community life; and connect people to the land in a way that will help us better understand and manage forest ecosystems.

II. ENVIRONMENTAL OVERVIEW

This section briefly discusses the physical environment of the Magdalena Ranger District. Environmental discussions are essential to archaeological analyses for many reasons. A central objective of archaeology is to identify and explain culture change through time. Archaeologists have long considered the human adaptation to physical environments and limitations imposed on human populations by the environment as indispensable factors in understanding diachronic culture change. An environmental analysis establishes the range of resources available to prehistoric cultures in terms of both diet breadth (food) and utility (tools). The region encompassing the district contains diverse vegetation, abundant habitats for game animals, and although limited, sufficient precipitation and water sources suited to human adaptation involving a mixed subsistence base with horticulture supplemented by wild food remains. There are numerous lithic resources suitable for the manufacture of stone tools, in addition to other important economic resources such as wood and stone for architecture, fuel wood, hides, pelts, and feathers.

The environmental setting of the Magdalena Ranger District can be divided into four non-contiguous geographic units: the Magdalena

Mountains, the San Mateo Mountains, the Bear/Gallinas Mountains, and the Datil Mountains (Figure 2). Interspersed within the mountains are expansive grassy plains, including the Plains of San Agustín, located some 20 miles west of the Village of Magdalena, New Mexico. The geographic variability of the district undoubtedly contributes to the long duration of human occupation in the area, and partially accounts for the distribution of archaeological sites on the district.



Fig. 2. Clockwise from upper left: Magdalena, San Mateo, Bear/Gallina, Datil Ranges.

The Magdalena Ranger District is within the Western Range and Irrigation Region (WRIR) Major Land Resource Areas (MLRA) 35 and 42 (USDA 2006:61). The Western Range and Irrigation Region is a semidesert and desert region of plateaus, plains, and numerous isolated mountain ranges. A majority of the precipitation in the Magdalena portion of the WRIR falls as rain during the warm season. A majority of the land in the WRIR is allocated to grazing, and because of the harsh arid climate overgrazing is a major concern for land managers.

Most of the Magdalena Ranger District lies within the Datil Section of the Colorado Plateau Province of the Intermontane Plateaus (MLRA

35) (USDA 2006:97). MLRA 35 is part of the Colorado Plateau, which has been structurally uplifted. The extreme eastern portion of the district lies partially within the Mexican Highland Section of the Basin and Range Province of the Intermontane Plateaus (MLRA 42) (USDA 2006:109). The linear, isolated mountain ranges of MLRA 42 are primarily tilted fault blocks modified by erosion. Alluvial fan deposits are common at the bases of most mountains. Quarternary (2 mya – present) and Tertiary (65 – 2 mya) volcanic rocks consisting of basalt, andesite, and rhyolite are common (USDA 2006:109).

Dominant soils in the region consist of Alfisols, Aridisols, Entisols, Mollisols, and Vertisols. Dominant suborders present in the region include Argids and Calcids on the plains and basins; Orthents on plains, plateaus, and valleys, and Xerolls and Ustolls on mountain slopes. Soils in the regions typically have a mesic soil temperature regime, and aridic soil moisture regime, and mixed mineralogy (USDA 2006:61). The soils in the region are generally very shallow to very deep, well drained or somewhat excessively drained, and loamy or clayey (USDA 2006:98).

The orogeny of the Magdalena Mountains result from an east-tilted fault block range superimposed on Cenozoic era (65 mya) calderas, which form a portion of the western edge of the Rio Grande Rift Valley fronting the La Jencia Basin. During the Late Oligocene (28 – 23 mya), the original, closely spaced, high-angle normal faults and intervening blocks in the Socorro-Magdalena region underwent kinematic forces and were progressively rotated like falling dominos (Chamberlin 1976, 1978, 1983). The Socorro portion of the central rift hosts an inflating mid-crustal sill-like magma body 19 km below the surface responsible for two of the largest rift-associated earthquakes in recent times (both approximately 5.8 magni-

tude) in July and November 1906 (Reid 1911; Sanford et al. 1995).

The Magdalena Mountains are regionally high in elevation representing the third highest range in southern New Mexico. The range is a typical desert Basin and Range mountain surrounded by flat plains of Pinyon-Juniper grasslands to the north, east, and west, and by creosote desert in the south. The range is located immediately south of the Village of Magdalena, approximately 26 (41 km) miles west of Socorro, New Mexico. The highest point in the range is South Baldy at 10,783 ft. (3,287 m). The Magdalena Mountain range runs roughly north-south for approximately 18 miles (28 km). Other prominent peaks include Buck Peak at 9,085 ft. (2,769 m), North Baldy at 9,858 ft. (3,005 m), and Timber Peak at 10,510 ft. (3,203 m) (Butterfield and Greene 2006).

Between 1866 and 1960, mining was prevalent on the west side of the Magdalena range and is largely responsible for the founding of the Village of Magdalena in 1884. Primary minerals extracted from the range include gold, silver, zinc, and lead. New, cutting-edge research using petrographic analysis is investigating the Magdalena Mountain Range as a third prehistoric source of lead used in producing prehistoric glaze ware pottery (Eckert & Huntley PC 2011).

During the first and second world wars, manganese was identified as a strategic material by the U.S. government for its importance to machinery production and mined in the southern Magdalena Mountains. Mines in the Magdalena's produced museum-quality specimens of the highly sought-after zinc carbonate mineral Smithsonite (Butterfield and Greene 2006).

The San Mateo Mountains are located about 25 miles (40 km) north-northwest of the town of

Truth or Consequences and run roughly north 40 miles (64 km) to about 30 miles (48 km) southwest of Socorro. The highest summit in the range is West Blue Mountain at 10,783 ft. (3,287 m). Other prominent peaks include Apache Kid Peak at 10,048 ft. (3,063 m), Mount Withington at 10,115 ft. (3,083 m), San Mateo Peak at 10,139 ft. (3,090 m), San Mateo Mountain at 10,145 ft. (3,092 m), and Vicks Peak at 10,252 ft. (3,125 m). Vick's Peak is named after the famous Apache Chief, Victorio.

The San Mateo Mountains are the result of a fault-block range where kinematic forces widely broke up large areas of bedrock creating large, vertical displacements of the continental crust between 28 and 24 million years ago. The range is composed of volcanic rock from the Mogollon-Datil Volcanic Field. The San Mateo's form the western edge of the Rio Grande Rift Valley and the eastern border of the Plains of San Augustin. At the end of the 19th century, a small amount of mining for gold, silver, and copper occurred in the southern part of the range. There are two wilderness areas in the San Mateo's, the 44,650 acre (181 km²) Apache Kid Wilderness and the Withington Wilderness at 18, 829 acres (76 km²).

For management purposes, the Magdalena Ranger District refers to the Bear Mountains and the Gallinas Mountains as a single unit, although they are geologically distinct. The Bear Mountains are a roughly north-south trending ridge at 8,205 ft. (2,501 m). Prominent physiographic features of the Bear Mountains include Hells Mesa at 7,812 ft. (2,381 m) and Los Cerros Barril at 6,980 ft. (2,127 m). The Gallinas Mountains are located about 13 miles north-northwest of the Village of Magdalena and are just west of the Bear Mountains and tend to run on a north-northwest trajectory. The highest points in the Gallinas range are Indian Mesa at 8,522 ft. (2,597 m) and the summit

of Gallinas Peak at 8,442 ft. (2,573 m). The Bear/Gallinas region contain some of the densest archaeological deposits on the district, most likely attributed to the lower elevations, numerous natural springs, and ephemeral water sources.

The Datil Mountain portion of the district is located in Catron County. The highest point in the range is the summit of Madre Mountain at 9,556 ft. (2,912 m), which is sacred ground to the Acoma, Laguna, and Zuni. Other prominent mountains include Sugarloaf Mountain at 9,155 ft. (2,790 m), South Crosby peak at 9,095 ft. (2,772 m), Anderson Mountain at 8,923 ft. (2,719 m), East Sugarloaf Mountain at 8,708 ft. (2,654 m), Lone Mountain at 8,644 ft. (2,634 m), Monument Rock at 8,541 ft. (2,603 m), Cox Peak at 8,255 ft. (2,516 m), and Indian Peak at 8,133 ft. (2,478 m).

The Datil Mountains form the eastern part of the Datil-Mogollon Section located along the southeastern rim of the Colorado Plateau in eastern Arizona and west-central New Mexico. The Datil-Mogollon Section is a physiographic section that is a transitional area between the Colorado Plateau and the Basin and Range Province. The Datil Mountains also form the northern border of the Plains of San Augustin.

Another dominant physiographic feature of the district is the Plains of San Augustin in the San Augustin Basin. The Plains of San Augustin, for the most part, lie in the center of the district separating the mountain units, although a majority of the plains are managed by other jurisdictions. The plains extend northeast-southwest for approximately 55 miles (88km) and are located roughly 50 miles (80 km) west of Socorro. The plains are bordered by outliers of the Black Range to the south, the Tularosa Mountains in the west, the San Mateo Mountains in the east, and the Mangas, Crosby, Datil, and Gallinas Mountains in the north (Powers 1939).

The Plains of San Augustin are located within the Mogollon-Datil Volcanic field south of the southeastern edge of the Colorado Plateau and west of the Rio Grande Rift Valley. Geologically, the basin is referred to as a *graben*, a down dropped block which subsided between parallel faults (Stearns 1962). The flat floor of the plains are the remnants of the Pleistocene-epoch (2.6 mya to 12,000 ya) Lake Augustine. The ancient lake attracted animals, and thus there are numerous Paleolithic and Archaic hunting sites around the plains including the Ake Site and Bat Cave.

The Magdalena Ranger District contains a diverse range of flora resources that are distributed largely based on elevation. Higher elevations of the Magdalena Mountains support a mixed-conifer zone overstory above 8,000 ft. msl consisting of Douglass Fir (*Pseudotsuga menziesii*), White Fir (*Abies concolor*), Southwestern White Pine (*Pinus strobiformis*), and Ponderosa Pine (*Pinus ponderosa*). Below 8,000 ft. the forest begins to grade into predominantly Ponderosa pine, Mountain Mahogany (*Cercocarpus montanus*), and Gambel Oak (*Quercus gambelii*). The pinyon-juniper belt beginning at approximately 6,500 ft. (msl) consists of one-seed juniper (*Juniperus monosperma*), rocky mountain juniper (*Juniperus scopulorum*), alligator juniper (*Juniperus deppeana*), and two needle pinyon (*Pinus edulis*) (Elmore 1976).

The San Mateo Mountains support a similar forest system to the Magdalena's with the addition of a Spruce-Fir zone that consist of Engelmann Spruce (*Picea engelmannii*) and Douglas Fir between 9,000 and 10,000 ft. msl. The Datils and the Bear/Gallinas do not support either a mixed conifer or spruce-fir zone in the proper sense of the definition. However, an occasional spruce is present in the Datils, but entirely absent from the Bear/Gallinas.

At lower elevations throughout the district, the understory consists primarily of perennial grasses, shrubs, forbs, and cacti. Common grasses include blue grama grass (*Bouteloua gracilis*), black grama grass (*Bouteloua eriopada*), poverty three-awn grass (*Aristida divaricata*), purple three-awn (*Aristida purpurea*), sideoats grama (*Bouteloua curtipendula*), ring muhly (*Muhlenbergia torreyi*), mountain muhly (*Muhlenbergia montana*), pine dropseed (*Blepharoneuron tricholepis*), sand dropseed (*Sporobolus cryptandrus*), indian ricegrass (*Achnatherum hymenoides*), and wolftail (*Lycurus phleoides*) (Allred 2005).

Shrubs, forbs, and cacti on the district include four-winged salt bush (*Atriplex canescens*), bud sage brush (*Artemisia spinescens*), creosote bush (*Larrea tridentata*), greasewood (*Sarcobatus vermiculatus*), broom snakeweed (*Gutierrezia sarothrae*), soapweed yucca (*Yucca elata*), Navajo yucca (*Yucca navajoa*), mormon tea (*Ephedra viridis*), prickly pear cactus (*Opuntia polyacantha*), and Cholla cactus (*Opuntia imbricata*) (Elmore 1976).

The diverse physical geography of the district also supports a large number and wide spectrum of wildlife. Socorro County alone contains 826 species of wildlife, including 14 amphibians, 60 reptiles, 336 birds, and 96 mammals (BISON 2011). Big game on the district consists of black bear (*Ursus americanus amblyceps*), mule deer (*Odocoileus hemionus hemionus*), pronghorn (*Antilocapra americana americana*), elk (*Cervus elaphus nelson*), and mountain lion (*Puma concolor*). Smaller fauna include common gray fox (*Urocyon cinereoargenteus scottii*), kit fox (*Vulpes macrotis neomexicanus*), Gunnison's prairie dog (*Cynomys gunnisoni gunnisoni*), coyote (*Canis latrans lestes*), bobcat (*Lynx rufus baileyi*), collared peccary (*Peccari tajacu angulatus*), desert cottontail rabbit (*Sylvilagus audubonii*), tassel-eared squirrel

(*Sciurus aberti*), and red squirrel (*Tamiasciurus hudsonicus fremonti*). Notable birds include wild turkey (*Meleagris gallopavo*), turkey vulture (*Cathartes aura septentrionalis*), Mexican spotted owl (*Strix occidentalis lucida*), red-tailed hawk (*Buteo jamaicensis calurus*), northern goshawk (*Accipiter gentilis atricapillus*), peregrine falcon (*Falco peregrinus anatum*), and bald eagle (*Haliaeetus leucocephalus alascanus*) (BISON 2011).

According to climatic data from the Magdalena climatic station (NOAA Station ID # NM295353) recorded at an elevation of 6,540 ft. (1,993 m), the mean annual precipitation is 11.75 in. (29.84 cm). The wettest months are July and August when 2.54 and 2.62 inches, respectively, fall during the summer monsoonal rains. The lowest mean average annual temperature is 37.3° F and the highest mean average temperature is 67.7° F. The lowest documented temperature was -24° F recorded on January 11, 1962. The highest documented temperature was 102° F recorded on June 11, 1906 and July 14, 1909. The earliest last spring frost occurs around May 22, and the latest first fall frost occurs around October 29 for a potential growing season of 161 days. Although rare, the last spring frosts have occurred as late as July 29, and fall frosts as early as September 17 in Magdalena.

According to climatic data from the Datil climatic station (NOAA Station ID# NM292367) recorded at an elevation of 7,105 ft. (2,165 m), the mean annual precipitation is 12.42 in. (31.54cm). The wettest months are also July and August when 2.30 and 2.77 inches, respectively, fall during the summer monsoonal rains. The lowest mean average annual temperature is 29.4° F and the highest mean average temperature is 65.5° F. The lowest documented temperature was -26° F recorded on January 4, 1947. The highest documented temperature was 105° F recorded on Au-

gust 10, 1908. The earliest last spring frost occurs around June 02, and the latest first fall frost occurs around October 19 for a potential growing season of 139 days. Last spring frosts have occurred as late as June 15 and earliest fall frosts have occurred as early as September 08 in Datil.

III. PREHISTORIC OCCUPATION

The Magdalena Ranger District manages 791,684 acres (320,383 hectares) of Federal land. To date, archaeologists have surveyed 51,563 acres resulting in a mere 6% survey coverage of the district. Thus far, survey has documented 1,118 historic properties on district lands. Approximately 50% of those sites are prehistoric, 28% historic, with the rest representing multi-components or unknown components.

Across the district, site density is low, defined as 20 or less sites per square mile. Sections of the district have moderate to high archaeological site density. Moderate site density is defined as 20 to 40 sites per square mile, and high site density is 40 or more sites per square mile. Site density on the Magdalena Ranger District tends to be lower in areas situated at high altitudes in the mixed conifer vegetation zone. Areas on the Magdalena Ranger District located in the pinyon juniper zone or historic mining areas will most likely have higher site density. Evaluation of site density on the Magdalena Ranger District is tied to the distribution of survey on the district. Survey on the district is predominantly project based and not reflective of scientific sampling. Survey on the district corresponds to land management activities such as timber sales, fuels projects, fire management activities, range projects, roads and infrastructure maintenance, and wildlife management. The following presents a brief overview of the prehistory and history of the district.

Archaeologists generally divide the cultural history of the American Southwest into four major periods: Paleoindian (9500–6500 B.C.), Archaic (6500 B.C.–A.D. 300 in the Magdalena area), Formative (A.D. 300–1540 in the Magdalena area), and Historic (A.D. 1540–present in the Magdalena area) (Willey and Phillips 1958).

The oldest documented evidence of human occupation in west central New Mexico dates to the terminal Pleistocene between 14,000 and 8,000 years ago referred to as the Paleoindian period. The Paleoindian period is characterized by a subsistence strategy that relied on big game hunting supplemented by occasional gathering of flora resources. The hallmark of the Paleoindian period is a distinctive lanceolate fluted lithic technology. Paleoindian hunters used these large spear points to hunt now extinct forms of megafauna such as mammoth, mastodon, saber toothed tigers, and cave bears.

The discovery of abundant Paleoindian artifacts in and around Magdalena suggests that highly mobile hunting and gathering bands visited the area throughout much of the 6,000-year span of the Paleoindian period. Archaeologists have excavated several Paleoindian sites near Magdalena including the Mockingbird Gap site located southeast of Socorro, and the Ake Site located on the Plains of San Agustín (Fetterman 2005). Excavations at the Mockingbird Gap site recovered over 150 Clovis (early Paleoindian period) spear points from stratified deposits that date between 11,000 and 8,000 B.P. (Fetterman 2005). Evidence of later Paleoindian occupation appears at the Ake site, where five Folsom points and a channel flake were discovered *in situ* with an extinct species of bison (*B. antiquas* or *B. occidentalis*) tooth enamel (Beckett 1980:94). Bat Cave, located southeast of the Ake site on the southern

margins of the Plains of San Agustín, also has a late Paleoindian component (Dick 1965).

In 2010, archaeologists discovered a Cody complex projectile point in the Gallinas Mountains, representing the first documented evidence of Paleolithic presence within the Magdalena Ranger District boundary (Figure 3). The artifact is a late Paleoindian projectile point preform most closely conforming to the morphology and flaking technology of a Milnesand projectile point (2010 Roberts et al.). According to Justice (2002: 94–95), the Milnesand point is primarily a Great Plains type and the type site is located roughly 400km east of Magdalena in eastern New Mexico. The point preform measures 4.9cm in length, 2cm wide and .4cm thick. The point preform is lenticular in cross-section and exhibits fine collateral flaking. In addition, the uniform size and spacing of the large percussion scars suggests Paleoindian technology. Most importantly, the point preform exhibits at least one (and possibly two) overshot flake scars. This technology is unique to Paleoindians and confirms its antiquity. The point preform is manufactured from honey-colored petrified wood of unknown origin. In general, Milnesand points are considered lanceolate, concave base points dating to 10,200 B.P.-9,200 B.P. However, as in most late Paleoindian lanceolate typologies, morphological variation exists within types. When Sellards originally characterized the point type he describes the point as exhibiting a “prevalingly square base” (1955: 343). Moreover, Sellards recovered a distinctively convex based point (#40) from the same context (extinct bison bone bed) that yielded numerous other typical Milnesand points. This point exhibits a convex base, which is more indicative of a point preform than a completed point. However, based on the length to width ratio (12.5:1), minor basal grinding, and the very late stage in the production continuum, this artifact may in fact represent a com-

plete point. Another possibility exists. The point also exhibits basal retouch that may have been done at a later time. The point exhibits step fractures indicative of less skilled flintknappers (i.e., Formative groups) along the base on one face. This later retouch may have created the convex base (2010 Roberts et al.).

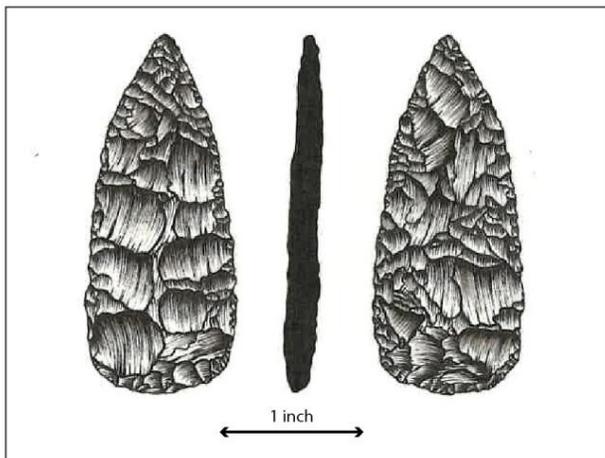


Fig. 3. Illustration of Milnesand preform.

Following the Paleoindian period is the Archaic Period. In the American Southwest, the Archaic refers to both a time period spanning from 5,500 B.C. to A.D. 200, and a way of life. During the Archaic, the physical environment became as we observe it today. Paleoclimatic data indicate that following the Pleistocene, increased desiccation characterized the early Holocene climate of the American Southwest (Cordell 1979:29). Geological studies indicate that the decrease in moisture resulted in a lowering of the shoreline in the San Agustín basin prior to 5000 B.P. (Powers 1939). The shifting climatic patterns instigated a change of human adaptive strategies resulting in a new archaeological signature beginning around 8000 B.P. During the Archaic, the exploitation of big game resources was supplanted by an expanded diet breadth comprised of smaller game animals and an increased reliance on gathered plant resources. Archaic populations were less

mobile than Paleoindian populations, engaging in mobility patterns referred to as *transhumance*. Transhumance refers to a mobility cycle where people revisited geographic areas seasonally to exploit resources as they became available.

Archaic period systematics in the American Southwest has been subject to some debate. Defining the archaic as a stage of cultural development ending with the terminal Pleistocene to the adoption of agriculture with temporal phases is challenging. As Cordell (2009:102-106) explains, Cynthia Irwin-Williams was the first to address this problem. Defining the Archaic period has become largely cultural historical based on projectile point typologies. The Southwestern archaic is divided into smaller subregions called *traditions*, which are comprised of various complexes.

The northernmost tradition was coined the Oshara tradition by Irwin-Williams (1973), and is further subdivided into sequential phases. Irwin-Williams describes these phases as the Jay (5,500 to 4,800 B.C.), Bajada (4,800 to 3,200 B.C.), San José (3,200 to 1,800 B.C.), Armijo (1,800 to 800 B.C.), and En Medio (800 to 400 B.C.). Oshara tradition archaeological sites have been documented in the Rio Grande valley, the San Juan Basin, and the Plains of San Agustín in New Mexico, in addition to south-central Colorado and southeastern Utah. Sites dating to the archaic period are located in the vicinity of the Magdalena Ranger District. The Ake site, Bat Cave, and Tularosa Cave, centrally located within the district all contain an archaic component.

The Jay phase is marked by distinctive, shouldered projectile points and highly patterned leaf-shaped knives and scrapers. The Bajada phase tool assemblage shows general continuity with the preceding Jay phase. Bajada projectile points dif-

fer from Jay points by the presence of basal thinning and concave bases. The Bajada phase tool assemblage exhibits increased quantities of large choppers and cruder side scrapers. San José points resemble Bajada projectile point morphology, but are generally smaller with a shorter stem to blade ratio, and have serrated edges. Other artifacts documented in the San José tool kit include crudely made side scrapers in addition to large chopping tools. San José groundstone consists of pounding stones, manos constructed from small cobbles, and shallow basin grinding slabs (Cordell 2009).

Irwin-Williams considers the Armijo phase projectile point to be a continuation of earlier San José serrated projectile point morphology with short, expanding stems and concave bases with straight bases appearing later in the phase. Armijo assemblages also contain small bifacial knives, flake scrapers, drills, and choppers. Lastly, the En Medio phase displays an obvious continuity with the earlier phases, but with an increased emphasis on groundstone. There is also a considerable degree of variability in projectile point morphology with an apparent evolution of stemmed corner notching earlier to longer barbs later in the phase. The En Medio phase represents early agriculturalists and is equivalent to the Basketmaker II period in the Pecos classification system. The Oshara tradition is believed to be antecedent to the Anasazi culture (Cordell 2009).

The southern tradition, called the Cochise tradition, was first documented in southeastern Arizona and originally defined by Sayles and Antevs (1941; Sayles 1983) based on investigations in southeastern Arizona and was further modified by Huckell (1995). The Cochise Archaic tradition is divided into three main periods (early, middle, and late) and four phases: Sulphur Springs (8500–6000 B.C.), Chiricahua (6000–1200 B.C.), San

Pedro (1200–800 B.C.), and Cienega (800 B.C. – A.D. 1).

Sayles and Antevs initial work at Sulphur Springs was in 1941 before the advent of carbon dating. Because of the lack of absolute dates, Sayles originally believed that the Paleoindian tradition co-existed with a hunting-and-gathering tradition that exploited smaller fauna supplemented with flora resources. Developments in absolute dating produced data indicating that Sayles interpretation of the Sulphur Springs material was incorrect (Roberts et al. 2010). Re-examination of Sulphur Springs established reliable dates beginning around 8500 B.C. for the Early Archaic period of Cochise culture (Reid and Whittlesey 1997:44, 45).

The Middle Archaic period of the Cochise culture (ca. 6000-1200 B.C.) is called the Chiricahua phase. Chiricahua phase artifact assemblages are dominated by cobble manos and shallow metates, clearly indicating the archaic reliance on plant foods in the diet. There is a wide-range of projectile points in the Chiricahua phase with many being side-notched with concave bases in addition to diamond shaped points of either serrated or unserrated varieties. The subsequent San Pedro phase points tend to be larger and display low-corner or side-notched with straight to convex bases. Other San Pedro stone tools include various scrapers, denticulates, bifacial knives, and choppers. San Pedro groundstone technology differs from preceding phases in that the metates have a deeper basin, along with the appearance of mortars and pestles (Cordell 2009).

The Late Archaic period (ca. 1200 B.C.-A.D. 1) is typically divided up into the San Pedro phase (1200-800 B.C.) and the Cienega Phase (800 B.C.-A.D. 1). Archaeological and paleobotanical evidence suggests that the Late Archaic appears to

be a time of increasing adaptation to agriculture as the primary subsistence strategy. The prevalence of maize documented at archaeological sites throughout the southwest has led some archaeologists to refer to this period as the Early Agricultural period (Huckell 1995; Mabry 1997, 1998).

Although archaeologists use projectile point styles to distinguish these two traditions, there are similarities between the points identified for each tradition, and misclassification of point types may be a problem (Gossett 1985). In the Fence Lake Coal Mine area, located west of Magdalena, archaeologists have documented both projectile point styles at Archaic sites (Hogan 1985). This suggests that the transition zone between desert Basin and Range and the Colorado Plateau is also a transition zone between the Cochise and Oshara traditions (Fetterman 2005).

The transition to agriculture brings about momentous changes in settlement patterns, technology, and a discernible demarcation among regional cultural traditions in the American Southwest. The term *Formative Stage* is used in the Southwest for the appearance of sedentary lifestyles that are usually associated with the co-occurrence of ceramics and house construction. Noteworthy changes in the archaeological record include the appearance of pottery, development of the bow and arrow, the increasing use of pit structures, and ceremonial architecture.

The most significant process to occur in the American Southwest was the domestication of maize. Our knowledge of the timing and circumstances of the transition to agriculture in the Southwest have been refined by the re-excavations of major well-known sites and advancements in accelerated mass spectrometer (AMS) carbon dating that facilitates more accurate dates from smaller samples of material. Re-

cent data indicate that corn (*Zea mays*) was first planted in the Southwest between 1000 and 1500 B.C. (Cordell 2009). Evidence of early cultigens was discovered at both Bat Cave and Tularosa cave, located very near the Magdalena Ranger District (Dick 1965, Martin and Plog 1973).

The earliest sedentary villages appeared in the southwest during the Late Archaic period during the last millennium B.C., or between two and three thousand years ago. Late Archaic sites typically contained circular foundation pits, storage facilities, crude plainware (not decorated) pottery jars and bowls, and evidence of Maize farming. By the first century A.D. (100 A.D.), agricultural villages were spread all throughout the southwestern landscape. These settlements exhibited basketry containers, metates (grinding stones), and manos (hand stones) for grinding corn and seeds (Cordell 2009).

The Magdalena Ranger District is situated in a transition zone that contains the material remains of both the Mogollon and the Anasazi cultures. Archaeologists typically distinguish the Mogollon and Anasazi cultures by observed variations in pottery, pit structure architecture, and site configuration (Cordell 1984, Wheat 1955). The author follows Berman's lead for the Socorro area and uses chronological sequences for both groups by following Haury's (1936) and Martin's (1979) classification scheme for the Mogollon, and the Pecos classification scheme (Kidder 1927) for the Anasazi.

Mogollon sites typically consist of brownware pottery and pithouses appearing together in the same archaeological context. Vessels were constructed using a coiling and scraping method, and the exteriors were occasionally lightly polished. Mogollon architecture typically displays deep pithouses with ramp entryways, but lack benches,

deflectors and sipapus. Early Mogollon settlements were distributed randomly across the landscape in unpredictable *Rancheria* style arrangements. In contrast, Anasazi material culture includes gray ware pottery, pit structures with vent tunnels, roof entry, benches, and sipapus, and usually a highly predictable site and village layout often times centered on ceremonial architecture.

The earliest known Mogollon settlements documented in the Pine Lawn, Forestdale, and Mimbres areas date to between A.D. 200 and A.D. 550. These early Mogollon settlements range from as simple as a single pithouse to as many as 80 pithouses. The Mogollon pithouses were characteristically round in shape 3 m to 5 m in diameter. Roofs most likely consisted of thick logs covered by thatch comprised of smaller branches covered by mud. Some pithouses had internal hearths (thermal features), but the presence of extra-mural thermal features suggest that a majority of cooking activities occurred outdoors. Early Mogollon pithouse communities were constructed on higher prominent ridges and bluffs, perhaps in an attempt to defend their food supplies from raids.

Changes in the Mogollon lifestyle began around A.D. 550 marked by the appearance of San Francisco Red pottery in the archaeological record along with the construction of D-shaped pithouses. In addition, the Mogollon began constructing settlements in a broader range of locales in addition to the higher ridge tops of the earlier phase. By A.D. 600, Mogollon pithouses had assumed a rectangular shape and central fire hearths were more common.

There is enough differentiation in the expression of certain cultural traits within the Mogollon cultural complex to define different branches during the period A.D. 950 and 1150. In the Gila Na-

tional Forest bordering the Magdalena Ranger District, archaeologists define two branches: the Alpine and the Mimbres (Danson 1957). Archaeologists further subdivide regional phase sequences consisting of the Reserve phase (A.D. 1000-1100) and the Apache Creek phase (A.D. 1075-1150) in the Pine Lawn region and the Tularosa phase (A.D. 1100-1300) in the Tularosa region. The Mimbres Valley phases include the Classic Mimbres phase (A.D. 1000-1150), the Black Mountain-Animas phase (A.D. 1150-1300), and the Cliff-Salado phase (A.D. 1300-1450) (Anyon et al. 1981, Bluhm 1960, Kayser 1972, Nelson and La Blanc 1986).

The Anasazi represents one of the most studied prehistoric cultures in all of North America, made famous by over 100 years of research at Chaco Canyon and Mesa Verde. It should be noted that the Anasazi are known by other names in this region by indigenous people and researchers alike. The Navajo use the term Anasazi, while the Hopi prefer the term *Hisatsinom*. Archaeologists and modern Pueblo groups use the term *Ancestral Puebloan*. Regardless of the lexicon, Ancestral Pueblo and Anasazi both refer to the ancient agriculturists who lived in the northern portions of American Southwest, predominantly on and around the Colorado Plateau, for about 4000 years ago until the time of European contact in A.D. 1540.

There have been numerous attempts to establish a cultural chronology for Ancestral Puebloan archaeology. The original was established by Alfred Kidder and fellow colleagues at the first ever Pecos conference in 1927. The Pecos classification is still in use today, although with many refinements offered by new data and discoveries by archaeologists such as Hayes et al. (1981), Plog (1974), and Varien et al. (1996). Although regional adjustments are routinely made, the Pecos

classification scheme uses Basketmaker II (ca A.D. 1-500) for pre-pottery agriculturalists, followed by Basketmaker III (A.D. 500-700), Pueblo I (A.D. 700-900), Pueblo II (A.D. 900-1100), Pueblo III (A.D. 1100-1300) and Pueblo IV (A.D. 1300-1650).

Archaeological investigations in the lower Rio Salado to the northeast of Magdalena recorded an extensive Basketmaker III occupation and subsequent Pueblo I, II, III, and IV occupations (Wimberly and Eidenbach 1980). The ceramic assemblages consisted of equal quantities of Ancestral Puebloan greywares and Mogollon brownwares that suggest both Anasazi and Mogollon influences (Fetterman 2005). Whether or not the archaeological record reflects the physical movement of populations or is a reflection of transcultural diffusion remains a mystery. However, it should be noted that the clays used to construct Mogollon brownwares are typically procured in the Mogollon Highlands in what is today the Gila National Forest. This suggests that trade or migration, not the diffusion of ideas or cultural expression, can account for the presence of brownware pottery at transition zone archaeological sites (Basham 2008).

After about A.D. 1000, distinctions between the Mogollon and Anasazi cultures as observed in the archaeological record become less obvious and both areas undergo a set of similar changes. Sometime between A.D. 950 and 1150, three major changes occurred in Mogollon country that were so significant that many archaeologists believe that they were no longer Mogollon, but rather a regional variant of the Anasazi. Some scholars suggest using a unified Puebloan sequence for both areas after A.D. 1000. The most obvious change was a switch from semi-subterranean pithouses to above ground masonry pueblos. The plain red and brown ware pottery

style was replaced by styles that used black paint on a white slip. Lastly, there was an apparent population growth and expansion into less agriculturally productive areas.

Single story masonry structures in the form of multiroom linear or L-shaped roomblocks are common during the Reserve phase/Pueblo II period. The population increases and expands into areas not previously occupied, with an increased focus on low elevation areas (Stuart and Gauthier 1981). Pueblo II period archaeological sites are common throughout west-central New Mexico. Pueblo II sites have been recorded along the lower Puerco River and the Rio Salado drainage (Wimberly and Eidenbach 1980) to the northeast of Magdalena, and to the west in the Fence Lake and Quemado areas (Bernard-Shaw 1993; Bullard 1962; Hogan 1985).

During the subsequent Tularosa phase/Pueblo III and Pueblo IV periods, the archaeological record indicates a conspicuous abandonment of much of the region surrounding Magdalena. The concept of abandonment can be applied to a variety of phenomena and at different scales that are better understood as different kinds of events (Cordell 2009: 366). For instance, the term can imply situations of depopulation and to episodes where major building and construction ceased, but without depopulation (i.e. a population did not abandon a site, but quit building additional rooms and major architectural features). Abandonment can also refer to instances where large regions (such as Chaco Canyon) were depopulated, or to smaller localized areas and sites being deserted.

The people that remained in the Magdalena area appear to have aggregated into multi-story sites with hundreds of rooms, such as the large aggregated village of Gallinas Springs located in the foothills of the Gallinas Mountains of the

Magdalena Ranger District. The site consists of a multitiered, multi-storied pueblo containing as many as 500 rooms (Bertram et al. 1990). At Gallinas Springs, archaeologists have noted similarities to Mesa Verde style pottery and architecture prompting some researchers to suggest that the site was occupied by Mesa Verde immigrants (Davis and Winkler 1962). However, consultation with Dr. Linda Cordell suggests that Gallinas Springs is a local manifestation that adopted regional pottery designs and architectural styles. Cordell notes that the “crazing” of the white slip on Black-on-white ceramics found at Gallinas Springs would not occur on Black-on-white ceramics from the Mesa Verde region. In addition, the masonry style at Gallinas Springs reflects superior craftsmanship to that documented at Mesa Verde (Figure 4) (Cordell PC 2011).



Fig. 4. Close-up of masonry wall at Gallinas Springs.

Later Pueblo IV sites in the region include the Goat Springs site located on the district (Danson 1957; Warren and Wilson 1974) and several sites in the Rio Salado drainage at La Jara Butte and on the Rio Grande near San Acacia (Wimberly and Eidenbach 1980).

Cordell (2009: 368) identifies two periods or episodes of abandonment – one between A.D.

1130 and 1200, and another between A.D. 1200s and 1450 that can be attributed to different reasons. Cordell suggests that the earlier episode represents a period when southwestern groups retracted their territory and used land less intensively, and the later period of abandonment represents massive dislocations of populations. These two abandonment periods resulted in two socio-cultural outcomes. The first abandonment period reflected a change in lifestyle and land use patterns, but the cultural identity of the prehistoric people remained largely intact. The later period of abandonment had more prominent consequences in that cultural identity (i.e. Mogollon and Anasazi) became less identifiable.

IV. HISTORIC OCCUPATION

The cultural landscape of the American Southwest would forever change with the entry of the Spanish led by Francisco Vásquez de Coronado in 1542. In the Socorro and Magdalena area, Spanish contact occurred later in 1598 with the entrada of Don Juan de Oñate. Oñate stopped at a site along the middle Rio Grande occupied by Pilabo, a Piro Indian Pueblo (Fugate & Fugate 1989: 65). Oñate’s caravan had just transversed the harsh Chihuahua desert and were in dire need of provisions. The Pilabo Pueblo gave Oñate corn and other supplies and the pueblo was renamed Socorro, derived from the Spanish word *succor*, which means “help” or “assistance in time of distress”. As Oñate continued north, two priests stayed behind and established a mission at Pilabo. A small party of Spanish soldiers diverted from the rest of the Spanish army which continued north along the Rio Grande. The party traveled into the Magdalena area and named the mountain to the south of town “La Sierra de Magdalena” as it reminded them of a similarly-shaped mountain

back in Spain (Magdalena Centennial Committee 1984).

In 1680 the Pueblo populations along the Rio Grande revolted leading to Spanish depopulation of New Mexico until 1692. The southernmost Pueblo along the Rio Grande, the Piros, did not participate in the revolt with the northern Pueblos (Twitchell 2008: 79). Pilabo and the mission were abandoned, with the greater portion of the population following the Spaniards south to Paso del Norte (present day El Paso, Texas). In 1692 Don Diego de Vargas led forces back into northern New Mexico to re-establish the Spanish capital at Santa Fe. Pueblo communities reacted differently to the re-conquest with some capitulating and others establishing refugee communities leading to a longer period of re-conquest that lasted until 1696 (Bremer et al. 2009).

On the Magdalena Ranger District, Pueblo Magdalena and Goat Springs Pueblo are representative of Ancestral/Colonial Piro occupation. Marshall and Walt (1984:213-215) provide a size estimate of 209 ground-floor and upwards of 75 upper-story rooms and two kivas at Pueblo Magdalena. Vargas references the pueblo in his journal from the 1692 campaign of reconquest referring to it as “very old” and containing “some walls and parts of two kivas made of stone” (Kessel and Hendricks 1992: 590). Based on ceramic chronology and Vargas’s reference, Bletzer suggests that Pueblo Magdalena was abandoned some time before the Piro exodus of Pilabo in 1680 (Bletzer 2009:267).

The Goat Springs Pueblo is located 10 km north of Magdalena, and some 8 km north-northeast of Pueblo Magdalena. Marshall and Walt (1984:1984:215, 217) provide a size estimate of 165 ground-floor rooms and up to 50 second-story rooms based on differences in the

height of the rubble mounds. Establishing the chronology of the Goat Springs Pueblo has been difficult as researchers have documented Glaze D, E, and F ceramics (Mera 1940: 7), yet other investigations have documented older Magdalena Black-on-white ceramics that date to the late 13th and early 14th centuries (Knight and Gomolak 1987; Lekson and Cameron 1995; Lekson et al. 2002). Recent testing at the site by Dr. Susan Eckert of Texas A&M University suggests that the pueblo may have been constructed and occupied during more than one episode. Excavation units produced earlier Glaze A, B, and C wares separated by a decline in artifact density in the middle elevations followed by the presence of Glaze D, E, and F wares in the upper elevations (Eckert PC 2011). Another interesting phenomenon at the Goat Springs pueblo are the presence of four petroglyphs depicting crosses aligned heading north from the pueblo to the natural spring of the same name (Figure 5). One of the crosses clearly resembles the Franciscan Cross, or what historians sometimes refer to as victory crosses or conqueror crosses (PC Baumann and Moss 2011).



Figure 5. Franciscan cross petroglyph at the Goat Springs pueblo. It is hard to say if this cross can be attributed to the Spanish or Don Diego de Vargas. However, his journal mentions that his army camped at Pueblo Magdalena some 8 km southwest of this site. In addition, given de Vargas’s mission to re-conquer New Mexico, this petroglyph becomes even more intriguing.

In 1821, Mexico achieved independence from Spain and began to establish claims to its northern states of Texas and the New Mexico territory. Much of southern New Mexico, including the lands surrounding the Magdalena Ranger District, was a province of the Apache. Bands of Apache effectively controlled the Magdalena-Datil region from the seventeenth century until they were defeated in the Apache Wars in the late nineteenth century. During most of the early historic period, the area between El Paso and Socorro on the Rio Grande was sparsely settled and functioned primarily as a travel corridor (Laumbach 2011).

The Magdalena Ranger District is chock-full of historic lore of the Wild West. Outlaw renegades such as Butch Cassidy and the Wild Bunch and notorious Apaches like Cochise, Geronimo, and Victorio have ties to the mountains of the district. Perhaps most famous, was the Apache Kid, for whom the Apache Kid Wilderness in the San Mateo Mountains was named. The Apache Kid began his career in 1881 as a scout, aiding the U.S. Army's efforts to subdue the Apache. In 1857, the Apache Kid and four other scouts were wrongfully accused of shooting the famous scout Al Sieber, which began the Kid's life as an outlaw fugitive. On October 25, 1889, the four scouts and the Apache Kid were found guilty of the shooting and sentenced to seven years in territorial prison at Yuma, Arizona. During transport, the five Apaches escaped and fled, marking the last official sighting of the Kid and his gang (McKanna 2009). After this date, the legend of the Apache Kid becomes a blur as rumors of his crimes and exploits remain unconfirmed. The enigma that was the Apache Kid grew as he was credited with nearly every rape, murder, and robbery in the Arizona Territory (Figure 6).

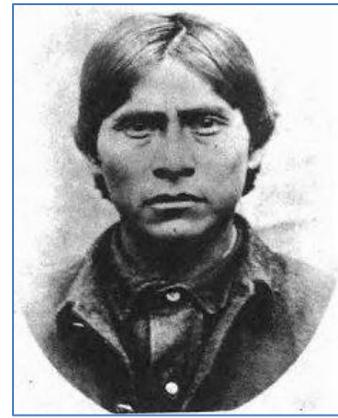


Figure 6. Undated Photo of the Apache Kid. Photo credit: Sharlot Hall Museum. Photographer: Erwin Baer.

Some have argued that it was not the Apache Kid killed in the San Mateo Mountains, but the Apache Massai, who was also noted for his various exploits around west central New Mexico and eastern Arizona. Although controversial, a gravesite memorial is located on the district a mile northwest of Apache Kid Peak at Cyclone Saddle, reportedly to mark the site where the Kid was killed by a posse of local ranchers (Figure 7). A tree with blazes marks the site, said to have been done by a Forest Ranger in 1910. The Forest also placed a sign (now dilapidated) at the marker tree, which read:

AT THIS PLACE APACHE KID, RENEGADE
MET HIS DEATH

“There is a possible grave about twenty (20) feet uphill, just north of the trail. The site consists of a low mound of boulder, measuring 2 ½ by 5 ½ feet.”

Whether it was the Apache Kid or Massai who was killed at Cyclone Saddle in the San Mateo Mountains of the Magdalena Ranger District, the site is “...associated with the lives of persons significant in the past” (36 CFR 60.4(b)). The grave itself is eligible for the National Register of Historic Places under criterion (a) for its association with the lives of either the Apache Kid or Massai

and criterion (b) because of its association with an historic event.



Fig. 7. Close-up of Apache Kid gravesite marker. Photo credit: Randy Weber and Paul Hoyt.

The Apache Kid, reputedly a dangerous renegade, was killed at the head of San Mateo Canyon in September 1906 or 1907. Historical sources about the Apache Kid are inconsistent and contradictory. There are numerous stories on how the Apache Kid met his death (Forrest and Hill 1947: 16). Despite confusion in the various accounts, few facts may be singled out as either known with certainty or as highly probable. The original Apache Kid was a San Carlos Apache, who, while being transported with other Apaches by stage coach to the territorial prison in Yuma, Arizona, escaped with his fellow prisoners in November 1889. This was the last confirmed sighting of the Apache Kid's whereabouts. From that time on, stories of depredations by the Apache Kid, and of his demise, became so common and dramatic that in southwestern folklore they may be exceeded

only by tales of lost Spanish gold. The account of Apache Kid's death that seems most credible is that he was killed in May 1890 in a clash with Mexican border troops, while trying to escape into Mexico. After this skirmish in 1890, scores of incidents and misdeeds continued to be attributed to him for the next seventeen years.

If the Apache Kid was killed at the Mexican border in May 1890, then clearly some other individual perished in the San Mateo Mountains in September 1906 or 1907. The confusion of the Apache Kid with the Native American killed in the San Mateos is found in the account of Ben Kemp (Kemp and Dykes 1968) and Walter Hearn (n. d.). It is unlikely that either author originated this bit of misinformation, because in the 1890s and early 1900s "Apache Kid" depredations were commonly reported across west central New Mexico. The posse that did the killing in the San Mateo Mountains did not initially know who they had murdered. Only later did stories circulate among local New Mexicans that it was the Apache Kid.

According to an account by Eve Ball (Ball with Henn and Sanchez 1980) the Native American killed at the site was Massai. The account came from Alberta Begay who was an Apache whose father was killed in an ambush when she was a little girl. Alberta Begay's account of this ambush matches some fundamental details with the story told by Kemp and Dykes (1968) and Hearn (n.d.) of how the Apache Kid was killed in Cyclone Saddle. Massai rode with Geronimo during the Apache Wars with the U.S. Army. He escaped from the train taking Geronimo's band to Florida, and made his way back to the Southwest. He married a Mescalero woman and they lived with their six children around the Mescal Mountain area in Arizona. Legend says that Massai instructed his family to go to San Marcial (New

Mexico) in the event of his death. This places the event in the correct general vicinity. The widow of the ambushed Native American appeared a few days later in San Marcial with her children; she left them there while she travelled back to the Mescalero Reservation to contact the Indian Agent. Her children eventually returned to the Mescalero Reservation later.

The above account seems to have taken on a life of its own among local people of the Socorro-Magdalena-Datil region. Various accounts of the Apache Kid's death seem to contain bits and pieces of the accounts presented by Ms. Begay and Kemp and Dykes (1968) and Walter Hearn's (n.d.). Extensive oral histories of early ranchers of the region compiled by Brenda Wilkinson of the Socorro Bureau of Land Management Field Office tell a similar yet different sequence of events (PC Brenda Wilkinson 2011).

In a 2009 oral history with Wesley Edward Burris (b. 1940), grandson of the Burris family patriarch (also named Wesley) new information came to light regarding the Apache Kid. The Burris family has a long and storied past deeply rooted in the Socorro area dating back to the arrival of Wesley and Martha Burris who arrived in Rosedale, NM from Oklahoma in 1899. Wesley was a miner and Martha, possessing a college degree, taught at the Rosedale school. Wesley and Martha's son, Edward Wesley Burris, was born in Rosedale two years later in 1901. The following account is derived from Edward Wesley Burris's hand-written journal obtained during a separate 1986 interview (lightly edited – spelling, names, and, language that of E.W. Burris):

In April 1904, there was an Indian – an Apache – killed at Cyclone Saddle on Blue Mountain in the San Mateo mountains. He was the Indian that jumped off of the

trail in Kansas when the government was taking the Apaches that they had captured at Apache Pass that were with Geronimo when they went on the war path from White River Arizona and started to Old Mexico and Captain Scott captured them.

And this one got away and came back to New Mexico and went on the war path stealing horses and raiding ranches – his name was Pees, not Apache Kid. He had been down in Old Mexico where the Apaches are down there and had stolen some horses and was on his way to Alamo – so he come by here.

At Chloride in the Black Range, (he) robbed a ranch there and shot at a Mexican boy and took some horses then came over to a ranch on the (Cañada Alamosa?) river above Monticello – and killed a big steer there and made the women cook some of it for them.

He had a squaw and four children with him – a girl about 17, a boy about 14 years old, and two smaller children. He took some horses from there and went on – the men from those ranches were up at the ranch in West Red Canyon with a roundup wagon – so Charlie Sullivan went and told them. Sebe Sorrells went with him and they were joined by Albert Sheron and Walter Hearn. They went to the Yaples place and from there they were joined by Billie Finnley. So – they took the old trail to Cyclone Saddle. They found the horses all hobbled out in the night – so they hid in the bluffs to wait for daylight. Then they were joined in the night by Ben Cox, Ben Foster, and Charlie Sullivan who had come up from West Red Canyon to Cyclone Saddle. They all laid up to wait for old Pees – just as the sun came up Albert and Sebe were on guard – Albert said to Sebe, “I see him coming.” Sebe said “you whistle and I will shoot him” – so he did with a 25-35 Winchester, right between the eyes.

So they all started down to the camp and these two half-grown Indians run out and Charlie shot at one of them and killed it and the other one was able to get off of the mountain down toward Tonto Basin and they didn't see any more and when they got to this one that Charlie had shot it was a squaw about full grown. So they got a old pole axe at the camp and started to dig a grave with it and down about three feet they struck rock so they put her there and built up around the grave with loose rock. Then there was a bunch of horses that they didn't know to who they belonged – 19 of them – so they took the horses up a draw and killed them – every head a bullet hole in it. So when they looked old Pees over they found a watch sewed up in the lining of his coat that belonged to a man that someone had dropped a rock on while he was herding goats for Acie Johnson – down in the Black Range. Old Fill “One Ear” Hiller went to the penitentiary in Santa Fe for killing him – so – R.P. Ponkey took the watch to Santa Fe and they turned old Fill Hiller out.

So this older squaw was in a teepee just next to where they killed the 19 horses. So when the shooting was all over she took the two little Indians and started east off of the trail and finally wound up at Fales-Gonzales place down in Milligan Gulch. She said that he was her uncle so she left the two little ones there and stole Sam Vivian's work mare and rode her to the Thurgood Ranch at Salinas Peak then took his saddle horse out of the corral that night and rode him to Mescalero that was where she come from before he (Pees) had taken her off when she was a girl. There was a bunch of Apache kids swimming in (Muskerillo?) River and old Pees come along a horseback and picked her up and carried her off – after she went to Mescalero. She come back over on the train and got the two little Indians she had left with

Fales and came to San Marcial, NM to take em back to Mescalero.

Many years later in 1959 at the Fort Craig Service Station, an Apache came in and asked me if I had been here a long time in them Mountains, and I said “yes”. I was born and raised in them – he said. You was here when they killed that Indian up there in 1904? I said “yes”. He said they say that he was the Apache Kid. But he wasn't – he was the Indian that jumped off the train in Kansas when they were taking them Apaches to Tennessee and his name was Pees. I said “where did you come from?” He said from Mescalero. I said “where are you going?” And he said “Back to Mescalero”. So I asked him if them children that the squaw took from over here were living over there – and he said “no after living up there in a cave on roots and bugs – they went to feeding them Post Toasties and they died.” He might have been the boy that run off when they killed the young squaw.

E.W. Burris's account of the killing in Cyclone saddle tells yet another local account contributing to the legend of the Apache Kid. It also illustrates the difficulty of separating fact from fiction surrounding famous western outlaws. What is certain is that an Apache died at the hands of a lynch mob exacting vigilante justice indicative of life in New Mexico territory during the late nineteenth and early twentieth centuries. Events such as what occurred up in Cyclone Saddle are an integral part of the heritage of Socorro County and Magdalena.

Extensive use of the area by non-Native Americans did not occur until the discovery of silver and lead in the Mountains south of the Village of Magdalena in 1863 and 1866. Mining and settlement in the area increased over the years and boomed once a spur railroad was built in 1885. Prominent mining areas on the district include the

Kelly, Waldo, and Rosedale mines. By 1886, the Magdalena area contained “two general stores, one notion store, one drug store, two livery stables, three restaurants, two blacksmith shops, two lumber yards, one hardware store, a sash and door establishment, one book store, one feed store, one church, one school house, and four sa-loons” (Magdalena Centennial Committee 1984:11). In 1918, Magdalena had two schools and 600 pupils. The area continued to grow until the late 1920s – early 1930s when the banks and mines closed down.

Mining in the rugged mountainous terrain of Magdalena required much technological advancement. One of which was the aerial tramways used to transport ore deposits up and down mountain slopes. Miners constructed aerial wire tramways to transport ore deposits from adit and shaft mines from mountain tops down to the bottom ore mill where it could be processed and loaded onto transport vehicles. Tramways of this type were common in mountainous regions in the early 20th century. Firms to capitalize on this technological market included Otto, Leschen, BRECO, Ceretti and Tanfani, and Riblet. An aerial tramway consists of a lower terminal (for unloading ore), an upper terminal (for loading ore), and multiple Finlayson-type towers using steel and wooden materials. Common tramways used in Magdalena mining endeavors were constructed by A. Leschen & Sons Rope Company of St. Louis, Missouri. At the time, this was a state-of-the-art aerial tramway whose system of buckets (called carriers) replaced the slow and dangerous method of using horses and wagons to carry heavy ore.

At the upper terminal, standing ropes were run through castings and anchored. A track connected to the castings and bolted to the timber work took the place of the carrying ropes. Empty carriers

would arrive at the upper terminal and run onto a rail around the terminal wheel to the releasing rod, where the clip is released from the empty carrier and passes on to the loaded carrier to engage the longer of two levers called the clip lever. The carrier instantaneously becomes attached to the shorter of the two levers known as the carrier lever. The carrier lever is fulcrumed to the clip lever in such a way that the speed of the carrier decreases gradually until it stops at the loading point. The clip lever and clip meanwhile pass along until the clip comes in contact with a device for accelerating the carrier, which until then has been loading, and the latter is gradually moved from its stationary position until it receives the full speed of the hauling rope. When the clip becomes locked in the clip frame and the carrier passes along the line, the two levers then return to their original position ready to receive the next arriving carrier (Figure 7) (Wallis-Taylor 1911).

The lower terminal has a similar arrangement for automatically handling the carriers to and from the running rope. This terminal is mounted on sills to facilitate its sliding backwards and taking up the tension on the running rope and so controlling the latter independently of the carrying rope. As a loaded carrier is released on its arrival from the hauling rope at the yoke its speed is gradually decreased through the series of levers as described with reference to the upper terminal. The clip goes on to the accelerator and picks up the empty carrier which passes round the lower terminal wheel, the levers return to place, and the loaded carrier stops at the discharging point (Wallis-Taylor 1911).

At the lower terminal is located the Leschen dumping device, which when in action makes one



Figure 8. Close-up of an aerial tramway terminal.

revolution of the terminal shaft and stands at rest until again thrown into action. During this revolution the dumping rods are operated after coming in contact with a pin on the bottom of the carrier that tip up the carrier and entirely spill the contents. No violent action takes place, the dumping rod being merely pulled up and let down. The clip passing from one carrier to the next is guided by a slot rail to ensure it is in its proper position to strike the accelerator. In the Leschen system there are always two stationary carriers, one at the upper terminal ready to load or loaded, and one at the lower terminal dumped or ready to be dumped (Wallis-Taylor 1911).

Typically, the timber required for the construction of each of the above terminals is as follows:

Main sills, two pieces, 10 in. by 10 in. by 22 ft. ; cross sills, three pieces, 10 in. by 10 in. by 16 ft.; top frame, two pieces, 10 in. by 10 in. by 20 ft. ; centre, two pieces, 8 in. by 8 in. by 20 ft. ; short posts and headers, one piece, 8 in. by 8 in. by 16 ft. ; posts and back cap, three pieces, 10 in. by 10 in. by 12 ft. ; headers, one piece, 10 in. by 10 in. by 10 ft. ; headers, one piece, 8 in. by 10 in. by 6 ft. ; track girts, ten

pieces, 4 in. by 6 in. by 16 ft. ; 500 ft. of 1-in. boards.

Personal correspondence with Professor Robert Eveleth of New Mexico Institute of Mining and Technology explained that manganese mining of the type conducted in the Magdalenas occurred primarily during the late 1940s and the early 1950s as part of the U.S. government's car load lot program. Manganese was identified as a strategic raw material during World War II and continued to be important in the years after for its importance in machinery production. Dr. Eveleth went on to speculate that the tramway at the Burris Claims more than likely was the same tramway from the Waldo Mine, which closed in 1949. It was common practice in mining to sell equipment locally if there was a need. If that is the case, it could explain why one single tower at the Burris Claims was constructed out of wood rather than metal (to configure the tramway to the local topography). It also helps explain why the dates embossed on bolts at the lower terminal are significantly older than the mine itself (PC Dr. Robert Eveleth 2010). Based on Professor Eveleth's insight, and the remarkable preservation of the site, it is likely that the Burris Claims Mine site dates to the early 1950s.

The decline of mining was hardly the end of the resilient Village of Magdalena. The last regularly used cattle trail in the United States stretched 125 miles westward from Magdalena. It began use in January 1885 with the arrival of the railroad. The route was formally known as the Magdalena Livestock Driveway, but more popularly known to cowboys and cattlemen as the Beefsteak Trail, which rivaled the Chisholm Trail in importance (Fugate and Fugate 1989: 389). Annually, herds were gathered from eastern Arizona and western New Mexico and driven to the railhead at Magdalena and loaded up for transport resulting in the village receiving the name "Trails End".

The trail's peak year was 1919 when some 21,677 cattle and 150,000 sheep were driven cross-country over the trail. The trail was continually used until trailing gave way to trucking and the trail officially closed in November 1971. The cattle heritage of Magdalena remains integral to the community's spirit and identity, evidenced by the annual "Old Timers" festival and rodeo.

The Magdalena Ranger District has many representative samples of Civilian Conservation Corps-era (CCC) heritage resources, including the operative Springtime Campground. During the hard times of the Great Depression, President Franklin Delano Roosevelt outlined his determination to put America's citizens back to work in his first inaugural address on March 4, 1933. He outlined an ambitious plan to begin "greatly needed projects to stimulate and reorganize the use of our natural resources" (NM Tourism Department 2006: 1). In subsequent speeches, FDR further argued his case:

This enterprise will conserve our precious natural resources. More important than the material gains will be the moral and spiritual value of such work. We can take a vast army of these unemployed out into healthy surroundings. We can eliminate the threat that enforced idleness brings to spiritual and moral stability.

And so it was in his purpose to save "two of the nation's wasted resources, the young men and the land," the President signed Senate Bill 5.598 on March 31, 1933 launching the New Deal relief program that included the Emergency Conservation Work (ECW) Act, or what was more commonly referred to as the Civilian Conservation Corps (CCC) (NM Tourism Department 2006: 2). In broad terms, the CCC's mission was to provide training and employment in conservation and the development of the nation's natural resources by

such activities as planting trees, building dams, and fighting forest fires. Initially, the CCC planned to quickly build 1,330 camps across the nation over a period of four months and enroll up to 250,000 young men. The CCC's mission was a natural fit for the Department of Agriculture and the U.S. Forest Service, who along with the Department of Interior planned most of the projects and provided technical oversight.

Springtime Campground was constructed between November 1936 and May 1937 by Camp F-51-N of the Civilian Conservation Corps (CCC). The CCC's overriding mission in southern New Mexico focused on the Rio Grande Watershed above Elephant Butte Reservoir that implemented conservation measures aimed at reducing siltation. Camp F-51-N was based at Redrocks north of Monticello, NM, near the junction of the U.S. Forest Service road (FR 139) going to Springtime Campground. Camp F-51-N was a medium-sized camp established to improve roads, build fences and water tanks, landscaping, erosion control, in addition to introducing game conservation measures. The Redrocks area was also the location of a Ranger station when the area was a part of the Datil National Forest (now the Cibola National Forest). Both the Redrocks CCC camp and the old Ranger Station are now privately owned property.

The Springtime Campground contains five trailside Adirondack shelters that are representative of CCC style and workmanship. Each shelter was constructed using small diameter pine logs in lean-to style with three walls and one open section for each structure. Each shelter has a floor area that is 9 feet by 7 feet and a height of 7 feet at the open end and 4 feet on the back end. The five shelters retain integrity of design, workmanship, materials, and association and have been determined eligible for inclusion on the National Reg-

ister of Historic Places under criterion A, in that the shelters are associated with events that have made a significant contribution to the broad patterns of our history.

The USDA Forest Service is the oldest continuous business in Magdalena. The Magdalena Ranger District traces its roots to 1899 with the creation of the Gila Forest Reserve, and received its name in 1906. That same year, Mount Taylor and Manzano forest reserves were also established in west central and central New Mexico. All of these forest reserves were designated national forests in 1907. In 1908, Mount Taylor National Forest was added to Manzano National Forest and San Mateo National Forest was added to Magdalena National Forest resulting in the creation of Datil National Forest. In 1910, the Forest Service made Magdalena the headquarters for the Datil National Forest, one of the largest in the nation at over 3 million acres. In 1931 Cibola National Forest was established, combining Manzano and Datil national forests and their constituent parts (Davis 1983). The name and district boundaries were changed in the 1940s to the present Magdalena Ranger District, Cibola National Forest (Figure 8). At one time, district offices were once located at Water Canyon, Monica, Baldwin, Rose-dale, Red Rock, Council Rock, and Pigeon Canyon (Magdalena Centennial Committee 1984:65).

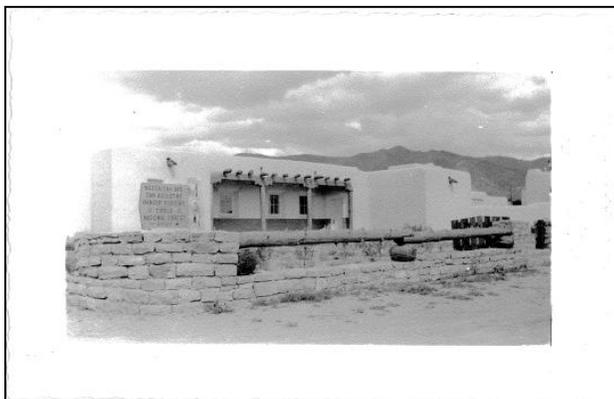


Figure 9. Magdalena Ranger Station, ca. 1941.

V. SURVEY STANDARDS FOR CONTRACTORS

The Cibola National Forest, Magdalena Ranger District Heritage program manages historic properties in accordance with the Region 3 First Amended Programmatic Agreement, the Forest Service Heritage Program Manual (FSH 2309.12), and under strict consultation with the New Mexico State Historic Preservation Office. There are some specific procedures and protocols unique to the Cibola National Forest Heritage Program that contractors may or may not encounter when doing business with other Forests and Federal Agencies. This section is intended to describe the Forest's expectations of contractor's performance.

Personnel must meet the requirements of Section X of the Region 3 Programmatic Agreement. Each field survey crew will be lead by a crew chief qualified archaeologist who meets the equivalent experience and educational requirements of GS-0193 series professional archaeologist established by the Office of Personnel Management (OPM X-118). Crewmembers must meet the equivalent experience and educational requirements of GS-0102 technician series. The Principal Investigator will provide the Magdalena Ranger District Archaeologist or the Cibola National Forest Archaeologist with resume/vitae for all personnel used on the project for approval.

Pedestrian surveys should be conducted by compass-controlled transects spaced no greater than 15 meters apart in block survey areas and parallel transects spaced no more than 15 meters apart along linear units. Survey pace must not exceed an average of **25 acres** per person per day. Spot checks of survey coverage will be conducted for every contract by Forest Archaeologists for quality assurance.

For the Southwestern Region of the Forest Service (including the Cibola), a cultural resource site is defined as a locus of purposeful prehistoric or historic human activity, which has resulted in a deposit of cultural material beyond a level of one or a few accidentally lost artifacts. A cultural resource qualifying as a site under this definition

should exhibit at least one of the following:

- (1) One or more features.
- (2) One formal tool if associated with other cultural material, or more than one formal tool.
- (3) An occurrence of cultural material (such as pottery sherds, chipped stone, or historic items) that contain one of the following:
 - i. Three or more types of artifacts or raw material.
 - ii. Two types of artifacts or material in a density of at least ten items per 100 square meters.
 - iii. A single type of artifact or material in a density of at least 25 items per 100 square meters.

Site definition criteria may be modified, where appropriate, based on a professional cultural resource specialist's judgment. However, contractors should discuss gray-area situations with the Contracting Officers Representative (COR) to see how the Forest wants to manage the property.

For eligibility recommendations, the following types of heritage resources, provided they are 50 years old or older and clearly retain integrity, may be considered eligible for the National Register of Historic Places:

- (1) Properties with clear evidence for the presence of structures (historic structures, pueblos, pithouses, field houses, etc.)
- (2) Properties with hundreds of surface artifacts
- (3) Properties with clearly visible evidence of in-tact subsurface deposits
- (4) Properties that clearly meet the National Register listing requirements in State historic contexts, existing multiple-property contexts, or

SHPO-approved Forest-level historic contexts

At a minimum the contractor shall record all heritage resource sites located in the project area in accordance with the appropriate State standards, to the level of site recording identified in the associated task order and with the USDA-Forest Service Region 3 Cultural Resources Handbook. Locational information will be collected in UTM's, NAD 1983 datum. Photographs will be taken of each site.

Evaluate each heritage resources site and make a recommendation regarding its eligibility to the National Register of Historic Places using all criteria listed in 36 CFR 60.6, USDI-National Register Bulletin 15, and provide all appropriate site, feature, and artifact documentation as required by the appropriate State Historic Preservation Office as justification for a determination of eligibility, and as specified in an associated task order. An eligibility recommendation of "Undetermined" may be made, with justification, when eligibility is inconclusive based on surface observations.

All previously recorded sites located within the survey area that have been determined to be eligible, or that have not received an eligibility determination, will also be documented. All site records shall be updated using the Custom Magdalena Ranger District Version of the Laboratory of Anthropology site inventory update form for the state of New Mexico. In the case of previously recorded sites that have not been documented using the modern Laboratory of Anthropology Form (i.e. the old CRAIS forms), a full rerecord is required. In the case of those sites that have not received an eligibility determination, site updates shall include an evaluation of the site's eligibility to the National Register of Historic Places. All appropriate documentation, as required by the appropriate State Historic Preservation Office, shall be provided as a justification for a determination of eligibility. Any previously recorded site that

has been determined to be not eligible to the National Register of Historic Places will not be updated.

The following applies to all sites. The site boundary shall be marked with white flagging tape (or other method, depending on the type of project and appropriate Forest standards as specified in the associated task order) in such a manner that a person who has not previously seen the site can easily identify it. Flagging on trees on the perimeter of the site should be inter-visible and not obscured by branches or foliage. Site boundaries marked on the ground should correspond to the boundaries as mapped. A datum tree or other convenient, fairly permanent object, such as a fence post, will be established as near as possible to the center of the site or next to a prominent feature of the site. The location of the datum shall be recorded using a GPS, in UTM's, NAD 83 UTM Zone 13N. An aluminum tag with the site number shall be attached to the datum at stump level with an aluminum nail unless otherwise specified in the individual work order. The site datum shall also be identified by placing two bands of white flagging tape around or on it. The USDA-Forest Service realizes that this marking system is not always possible at each site; any deviation from this system should be discussed with the Contracting Officer's Representative and documented in the report. Unless specified in a task order, this will be the standard site marking treatment.

After fieldwork is complete, the contractor will provide a report, which describes the survey and results. The report will be used for National Historic Preservation Act, Section 106 consultation between the USDA-Forest Service and the appropriate State Historic Preservation Office and as such, shall provide sufficient information with which to conduct these procedures. The report shall contain a description of the proposed project

for which the archaeological survey is being conducted.

The report must be accompanied by the appropriate Custom Magdalena Ranger District Laboratory of Anthropology site inventory forms or other appropriate site documentation forms as specified in the associated task order, all artifact recording forms, with diagnostic artifact drawings, I.O forms, with diagnostic artifact drawings, and all other appropriate recording forms, as well as the necessary number of 7.5 minute USGS topographic maps required to show clearly the locations of all heritage resources found, the survey boundaries, and the project location. All site locations will be marked on the topographic maps in accordance with standards set forth in the USDA-Forest Service Region 3 Cultural Resources Handbook. All topographic maps included in the report shall contain a heading in accordance with the standards set forth in the USDA-Forest Service Region 3 Cultural Resources Handbook. All site forms, photo logs, prints, negatives, and unused government-furnished property will be returned to the Contracting Officer's Representative with the report.

The Cibola National Forest considers the Laboratory of Anthropology (LA) Forms to be stand-alone documents. Each LA form should contain:

- (1) Printed out site and artifact photographs with captions.
- (2) Plan view drawing of the site (site map).
- (3) Site location map at 1:24,000 scale.

The final deliverables should include:

- (1) Three copies of the report.
- (2) Three copies of each LA form
- (3) Three copies of all other documentation

- (4) A CD/DVD containing electronic versions of all documentation, maps, photos, and GIS data.

VI. MAGDALENA CUSTOM LA FORM

Two important aspects of managing lands on the Magdalena Ranger District are the range and fire programs. A large portion the Magdalena Heritage Program efforts are to support range and fire undertakings. For that reason, pertinent data associated with these programs is imperative to manage cultural properties on the district. In addition, a recent Forest Service mandate, the Travel Management Rule, requires a long-term monitoring plan to assess the effects of the undertaking. To gather the required data, a custom Laboratory of Anthropology (LA) site record was created. This section explains the custom LA form and how to record the necessary information.

There are several fields under “Section 3 - Condition” and “Section 6 - Location” on the Magdalena Ranger District custom LA Site Record form not present on the standard form. These fields are described below. These fields are designed to capture site condition information specific to Forest Service heritage resource management objectives. The creation of the fields also affects the use of some existing fields; changes in the use of these fields are also described below.

SECTION 3. CONDITION

Disturbance Sources: Specify all significant sources of disturbance observed on the site. If the physical evidence is localized, as in potholes or arroyo cuts, include this information on the site sketch map. Describe the nature of the impacts in the "Observations on Site Condition" section. NOTE THAT THERE ARE TWO ADDITIONAL CHECK-BOXES ON THIS FORM FOR “FIRE” and “GRAZING” THAT ARE NOT ON THE STANDARD LA FORM.

- *wind erosion:* Check box if the site has been subject to significant wind erosion (e.g., dune blowouts or "lag" artifact scatters).

- *water erosion:* Check box if the site has been subject to significant water erosion (e.g., arroyo cutting or sheet washing of midden materials).
- *bioturbation:* Check box if burrowing rodents, birds, insects, etc. seriously disturbed subsurface archeological deposits. DO NOT CHECK THIS BOX FOR GRAZING IMPACTS; check “grazing” instead.
- *grazing:* Check box if evidence of grazing by domestic or feral livestock (cattle, sheep, goats, horses, etc.) is present. Check bioturbation if there is grazing disturbance from large non-domestic (or non-feral domestic) ungulates, such as deer, elk or antelope.
- *fire:* Check box if site has been damaged by wildland fire or by prescribed burning. Do not check this box for arson-burned structures. For arson damage, check the "vandalism" box and check “damaged/defaced building” under the Vandalism subcategory.
- *vandalism:* Check box if non-scientific excavations have been performed on site or archeological features or deposits have been intentionally destroyed or defaced.
- *construction/land development:* Check box if construction or land development actions, including land management activities such as timber cutting, have damaged the site. Do not use this check box for impacts from prescribed burning or grazing. Check “Fire” and “Grazing”, respectively, for these impacts.
- *other source:* Check box if there is another source of disturbance to the site. Specify the disturbance type in the accompanying blank.

Grazing Impacts: Indicate the impacts to the site from livestock grazing, if any. Choose one of the four boxes indicating the degree of impact (none, low, moderate, high). Also check the “damaged

features?" box if there is evident damage to features. Describe the nature of the impacts in the "Observations on Site Condition" section.

- *none*: Check box if there is no grazing evident (grasses are ungrazed).
- *low*: Check box if there is minimal evidence of grazing (a few hoof prints).
- *moderate*: Check box if there are hoof prints, dung and short grazed grasses on the site.
- *high*: Check box if there is evidence of bedding down, hoof prints, dung, a corral nearby, and/or a water source near or on-site.
- *features damaged?*: Check box if there is evidence of damage from grazing to site features (standing architecture, wall alignments, etc.).

Fuel Loading: Indicate the type of fuels present on the site. Document the potential threats to the site from prescribed burning or wild land fire in "Observations on Site Condition" section.

- *1 hour*: Check box if there are grasses, litter (duff, leaves), and/or twigs < 1/4" in diameter on the site surface.
- *10 hour*: Check box if there are sticks and twigs 1/4" to 1" in diameter on the site surface.
- *100 hour*: Check box if there are down branches and limbs that are 1" to 3" in diameter on the site surface.
- *1000+ hour*: Check box if there are large limbs, down logs, and stumps >3" in diameter on the site surface.
- *flammable features*: Check box if the site contains wooden or other fire-threatened features (rockshelters, rock art, exposed hearths, etc.).
- *fuels on feature*: Check box if there are 10-1000 hour fuels (including stumps) in contact with site features.

- *dense understory*: Check box if the site contains dense brush, shrubs, small trees or other live understory material that could intensely burn.
- *ladder fuels*: Check box if there are shrubs, small trees, or low hanging branches that could transport fire from the ground into the crowns of trees.
- *closed overstory*: Check box if the trees on the site have limbs in contact with one another that could permit the spread of a crown fire.
- *other potential fire impacts*: Check box if there are other potential threats to the site from prescribed burning or wild land fire. Specify other potential threats to the site from prescribed burning or wild land fire in the accompanying blank.

Recreation / Motorized Impacts: This section helps the forest monitor the effects of implementing the travel management rule. Specifically, this section is designed to determine if there are any impacts to historic properties resulting from motorized vehicles (ATVs, UTVs, motorcycles, etc.) and camping activities. Motorized vehicle impacts can include displaced artifacts, crushing of artifacts, damage to features or architecture, and rutting or the hardened creation of a user-created route. Camping-related impacts can include construction of modern campfire rings, evidence of theft or unauthorized excavations, graffiti, littering, or the creation of a hardened campsite.

- *off-road vehicle impacts*: Check box if motorized off-road vehicle tracks are noted within the site boundary. Describe impacts in the "Observations on Site Condition" section.
- *camping impacts*: Check box if evidence of camping is noticed such as modern trash, campfire rings, footprints, vandalism, etc.
- *features damaged?*: Check box if either impacts have damaged features or archi-

texture. Describe impacts in “Observations on Site Condition” section.

Section 6. Location

FS PBS Quad?: Check box if a Forest Service primary base series (PBS) 7.5’ topographic quadrangle is used as the source graphics for displaying the site location on maps attached to the LA site record form.

Unplatted: Never check this box for sites located wholly on Forest Service lands. All Forest Service lands have either legal or protracted PLSS locations. Check box only if site lies partially or wholly on lands of another jurisdiction. If the site lies partially on Forest Service lands, complete the PLSS location description for this portion of the site, and check “Unplatted” on a subsequent line for the portion of the site that lies on another jurisdiction (if that jurisdiction is unplatted).

Protracted: Check box if PLSS location has been calculated using a protracted location shown on Forest Service PBS 7.5’ topographic quadrangles.

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Cibola National Forest, Albuquerque



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APPENDIX A – COMMON CERAMIC TYPES ON THE MAGDALENA RANGER DISTRICT
(ADAPTED FROM DYER – 2008)

Photos by Rob Doster. Courtesy of Laboratory of Anthropology.

BROWNWARES



Exterior

Alma Incised: A.D. 300-925
Culture Affiliation: Western Mogollon
Paint: None
Temper: Heterogeneous
Paste: Brown



Exterior

Alma Punched: A.D. 300-925
Culture Affiliation: Western Mogollon
Paint: None
Temper: Heterogeneous
Paste: Grey to brown; porous



Alma Plain: A.D. 300-950
Culture Affiliation: Western Mogollon
Paint: None
Temper: Med. to course sand; white quartz fragments
Paste: Black to grey to light brown occasional carbon streak



Exterior

Alma Rough: A.D. 750-800
Culture Affiliation: Western Mogollon
Paint: None
Temper: Course sand; white quartz fragments
Paste: Brown to black; uniform in color or gray core



Los Lunas Smudged: A.D. 1125/1270-1370
 Culture Affiliation: Rio Grande, Socorro District, PII
 Paint: None
 Temper: Sand w/ crystalline inclusions & white specks
 Paste: Brown to black



Reserve Plain Corrugated: A.D. 1000-1200
 Culture Affiliation: Western Mogollon
 Paint: None
 Temper: Light sand; mostly round, some angular
 Paste: Pinkish tan to dark brown



Reserve Indented Corrugated: A.D. 1050-1250
 Culture Affiliation: Western Mogollon
 Paint: None
 Temper: Light sand, abundant temper
 Paste: Pinkish tan to dark brown



Reserve Smudged: A.D. 750-800
 Culture Affiliation: Western Mogollon
 Paint: None
 Temper: Angular, heterogeneous materials
 Paste: Brown

GRAY WARES



Clapboard Corrugated: A.D. 1100-1500
Culture Affiliation: Rio Grande, Middle & Upper Districts
Paint: None
Temper: Sand
Paste: Mostly brown, dark grey, or black; course



Plain Corrugated: A.D. 950-1300
Culture Affiliation: Rio Grande, Middle & Upper Districts
Paint: None
Temper: Sand, occasionally crushed rock
Paste: Mostly brown, dark grey, or black; course



Indented Corrugated: A.D. 1150-1450
Culture Affiliation: Rio Grande, Middle & Upper Districts
Paint: None
Temper: Sand, occasionally crushed rock
Paste: Mostly brown, dark grey, or black; course



Plain Gray: A.D. 450-1600
Culture Affiliation: Rio Grande, Middle & Upper Districts
Paint: None
Temper: Sand, sand/tuff sherd
Paste: Light grey to brown

WHITE WARES



Escavada Black-on-white: A.D. 925-1125
Culture Affiliation: Anasazi (Cibola white ware)
Paint: Mineral, black
Temper: Course quartz and crushed potsherds
Paste: Grey, usually showing dark core



Kiatuthlanna Black-on-white: A.D. 825-910
Culture Affiliation: Anasazi (Cibola white ware)
Paint: Mineral, dense black
Temper: Sand
Paste: Grey, carbon streaks are common



Gallup Black-on-white: A.D. 1000-1150
Culture Affiliation: Anasazi (Cibola white ware)
Paint: Mineral, dull; heavy
Temper: Sherd and/or sand
Paste: Grey, vitrification common



Magdalena Black-on-white: A.D. ca. 1300s - ?
Culture Affiliation: Anasazi /Mogollon
Paint: Mineral, dense black
Temper: Sherd
Paste: Dark Grey
NOTE: Local variant – some believe this to be Mesa Verde B-on-w. However, the slip on Magdalena B-on-w “crackles” differentiating from Mesa Verde wares.



Bowl interior
 Puerco Black-on-white: A.D. 1010-1125
 Culture Affiliation: Anasazi (Cibola white ware)
 Paint: Mineral and carbon, heavy black
 Temper: Sherd more common
 Paste: Grey



Bowl interior
 Socorro Black-on-white: A.D. 1050-1300
 Culture Affiliation: Anasazi
 Paint: Mineral, distinctive dark black
 Temper: Fine sand w/ crushed dark stone
 Paste: Light to dark bluish grey; hard



Bowl interior
 San Marcial Black-on-white: A.D. 750-950
 Culture Affiliation: Anasazi
 Paint: Mineral, dense black, blackish brown, reddish brown
 Temper: Course sand
 Paste: Creamy white or ivory



Bowl interior
 Tularosa Black-on-white: A.D. 1100-1325
 Culture Affiliation: Anasazi
 Paint: Mineral
 Temper: Crushed sherd
 Paste: Grey

RED WARES



Puerco Black-on-red: A.D. 1030-1175
Culture Affiliation: Anasazi (White Mountain Redware)
Paint: Mineral, thin, black
Temper: Crushed sherds
Paste: Orange, medium in fineness



St. Johns Black-on-red: A.D. 1175-1300
Culture Affiliation: Anasazi (White Mountain Redware)
Paint: Mineral-carbon mix, brownish-black
Temper: Sherd
Paste: White, grey, buff, or pink



Wingate Black-on-red: A.D. 1050-1200
Culture Affiliation: Anasazi (White Mountain Redware)
Paint: Mineral, heavy, black
Temper: Sherd; white angular particles
Paste: Grey to orange

POLYCHROMES



St. John's Polychrome: A.D. 1175-1300
Culture Affiliation: Anasazi (White Mountain Redware)
Paint: Mineral to matte glaze; Interior decorated with dark grey to grey-brown matte mineral to matte glaze paint; Exterior decorated with simple design in chalky white paint
Temper: Crushed sherds
Paste: Creamy-white, light grey, light brown, yellowish buff

Wingate Polychrome: A.D. 1125-1200
Culture Affiliation: Anasazi
Paint: Mineral and carbon combination; thin brown or black. Penetrates slip. White paint applied after black paint
Temper: Sherd; rounded quartz
Paste: Light brown, orange-buff, light grey, or white

RIO GRANDE GLAZEWARES

Note: Rim forms are the only definite distinguishing feature.
(Adapted from Pecos Archaeological Survey 1996)

Glaze A: Direct rims; brown to black glaze; glaze not runny; bichromes more common than polychromes; polychromes produced by contrastive slipping or red matte edging; paneled band designs with panels separated by open spaces; geometric motifs common; hemispherical bowls and low-neck globular jars.

Glaze B: Bowls have thickened, flat rims; glaze not runny; high contrast glaze polychrome with use of outlined red figures; paneled band layouts; bichromes and polychromes.

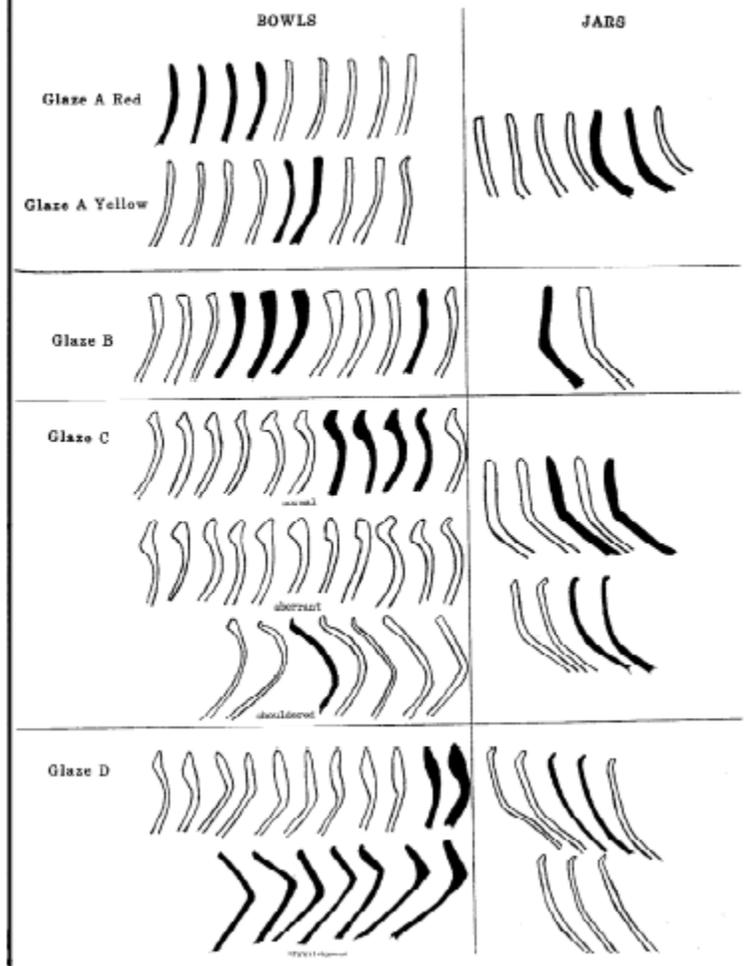
Glaze C: Short, everted rims; glaze not runny; gaudy appearance; rich red matte paint and lustrous glaze on light off-white slips; shouldered bowls introduced.

Glaze D: Bowls have convex inner rim face ending in low carina with exterior flare or recurve; glaze not runny; polychromes only; subdued tones of fawn, tan, orange, and deep red; introduction of all-over designs, the awanyu motif, and increased use of aviforms.

Glaze E: Bowl rims are exaggerated forms of Glaze D—rims that are high, thick, and recurved on exterior with marked exterior angularity with the lower body; rims also can be thick rectangular and club-like, all exhibiting low carina; glaze tends to be runny; emphasis on unpaneled glaze design with glaze-outlined figures sloppily executed; fawn and light off-white continue with some highly contrastive gaudy decoration like Glaze C.

Glaze F: Bowls have high, thin rims with flat lips, recurved to exterior; glaze extremely runny, usually towards the rim; glaze tends to be apple green; bichrome decoration predominant; decoration most often restricted to unpaneled line designs near rim.

Rio Grande Glazes A through D Rims



Rio Grande Glazes E and F Rims

BOWLS

JARS

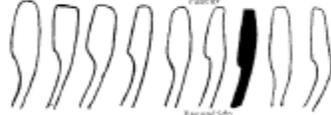
Glaze E



FLASK STYLE



FLASK



EXTRA GLAZE



CONSIDERED



Glaze F



Glaze F



Bowl interior

Rio Grande Glaze A: A.D. 1315-1425

Culture Affiliation: Rio Grande

Paint: Glaze; non runny & well controlled

Temper: Igneous rock, occasionally sherd

Paste: Red brown or red margins w/grey core



Bowl interior

Rio Grande Glaze C: A.D. 1425-1490

Culture Affiliation: Rio Grande

Paint: Black glaze and red matte paint

Temper: Igneous rock, some sandstone and siltstone

Paste: Red brown margins w/grey core



Bowl interior

Rio Grande Glaze B: A.D. 1400-1450

Culture Affiliation: Rio Grande

Paint: Glaze; non runny & well controlled

Temper: Igneous rock, some sandstone & siltstone

Paste: Greyish-yellow to red



Bowl interior

Rio Grande Glaze D: A.D. 1490-1515

Culture Affiliation: Rio Grande

Paint: Brown to black glaze paint and red matte paint

Temper: Igneous rock, some sandstone and siltstone

Paste: Grades from buff to red



Rio Grande Glaze E: A.D. 1515-1650

Culture Affiliation: Rio Grande

Paint: Brownish-black glaze & dark red matte paint; runny

Temper: Igneous rock, some sandstone and siltstone

Paste: Red to buff or dark brown



Rio Grande Glaze F: A.D. 1600-1700/1750

Culture Affiliation: Rio Grande

Paint: Brownish-black to green glaze; thick and runny

Temper: Igneous rock, some sandstone and siltstone

Paste: Brownish-red margins with grey cores

APPENDIX B - FLORA RESOURCES ON THE MAGDALENA RANGER DISTRICT



Ponderosa Pine, *Pinus ponderosa*



Southwestern White Pine, *Pinus strobiformis*



Douglas-fir, *Pseudotsuga menziesii*



Two-needle Pinyon, *Pinus edulis*



White fir, *Abies concolor*



One-seed juniper, *Juniperus monosperma*



Rocky Mountain juniper, *Juniperus scopulorum* Sarg.



© Patrick J. Alexander

Mountain Mahogany, *Cercocarpus montanus*



© Susan McDougall

Alligator juniper, *Juniperus deppeana*



Gambel Oak, *Quercus gambelii*



© Susan McDougall

Engelmann Spruce, *Picea engelmannii*



© W.L. Wagner

Blue grama, *Bouteloua gracilis*



© Patrick J. Alexander

Black grama, *Bouteloua eriopada*



© Patrick J. Alexander

Purple three awn, *Aristida purpurea*



© Patrick J. Alexander

Sideoats grama, *Bouteloua curtipendula*



Ring muhly, *Muhlenbergia torreyi*



Poverty three awn, *Aristida divaricata*



Mountain muhly, *Muhlenbergia montana*



Pine dropseed, *Blepharoneuron tricholepis*



Indian rice grass, *Achnatherum hymenoides*



Sand dropseed, *Sporobolus cryptandrus*



© Patrick J. Alexander

Wolftail, *Lycurus phleoides*



© Gary A. Monroe

Fourwing saltbush, *Atriplex canescens*



Sage brush, *Artemisia spinescens*



Broom snakeweed, *Gutierrezia sarothrae*



Creosote bush, *Larrea tridentata*



Soaptree yucca, *Yucca elata*



Greasewood, *Sarcobatus vermiculatus*



Navajo yucca, *Yucca navajoa*



Mormon tea, *Ephedra viridis*



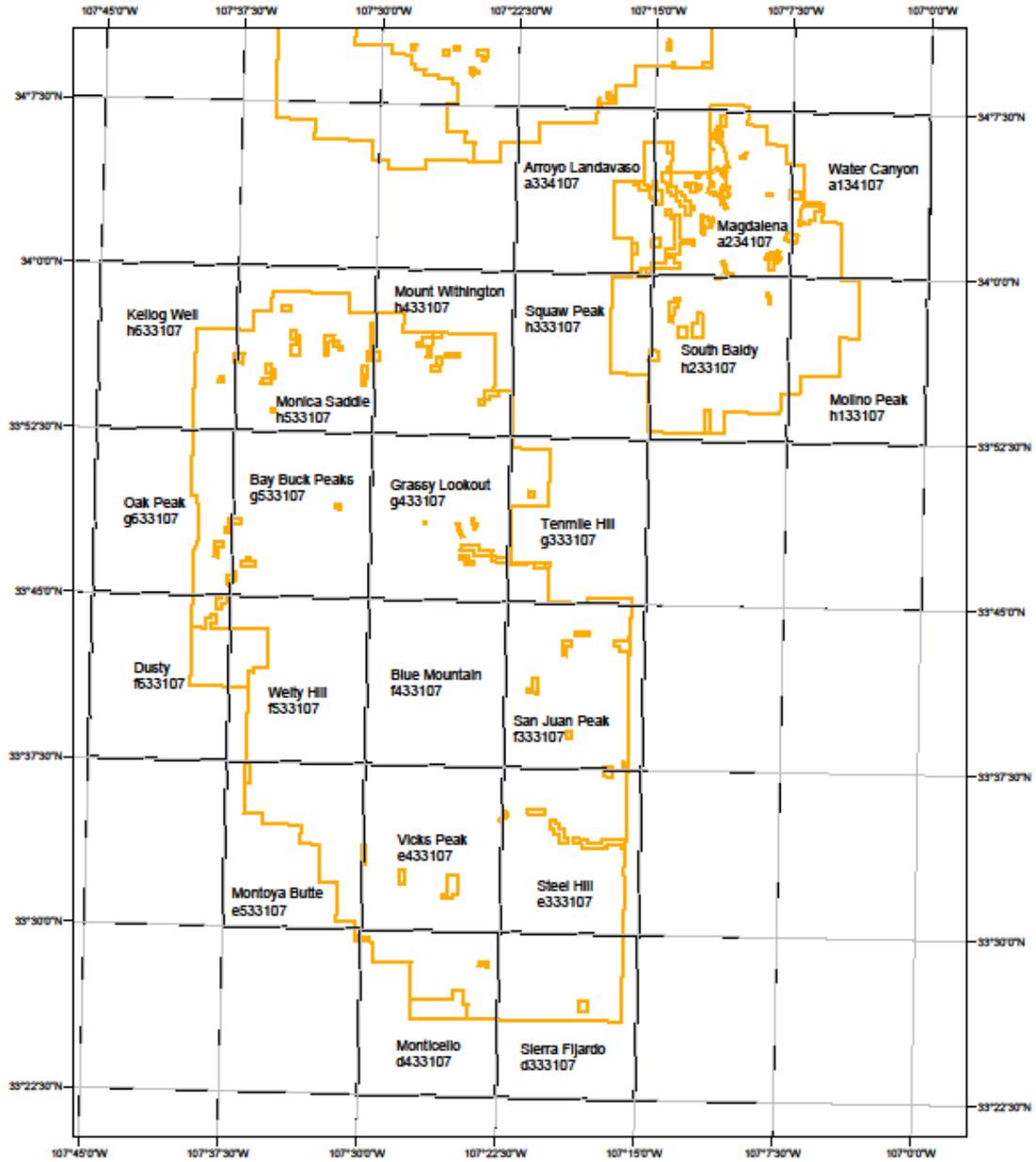
Cholla cactus, *Opuntia imbricate*



Prickly pear cactus, *Opuntia polyacantha*

APPENDIX C - QUADRANGLE INDEX FOR THE MAGDALENA RANGER DISTRICT

Magdalena RD Quads
Magdalena and San Mateo Divisions
D3



Magdalena RD Quads
 Datil and Bear Divisions
 D3

