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National Register of Historic Places Multiple Property Documentation Form

This form is used for documenting multiple property groups relating to one or several historic contexts. See instructions in How to Complete the Multiple Property Documentation Form (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer, to complete all items.

_X_ New Submission ___ Amended Submission

A. Name of Multiple Property Listing

Pueblo IV Sites of the Chupadera Arroyo, New Mexico

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

The Occupation and Interrelationship of PIV Puebios of the Chupadera Arroyo, A.D. 1350-1650

C. Form Prepared By

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D. Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation. (☐ See continuation sheet for additional comments.)

SHPO — 2-24-93

Signature and title of certifying official — Date

Historic Preservation Division, State of New Mexico

State or Federal agency and bureau

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Janet E. Jensen — 4-15-93

Signature of the Keeper — Date of Action

E. HISTORIC CONTEXT

This multiple property nomination includes significant Pueblo IV sites in the Chupadera Arroyo Basin (see Figures 1 & 2). These sites were occupied from approximately A.D. 1350-1650, according to ceramic dating.

There is evidence of human activity in the Chupadera Arroyo area as early as the Paleoindian period, but current research indicates that the highest population inhabited the area during the PIV period. Both Anasazi and Mogollon features have been found within this area and these sites could give details about cultural interaction.

Previous Research

Formal study of this portion of Central New Mexico was initiated in the 1890s by Adolf Bandelier. In 1892 Bandelier speculated that sites existed around the Chupadera Arroyo, but did not investigate them (Bandelier 1892).

Studies in the 1920s and 1930s focused on the Salinas Province, which is located to the north of the Chupadera Arroyo. Edgar Lee Hewett conducted archaeological excavations at historic pueblo and convent sites in the Salinas in the 1920s, and in 1931, W. S. Stallings conducted research at Salinas pueblo sites Abo and Gran Quivira.

Two of the best sources for the Chupadera Arroyo area have been H. W. Yeo and H. P. Mera. Yeo worked for the Museum of New Mexico in the 1930s. He surveyed and recorded many sites in the area, particularly the Glaze period sites. Though his locational data is a bit ambiguous, his maps of pueblo sites are fairly accurate. Yeo's works have remained unpublished, but are available at the New Mexico Lab of Anthropology.

New Mexican anthropologist, H.P. Mera, also surveyed the Chupadera Mesa during the 1930s and 1940s and documented 60 prehistoric structural and camp sites. Mera compiled maps and drawings of the sites and completed significant ceramic inventories (Mera 1940).

Research and excavation in the region expanded in the 1940s and 1950s. Excavations continued in the Salinas Province at such sites as Abo and Gran Quivira. Frances Scholes and H. P. Mera utilized historical and archaeological evidence to identify pueblos along the Rio Grande which were visited by the Spanish in the 1600s (Scholes and Mera 1940). Anna O. Shepard analyzed petroglyphs and ceramics of this region, including the Chupadera Arroyo Basin, in order to locate ceramic production areas (Shepard 1942).

An excavation at site LA 6565 at the south end of the Chupadera Mesa by Stewart Peckham in 1953 revealed that it contained remnants of both Mogollon and Anasazi cultures. A pipeline survey was conducted through the northern Chupadera Mesa and into the Salinas Province in 1956, and sites were recorded in the Salinas Province (Fenenga and Cummings 1956).

Archaeological excavations in the area were minimal in the 1960s and 1970s, although Alden Hayes continued excavations at Gran Quivira from 1965-1967. Archival research was undertaken by many archaeologists and anthropologists at this time. Archaeologist Albert Schroeder researched the cultural background of inhabitants of the pueblos in this region (Schroeder 1964 and 1979).

A resurgence in interest in the region took place in the 1980s. Further analyses of the archaeological data at Gran Quivira were undertaken by Beckett In 1981 and Wiseman in 1986. Human Systems Research conducted surveys of the White Sands Missile Range to the south of the Chupadera Arroyo (Eidenbach and Wimberly 1980; Laumbach and Kirkpatrick 1985).

The Chupadera Arroyo Basin was surveyed in the 1980s. Stuart Baldwin conducted a survey of the northern Chupadera Mesa, which helped to define the types and numbers of sites in the area (Baldwin 1983). Baldwin also devised a general cultural sequence. In 1986, a fieldschool was conducted along the Chupadera Arroyo by Eastern New Mexico University. Maps and reports by Yeo and Mera were utilized by the fieldschool to locate pueblo sites. The sites recorded during that fieldschool and the analyses completed afterwards are included in this nomination (ENMU 1989). Michael Kyte, a member of that fieldschool, completed his Master's Thesis on the ceramics of the Chupadera Arroyo in 1988 (Kyte 1988).

Environment

The Chupadera Arroyo Basin is located to the southwest of the Chupadera Mesa and is bordered on the west by the Sierra de los Pinos in the Mexican highland section of the basin and range plateau division of New Mexico (ENMU 1989: 5). The Chupadera Arroyo runs northeast-southwest through the basin, is 50 km wide, 75 km long, and encompasses 1,680 square km.

The environmental changes within the Chupadera Arroyo Basin during the last 10,000 years are hard to ascertain in that the Chupadera Arroyo is an enclosed basin, and may have had an environment unique to those surrounding it (Kyte 1988: 15). Though the Chupadera Arroyo drains into the larger Jornada del Muerto Basin to the south, and their environments may have had some similarities, only a vague picture of the past environment can be presented.

Prehistoric/Historic Environments

Geomorphological research has revealed that during the early Pleistocene age, the Jornada Basin was dissected by the Rio Grande and included small basins and ephermal lakes (Thornbury 1965). From approximately 10,000-6000 B.C. precipitation within the Jornada and Chupadera Basins was fairly high and the water supply was abundant. This environment supported large numbers of mammoth and bison.

Alternating dry and wet climatic trends then began to characterize this region. Droughts which occurred in the Sacramento Mountains and the Tularosa Basin to the southeast from 6000 B.C.-1 A.D. may have extended into the Chupadera Basin (Breternitz and Doyle 1983; Wimberley and Rogers 1977). Desert plants were introduced into the Sacramento Mountains during that period as well.

Central New Mexico experienced a cooling trend from 350-1000 A.D. The environment was biseasonal with a high water table, making plant domestication possible (Kyte 1988: 41). Corn was one of the essential crops during this period, particularly after a new strain was introduced into New Mexico after 500 A.D.

Temperatures began to rise in Central New Mexico after 1100 A.D. Droughts were documented for regions to the north of the Chupadera Basin during the 13th century (Stuart and Gauthier 1981). A cooler, wetter period took place in the 1300s and 1400s, which may account for the increased population within the Chupadera Basin at that time (Kyte 1988: 50).

The historic period was very dry. The Spanish noted the lack of water at Gran Quivira to the north during the mid 1500s (Kyte 1988: 50). Though the Chupadera Basin was used briefly for farming during the historic period, the environment simply became too arid (Kyte 1988: 20). Populations in the area decreased in the 20th century, and cattle ranching became predominant.

Present Environment

The Chupadera Basin would presently be typified as a semi-arid to arid grassland. Erosion, sheet washing and arroyo formation are problematic in the basin because of soil types and a lack of vegetation.

This area exhibits seasonal and diurnal weather patterns. Precipitation averages 25.5-30.5 cm (10-12") annually. One-half to three-fourths of the precipitation occurs during the summer through violent and short thunderstorms. The other one-half to one-fourth of the precipitation occurs through winter snows (Kyte 1988: 28). Summers are hot in the basin (July mean temperature 94 degrees F) and winters are cold (January mean temperature 22 degrees F)(Yi-Fu Tuan 1973). Winds are light to moderate throughout the basin.

Elevations in the basin range from 5000'-7500', and the soil types vary throughout the basin. The upland is dissected by deep drainages and the soils are generally mollisols with clay, calcium and sodium rich subsoils. The lower elevations are rolling plains with hills and windblown deposits of sand. These soils are aridisols, which are light colored and dry.

Vegetation in the basin is distributed according to elevation. The higher elevations support grasses and cacti, as well as stands of juniper and scattered pines. The lower elevations of the basin include: grama grass, sandsage, greasewood, yucca, and some juniper. The grasses in the basin are abundant enough to support cattle grazing. Fauna in the Chupadera Arroyo Basin includes: various reptiles, rodents, birds, rabbit, squirrel, coyote, antelope, horse, and cattle.

Cultural Periods

The cultural periods for the Chupadera Arroyo Basin are defined and chronologically arranged in this section. These periods have been gleaned from Michael Kyte's 1988 Thesis and the report from the 1986 survey of Chupadera Arroyo by ENMU and apply to the Chupadera Mesa and the basin (Kyte 1988, ENMU 1989).

Paleoindian

This period took place from 10,000-7000 B.C. Cultural groups were mobile hunters and gatherers, who relied heavily on the abundance of mammoth and bison. They took advantage of the wet climate and inhabited the areas close to pleistocene lake beds and playas. Sites of this period are characterized by the presence of clovis and folsom projectile points.

Evidence of Paleoindian occupation of the Chupadera Arroyo is minimal. One Paleoindian projectile point was noted at LA 1075 (Shelley 1992). Several isolated projectile points were noted during a study of the northern part of the Mesa by Stuart Baldwin (1983: 14). Cultural background of the Paleoindian peoples who traversed the Chupadera Basin is unknown.

Archaic

Archaic sites date from 7000 B.C.-1 A.D. Most sites of this period are characterized by lithic assemblages, indicating that culture groups continued hunting and gathering. The dry period documented between 6000-3000 B.C. may be partially responsible for this lifestyle, forcing groups to exploit areas seasonally and utilize a wide range of resources.

During the latter part of this period, cultural groups began to establish base camps, the populations increased, and plant domestication developed, particularly maize. Characteristic artifacts included large chopping and grinding tools used in farming and harvesting.

The Chupadera Arroyo area lacks Archaic sites. One Archaic lithic item was discovered on LA 1069 by the ENMU fieldschool (ENMU 1989: 77). Again, Stuart Baldwin documented several archaic lithic scatters in a survey of the northern part of the mesa (Baldwin 1983: 14). The cultural heritage of those who occupied these sites is unknown.

Pithouse

The Pithouse period of 1-1000 A.D. is characterized by the transition of a hunter/gatherer subsistence to a farming economy, particularly with the introduction of a new type of corn into the area. Architecture and subsistence technology were more specialized and southwestern tribes became sedentary farmers.

New construction methods and architectural styles came forth during this period. Pithouses, both circular and rectangular, replaced the impermanent camp sites. These pithouses were dug deeply into the ground and had roofs constructed of large support beams. At the beginning of the period, pithouse villages were constructed on high overlooks in a defensive posture, indicating possible social unrest. This defensiveness lessened after A.D. 500, and villages were constructed on river terraces next to agricultural fields (Kyte 1988: 45-52).

The development of ceramics is attributed to this period. The plainer utilitywares were the first invented, including the plain brownwares and red slipped brownwares. Later in the period more decorative, Black-on-white ceramics were created. Subsistence technology became sophisticated, with the refinement of lithic tools, and the use of manos, trough metates, and polished stone axes.

The Chupadera Arroyo Basin was not highly populated during the Pithouse period. There are seven documented sites within this area which date to this period through the presence of Jornada Mogollon brownwares and San Marcial Black-on-White ceramics. These ceramics indicate that this area was occupied by both Anasazi and Jornada Mogollon cultures. It is uncertain which group was predominant in the Basin.

The Pithouse period sites are sherd and lithic scatters, and four have been identified by archaeologist Michael Kyte as camp sites (Kyte 1988:61). These sites are located in the lower elevations of the Basin, where culture groups may have planted fields. According to present survey results, the use of this area was transitory and sites lacked pithouse features. Perhaps the periods of drought documented in the Tularosa Basin during this time period also occurred in the Chupadera Basin, making it less inhabitable.

Pueblo II Period

The Pueblo II period dated between 900-1100 A.D. It was characterized by the abandonment of pithouses and the construction of slab based jacal pueblos. These pueblos consisted of linear roomblocks situated in a non-defensive manner. Camp sites were also in use during this period.

Farming played an important role in this period, possibly as a result of the cooling trend that took place at that time. Trade was a part of the economy, as evidenced by the presence of ceramic tradewares on PII sites. Ceramic technology was advancing during this period, and some typical examples were the Red Mesa Black-on-White, used by the Anasazi in A.D. 870-930, Boldface Black-on-White, a typical Jornada Assemblage, and Mimbres Black-on-White.

Twenty-one sites have been found along the Chupadera Arroyo with Pueblo II components. These sites are lithic/sherd scatters, pueblo or camp sites which are in geographic proximity, clustered around the Arroyo. Two of these sites, LA 1069 and LA 1072 are included in this nomination.

Pueblo II sites are generally identified by the presence of the ceramics noted above and exhibit both Anasazi and Mogollon traits. There was an influx into the area during that time and it is uncertain which culture was dominant. There is evidence of only one defensively oriented structure, and that is within LA 1077. This jacal structure sat on a hilltop and was burned at some point. This could have been the result of intertribal hostilities.

Pueblo III Period

This period dates from 1100-1300 A.D. A difficult period characterized by drought, cultures often fought or defended arable land. Trade increased and sedimentary communities grew. Multistory masonry or jacal pueblos were developed with plazas and kivas.

Pueblo III sites are numerous in the Chupadera Basin. Twenty-eight early Pueblo III sites have been identified, with jacal structural remains on three of the sites (Kyte 1988). The remaining sites are camp sites or sherd and lithic scatters. The sites are clustered together, a possible indication of community interaction.

The site concentrations in areas to the north and to the south, may have been due to warring factions (Kyte 1988:76). There was a fortified village dating from this period which may be evidence of hostilities. Also, the burned jacal building of LA 1077 may date from this period as well.

The ceramics found at these sites are diverse. Trade was important, and ceramics became more advanced. Examples of ceramics of the period are Chupadero Black-on-White and textured brownpaste culinary wares.

There are 17 late Pueblo III sites in the Chupadera Basin. Six habitation sites have been documented which include multistory rectangular jacal/masonry buildings and pithouses. These sites are situated in a less defensive posture and are positioned in higher elevations.

Pueblo IV Period

In the 1300s, climates became cooler and the population expanded in the Chupadera Basin. The PIV period lasted from A.D. 1350-1650, during which time, the number of small sites declined as people aggregated into masonry pueblo complexes. Large camp sites were in use, probably in the trading process. One of the most salient characteristics of this period was the presence of Glaze A ceramics.

Immigration was an important element during the PIV period, as well as trade. The sites of this period were located in the middle of the Basin along the arroyo. Evidence of a foreign influence can be seen in the architecture and ceramics on these sites.

At the peak of this period, from 1350-1400, 19 pueblos were inhabited, including the sites in this nomination (LA's 1181, 1201, and 1069-1076). These pueblos were rectilinear, with multiple roomblocks and were constructed of sandstone and shale. They were from one to three stories in height (ENMU 1989). Often, these pueblos had multiple kivas and plazas. Many of these pueblos were situated with a north-northeast, south-southwest axis.

The presence of multiple kivas and plazas, as well as a northeast-southwest axis could be attributed to cultural mixing. Two cultures may have inhabited these pueblos at one time, creating a dualistic society. The orientation of the pueblos may have been due to religious or astrological beliefs.

The cultural background of the inhabitants is uncertain and the sites of this period contain both Anasazi and Mogollon elements. The Northern Mogollon were abandoning the Sacramento highlands in the 1300s during the time of the influx into the Chupadera Basin, so it is possible that this group was responsible for the changes in society and technology (Kyte 1988: 177). Also, these populations may have been related to those west of the Rio Grande (Dittert 1959).

Some researchers agree that the pueblos of the Salinas province, north of the Chupadera Basin, were either Piro or Tompiro speakers, related to the Tewa and occupants of Soccoro and the Isleta pueblos of the Rio Abajo (Scholes and Mera 1940; Kelley 1986; ENMU 1988). The Piro or Tompiro influence may have also reached into the Chupadera Basin.

Glaze ceramics began to appear in the Chupadera Basin and petroglyphic data analyzed by Anna Shepard in 1942 indicated that the Chupadera Basin was a major production center for these ceramics (Shepard 1942: 170). Chupadera Black-on-White of the PIII period and the utilitywares were found on the sites, as well as a great number of Agua Fria Glaze-red, some San Clemente Glaze-polychrome sherds. Small numbers of the following were also noted: Cieneguilla Glaze-polychrome and Glaze-yellow, Zuni Glaze-polychrome, Arenal Glaze-polychrome and Glaze-red, Jeditto Polychrome, Hopi, Heshoutauthla, Kwakina Polychrome, Ramos Polychrome, and Glaze C-D unknown. The Glaze A ceramics were predominant.
These ceramic types indicate an emphasis on eastern trading (Kyte 1988: 131). The campsites increased in size, though not in number, and may have been used as trade-posts along the Chupadera Arroyo.

Inhabitants of this area were agricuiturallsts as indicated by the presence of manos and trough metates, as well as carbonized corn found on these sites. The cooling trend of the 1300s may have made the environment conducive to this lifestyle. Hunting and gathering may have still been a part of the economic base. Trapping or snaring animals may have been preferred over the use of bows and arrows, which would explain the lack of projectile points, etc. Reservoirs were constructed to provide water for domestic use on many PIV sites.

As stated earlier, 19 sites were inhabited at the height of the PIV period, and the population was quite high. Yet by the early 1550s the population had dwindled considerably in the Chupadera Basin. At that time only two settlements were built and two were reoccupied. The occupied portion of older pueblos and the size of the new pueblos was very small. The latest date of occupation was estimated at 1650 (Kyte 1988: 166-168).

Historic Period

During the 1500s, the Spanish documented interaction with many of the pueblos along the Rio Grande. It is uncertain if their influence reached into the Chupadera Basin as no Spanish documents mention this area.

The Piro and Tompiro who lived in areas to the north of the Chupadera Basin were described by the Spanish. Coronado visited several Piro pueblos in 1540, which were located along the Rio Grande. During the Spanish Entrada of the 1580s, the Piro of this region were described in great detail as farmers who lived in large pueblos and raised corn, beans, squash and cotton. The Piro were affected by various social pressures, and they dispersed through the 1600s, and were particularly prone to Apache attacks (Schroeder 1979: 236-237). The Tompiro tribes were located in the Salinas province to the northeast of the Chupadera Arroyo. The Tompiro were also pueblo dwellers and they moved to modern-day Mexico in the 1680s (Schroeder 1979: 241).It is possible that the inhabitants of the Chupadera Arroyo pueblos fell into one of these groups and
disappeared during the contact period. They may have fled from the Apaches or the Spanish or may have died from smallpox. There is a chance that these people never encountered the Spanish, and emigrated because of environmental or cultural pressures.

This area experienced a small population surge in the 1800s and early 1900s. There are abandoned fields, farming equipment throughout the basin, and dryland farming may have been attempted (Kyte 1988: 20). There are also the remnants of historic ranch houses and farms. Historic artifacts have been found at many sites in the basin, including LA 1070 and LA 1075.

Today this area is utilized primarily for grazing and there are few residents. The land is owned by private individuals, and federal and state governments. White Sands Missile Range extends into this region, which is often under surveillance, and public access is occasionally restricted. There are several maintained and private roads across the basin.

Potential Kinds of Data

These pueblo sites are large and full of valuable information. Though some investigations have been undertaken on these sites with regard to architecture, ceramics and lithics, there is still much to be learned.

Architecture - The PIV sites of the Chupadera Basin can reveal much about construction methods and materials of this period and region. Many mounds containing pueblo walls are in excellent condition. Also, small portions of pueblo walls are visible and could be used in an extensive architectural analysis. These walls were constructed of sandstone and limestone, which appears to have been acquired locally. The possible methods of quarrying for building materials could be addressed.

The reasoning behind dual plazas and kivas on several of the sites needs to be determined. The answer to this may lie in the architecture itself, and also could be found through artifact analyses. Also, several of the sites have possible reservoir features. More research could give more details as to the use and management of the reservoirs and their importance in domestic life and in agricultural irrigation.

Finally, the architecture could give clues as to the cultural background of the inhabitants of the pueblos. By studying these remains and comparing them to those of sites nearby, perhaps a pattern could be established.

Ceramics - Each site has a very high artifact density, generally in the 1000s. The ceramics of these sites have been analyzed by both H.P. Mera in the 1940s and ENMU and Michael Kyte in the 1980s. These analyses are informative and have helped to establish a foundation for the understanding of these sites. However, there remains potential information at these sites as both of the previous analyses are based on sample collections. Further, there is a high probability that there are whole vessels underground. These ceramics could offer information regarding trade, daily subsistence, and religious practices during the PIV period.

Lithics - Basic lithic analysis was undertaken by the ENMU fieldschool in 1986, particularly obsidian hydration. Points were collected as well. But these analyses were based on sample surface collections. An extensive investigations necessary and it is probable that more definitive artifacts are below the surface.

Groundstone - There is much groundstone on this site, and there is a need to determine the number of manos, metates, etc. and their locations across each site. This would help in estimating areas and types of agricultural manufacture. The groundstone serves as a key to the understanding of subsistence patterns in this area.

The quarrying and manufacture of groundstone implements could be addressed as quarries can be found on several of the PIV sites in the Chupadera Arroyo.

Other - As carbonized corn was located on four sites, agriculture was definitely a part of these cultures' economies. This corn should be analyzed and compared from site to site, as it could reveal much about past diets and climates. Also, these sites could possibly yield dendrochronological information, essential as a dating technique. Finally, several sites contain burials, some of which may have been excavated, and they could give information about burial practices, as well as the types of people at these sites, their health conditions, their religious beliefs, etc.

Research Questions

The sites of the Chupadera Arroyo hold the answers to many important questions concerning the Pueblo IV period. The work of Yeo and Mera in the 1930s, the ENMU fieldschool in 1986, and Michael Kyte in 1988 have added much to the archaeological record, but research potential in the region remains very high.

1. What was the prehistoric environment like and how did it change through time? How did environmental fluxes impact movement and along the Chupadera Arroyo from the PII-PIV periods? What changes in technology came about as a result of the environment. Currently, what is know about the past Chupadera Arroyo Basin environment is nebulous at best and because of its geographical situation, it may have differed greatly from the environments of surrounding regions. Intensive geomorphological studies of the area as well as pollen and soil sampling may help to provide answers.

2. This region of Central New Mexico was inhabited by both Anasazi and Mogollon cultures, as is evidenced by ceramic types within the Chupadera Arroyo area. This is an area of culture contact, particularly during A.D. 1300-1400. What was the relationship between the Anasazi and the Mogollon? When did they come into contact? Was there a dominant influence in this situation or a cultural melding?

3. The PIV pueblo sites along the Chupadera Arroyo are in geographic proximity. Were they occupied at the exact same time? If so, what was the interrelationship of these pueblos? Did they use the proximity to create communication networks? How did the Chupadera Arroyo pueblos interact with the Salinas Valley pueblos?

4. What was the primary means for subsistence within the Chupadera Arroyo pueblos during the PIV period? The presence of possible reservoirs on these sites as well as carbonized corn and groundstone are evidence that agriculture was an essential part of the economy. Further artifact analysis would help to better define the role of agriculture in the society as well as hunting and trapping.

5. What caused the emigration of the populations from the Chupadera Arroyo during the 1600s? Where did the inhabitants go? Research coordinating archaeological evidence with Spanish documents of the contact period in the 1600s may offer solutions to this question. An investigation of the impact of smallpox in this particular area may also provide conclusions. Finally, ideological or environmental changes should be investigated during that period to ascertain their influence on the emigration.

6. What were the trade patterns of the 14th and 15th centuries? What role did the campsites play in the trading process?

7. Many of the pueblos of the PIV period were constructed with a northeast southwest axis, unlike pueblos built in earlier times, which had north-south alignments. What was the reason for the change? Was this building plan brought by immigrants or adapted from a tribe outside of this region? Did it have religious and/or astronomical meaning?

8. Archaeological remains suggest that several of the pueblos within this region contain two plazas and two kivas, indicating dualistic societies. What other evidence supports this theory? Which cultures participated in this arrangement and what was the reasoning behind it? How long did this last and what, if any, were the reasons for its demise?

F. PROPERTY TYPE

Physical Description

The archaeological sites in this nomination include the ruins of PIV, masonry constructed pueblos, along the Chupadera Arroyo, constructed in the 1350s and abandoned in the 1650s. These were multiroom, multistory pueblos constructed of local Abo sandstones and shales.

Presently, the sole remains of the pueblos are large mounds and extensive sheet trash. The mounds are generally irregular in plan and are on northeast/southwest axes. They range from 84.4 m^2 to 7513.33 m^2 in base area. The number of mounds varies at each site; some have one mound, others have as many as 17 mounds.

Rubble from the pueblos is scattered across many of the sites. LA 1074 and 1075 are exceptions in that very little rubble exists. They were possibly razed, the materials used elsewhere. The rubble consists of minimally worked limestone and sandstone blocks. Portions of walls revealed on the sites (see Figure 3), indicate that flattened rectangular blocks and slabs were laid with a mud mortar. Plaster was probably utilized to cover walls.

The analysis of the mounds and rubble by ENMU indicates that during their occupation, the pueblos were from one to three stories in height. The rooms in the blocks measured 9 m^2. The number of rooms ranged from 9-1,500 as shown by the existing ruins. The pueblos had from one to two plazas and kivas, indicating a probable dualistic society. Reservoir features were noted which were large depressions adjacent to the pueblos. They were used for agricultural irrigation.

The artifacts at these sites consisted of groundstone tools, various lithics and ceramics, and carbonized corn. The lithics consisted of chert, obsidian, chalcedony, quartzite and silicified shale in all states of reduction. The Glaze A ceramics were predominant on the sites, but older Black-on-White ceramics and utilitywares were also found (See Figure 4). The sheet trash generally extended far beyond the pueblo mounds.

The site boundaries encompass the pueblo mounds and artifact scatters. Several of the boundaries were created by H.P. Mera according to the ceramic dates of adjacent sites. If one site appeared older, it was given a distinctive boundary.

These sites have diverse settings. Many are situated on hilltops, but some are located on ridges, dunes, and hillslopes. The nearest drainage is the Chupadera Arroyo, which may have been utilized at the time of site occupation. The depth of fill at these sites ranges from 10-30 cm of sandy soil. The vegetation varies considerably from site to site. Some sites are on the flat grasslands and include sand sage, ring muhley, and various cactl. Others are located in the higher elevations within juniper stands.

Site condition is good at these sites, as verified by site inspections conducted in November 1992 by a group of archaeologists from the State Historic Preservation Office, the State Land Office, Eastern New Mexico University, and COAS. Most of the pueblos have suffered the affects of vandalism and there are areas which have been excavated. However, these potholes are small and partial sections of pueblo walls have been revealed. The sites have been slightly eroded as evidenced by sheet trash, but the mounds are still quite high and undisturbed. The area has also been grazed, and only a portion of LA 1181 has suffered visible damage. Sample collecting was conducted by H.P. Mera in the 1930s and by the ENMU fieldschool in the 1980s. This collecting was minimal and artifact concentration on the sites remains in the 1000s. In sum, these sites are in excellent condition as their location is quite remote and access is limited. Further, erosion and grazing has only posed a minimal problem and the sites retain their integrity (see Figure 5 for details).

There are many similarities between the pueblos in the Chupadera Basin and the large PIV and PV pueblos of the Salinas Valley. The pueblos at Gran Quivira, Abo, Quarai, and Salinas were large, multistory and multiroom masonry structures with kivas and plazas. They were occupied between the 1300s and the 1600s and it is thought that the inhabitants were Tompiro speakers.

The inhabitants of the Salinas Valley and the Chupadera Basin farmed the land, particularly producing corn. Trade was also an important part of their economies, as shown through tradeware ceramic types located on the sites.

The remaining features at these sites are alike. Dirt mounds exist where there used to be walls, and portions of the walls are apparent. Kiva and plaza depressions also exist. Artifacts and construction rubble are scattered across these sites.

Unlike the Chupadera Basin pueblos, the Salinas Valley pueblos have been researched extensively and much is known about their inhabitants. Excavation and survey revealed much information about the sites, and they are National Monuments that are interpreted for the public.

Also, the sites within the Salinas Valley were Spanish contact sites, and Spanish missionaries established churches next to the pueblos. These conventos are now in ruins though large portions of their walls still exist. The Spanish wrote a great deal about the inhabitants of these pueblos, who eventually abandoned the area because of the Spanish or the Apache raids. These documents are important to the interpretation of the sites.

Presently, there is no evidence that the Spanish traveled through the Chupadera Basin area during their 17th century expeditions. There is no Spanish documentation that the PIV pueblo sites along the Chupadera Arroyo were encountered. Further, there have been no Spanish artifacts or features noted on the surface at these sites.

Figure 5
Condition of PIV Pueblo Sites of the Chupadera Arroyo

Site #	Impacts	Condition
LA 1069	Eroded, Vandalized/ Excavated*, Mechanical Disturbance, Surface Collections.	Several potholes of unknown origin, one possible machine trench southast of site. Site is in good condition.
LA 1070	Vandalized/Excavated, Surface Collections	Twelve small potholes and one excavated wall. Mound height indicates good condition.
LA 1071	Eroded, Vandalized/ Excavated, Surface Collections.	Three small potholes noted. Lithics and sherds on northwest slope of site indicate some sheet washing. Good condition.
LA 1072	Vandalized/Excavated, Surface Collections.	Eighteen small potholes noted. Mound height indicates excellent condition.
LA 1073	Vandalized,Excavated, Surface Collections.	This site recently vandalized and approximately 30 small to medium sized excavated areas noted, including excavated walls. However, mound height and artifact density indicate fairly good condition.
LA 1074	Vandalized/Excavated, Surface Collections.	One small pothole. Good condition.
LA 1075	Mechancial Disturbance, Surface Collections.	Bulldozer trench noted in northwestern corner. Recent trash. Good condition.
LA 1076	Surface Collections.	Presence of historic trash. Good condition.
LA 1181	Vandalized, Excavated, Grazed, Eroded.	Ten small to medium sized potholes noted and some excavation. Disturbance on southern mound from horses. Artifacts on slopes around site from sheet washing. Good condition.
LA 1201	Vandalized/Excavated, Minimal Surface Collections.	One pothole noted. Good condition.

*This term will be utilized to describe disturbance which could either be attributed to H.P. Mera's partial excavations of the 1930's or from more recent pothunting.

Significance

The PIV pueblo sites along the Chupadera Arroyo are significant under criterion D for their potential to yield important information about the prehistory and history of Central New Mexico. Their size and condition is unique for the area.

The mound height at each of the sites as well as artifact density indicate that many important cultural finds lay beneath the surface, which could reveal some important data about the area and the inhabitants of that period. Further, site condition is very good and the minimal disturbance has left many artifacts and architectural elements intact.

The number of these large PIV sites is high, as was the population at this time. There was a large cultural immigration into this area during the 1300s. The sites in this nomination have elements from both Anasazi and Mogollon cultures, and as an area of cultural blending, these sites are invaluable. Once the cultural backgrounds of the inhabitants have been determined, their interrelationships and impacts on one another can be clarified.

The cultural periods for the Chupadera Arroyo need clearer definition, and as several of these sites are multicomponent, containing information from previous periods, they may help to define these periods.

These sites contain information regarding the role of agriculture in this area. There are artifacts and features that have been examined on the surface, indicating that agriculture was an important part of the economy at these pueblos. Further research could give more precise information about the subsistence practices at the pueblos and about diet.

The environmental setting for this region, as stated earlier, is unclear. Through dendrochronology and radiocarbon testing, it is possible to learn more about the paleoenvironment.

The sites are particularly significant as they stand on the cusp between prehistory and history. They were abandoned at the beginning of the contact period and can reveal much about life in New Mexico just prior to the arrival of the Spanish. Whether or not these Indian tribes ever encountered the Spanish is uncertain, though it is a distinct possibility. Information within these pueblo sites may provide answers.

Though there are many more site specific questions that must be dealt with, these pueblo sites have the potential to provide much data about the prehistoric and historic background of Central New Mexico. There is also the potential for visitor interpretation of the sites on public land. They are located along the same road used to access the Gran Quivira National Monument, and though their locations are at times remote, they could be used in an interpretive plan of the area.

Registration Requirements

The sites included in this nomination are eligible for the National Register under criterion D through their potential to yield important information about the prehistoric and historic heritage of Central New Mexico. The sites must contain information that will help to answer certain of the research questions set forth in Section E. The types of sites qualified for listing under this multiple property nomination are PIV pueblo sites located within the Chupadera Arroyo Basin. The properties are

characterized by surface and subsurface architectural and artifactual remains which have the potential to answer questions regarding the cultural background of past inhabitants, the subsistence activities of the area, and general site function. This nomination contains pueblo sites occupied between 1350-1650 A.D. The sites must retain integrity.

G. GEOGRAPHICAL DATA

The PIV pueblo sites included in this nomination are on the [redacted] The total area encompassing these sites is 5 miles east west by 10 miles north south. [redacted] The sites can be accessed by maintained and unmaintained, two track county and private roads. [redacted]

H. SUMMARY OF IDENTIFICATION AND EVALUATION METHODS

These sites were identified in the 1930s by H.P. Mera and H.W. Yeo, who mapped them and took field notes. Mera completed random artifact surface sampling and analyzed the ceramics, initially determining ceramic types and rough dates for the sites.

The information compiled by Yeo and Mera was augmented in 1986 during a fieldschool of ENMU students. This fieldschool also completed maps, locational information, and some sample surface collecting. Obsidian samples were analyzed by the fieldschool in order to determine geographical sources. Ceramics were also analyzed by fieldschool attendee, Michael Kyte, who wrote his Master's thesis on his findings. These ceramics helped to determine the dates of the sites. Architecture was also analyzed by the fieldschool, and pueblo heights and sizes at the time of occupation were estimated.

An inspection of this area was carried out recently by a group of archaeologists from the NM State government, ENMU, and COAS, which revealed that the sites were in very good condition and that their integrity remained intact.

On the basis of this data, it was determined that the PIV pueblo sites of the Chupadera Arroyo were highly significant for their condition, age, high number of artifacts and features, and function. These sites were linked in prehistoric time by their location in the Chupadera Basin, their dates of occupation--from 1350-1650 A.D.--and their role as large habitation sites.

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