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United States Department of the Interior
National Park Service

National Register of Historic Places Multiple Property Documentation Form

This form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. For additional space use continuation sheets (Form 10-900-a). Type all entries.

A. Name of Multiple Property Listing

Jemez Culture Developments in North-Central New Mexico

B. Associated Historic Contexts

Jemez - a high altitude cultural adaptation in northern New Mexico from A.D. 1350 to 1700.

C. Geographical Data

The Jemez Culture area is located in North-Central New Mexico within Sandoval County. Most of the land upon which this culture area is found is part of the Santa Fe National Forest. Other jurisdictions include Jemez and Zia Pueblos, Bureau of Land Management, and private interests. The boundaries of the Jemez Culture area are the New Mexico Principal Meridian on the west, the boundary between R. 3 E. and R. 4 E. on the east, a line two miles south of the boundary between T. 15 N. and T. 16 N. on the south, and the boundary between T. 19 N. and T. 20 N. on the north. This area encompasses 468 square miles, and 299,520 acres. These arbitrary boundaries include nearly all known sites associated with the Jemez Culture, or which exhibit high frequencies of Jemez Black-on-White pottery. Since survey coverage in this and adjoining areas is incomplete, a more precise boundary is impossible to define.

☐ See continuation sheet

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, 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 the Interior's Standards for Planning and Evaluation.

Signature of certifying official — Date: 2-13-90

USDA-Forest Service
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.

Signature of the Keeper of the National Register — Date: 4/19/90

Name of Context: Jemez - a high altitude cultural adaptation in northern New Mexico from A.D. 1350-1700.

Introduction: The Jemez Culture Area in north-central New Mexico is one of several late prehistoric culture areas in the Upper Rio Grande region of New Mexico. The people who lived in this area in A.D. 1540, the date of the first Spanish entrada of Francisco Vasquez de Coronado, called themselves the Jemez. They spoke a common language that is now known as Towa, a dialect of the Tanoan language group.

The Jemez culture developed within the previously defined boundaries of the Jemez Culture Area between around A.D. 1250 and A.D. 1350. This area was the scene of a variety of cultural influences during the period indicated. Rio Grande Anasazi peoples had lived in the area for at least several centuries. They were joined in the period A.D. 1175-1300 by various refugee groups from the San Juan Basin/Four Corners area, and the Gallina Culture area. The distinctive blend of characteristics of all three groups is what we now call the Jemez Culture. These predecessors of the group who told the first Spanish explorers they called themselves the "Jemez" people were at first little affected by the Spaniards. However, after the establishment of a Spanish colony in New Mexico in 1598 the Jemez came under a lot of pressure to conform to Spanish concepts of behavior. While they resisted mightily for over a century, by 1706 virtually all the Jemez were confined to what is now the Jemez Reservation. Thus the dates A.D. 1350-1700 were chosen for the historic context.

The term "high altitude agricultural adaptation" is used to describe the historic context for this nomination because of the remarkable elevation range to which the Jemez adapted during the period indicated. No other prehistoric group in the Southwest is known to have practiced agriculture at as high an elevation as the Jemez. Most sites in this area are located at over 7,000 feet elevation. Fieldhouse sites thought generally to have been associated with agriculture are found as high as 8,445 feet.

This multiple-property group is organized in the following manner. First is a discussion of the environmental setting of the study area. Then a discussion of previous research and a culture-historical overview of the study area from preceramic to historical times are presented. A discussion of possible explanations of the Jemez phenomenon follows. These sections present the historic context to which all the property types discussed later belong by virtue of their place in time and space. Five property types are defined, based on the results of thousands of acres of survey in the study area. These property types combined represent over 90% of all known sites dating to the period indicated in the study area. Since sites fitting these property types are nominated on the basis of their actual or potential information producing value, a discussion of possible classes of important information sites of the given types might yield is also presented.

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Environmental Setting: The study area covers much of what is termed the southern Jemez Plateau (Bailey et al. 1969). The Jemez Plateau is a part of the Jemez Mountain range, that was formed by intermittent volcanic activity during the Tertiary and Quaternary (Ross et al. 1961). The central feature of the Jemez Mountains is the Valle Caldera, a large collapsed volcanic crater about fifteen miles in diameter which overlies a slightly older and smaller, but similar feature, the Toledo Caldera.

The eruptions that formed the Toledo and the Valle Calderas occurred about 1.4 and 1.1 million years ago. These eruptions deposited a layer of ash which formed the lower Otowi Member and upper Tshirege Member of the Bandelier Tuff Formation. These eruptions covered an area of up to 400 square miles with the ash that has formed as much as 1,000 vertical feet of tuff. It has been estimated that some fifty cubic miles of ash resulted from these eruptive episodes (Ross et al. 1961).

The elevation of the area ranges from 11,254 feet at the top of Redondo Peak, which lies just to the east of the arbitrary east boundary of the Jemez Culture Area, to about 5,440 feet near San Ysidro, New Mexico, near the arbitrary southern boundary. Soils in the area are deepest in the lower elevations where sedimentary rocks have been exposed for long periods. Soils found on the tuff deposits have undergone highly variable degrees of formation. Soils forming in material derived from limestone, tuff, pumice, or basalt are generally said to be the most fertile in the area (Gass and Price 1980:38).

The principal drainage systems in the Jemez Culture Area include the Jemez River, Guadalupe River, Rio Cebolla, Rio Las Vacas, East Fork, San Antonio River, and Vallecitos Creek. Numerous hot, warm, and cold springs are found in the area. Average annual precipitation varies from about twelve inches in the lower-lying areas to about twenty-five inches in the highlands. About half the precipitation occurs in the form of intense summer thunderstorms. Snowfall is usually negligible at the lower elevations, but can accumulate as high as five feet in the mountains. Frost-free seasons range from about 110 days in the mountains to about 190 days in the south annually (Gass and Price 1980:40).

The Jemez Culture Area encompasses a number of vegetation zones. At higher elevations (above 9,000 feet) spruce and fir associations predominate. Between about 7000 and 9000 feet elevation Ponderosa pine is the dominant overstory species. Below 7000 feet one finds piñon-juniper associations. Along the margins of the permanent waterways one finds a riparian (cottonwood-willow) association.

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Wildlife now present in the Jemez Culture Area includes a number of large mammals that were probably important to the ancestors of the Jemez people such as deer, elk, brown bear, and perhaps antelope in the lower elevations. Streams in the area would have been populated by the native Rio Grande Cutthroat trout. Smaller mammals such as rabbits are common. Avian species such as wild turkey, hawks, and eagles are present in the area today and were no doubt utilized for their eggs, meat, or feathers.

In general, the study area consists of a series of elevated, relatively flat mesas ranging from 6,500 to 8,500 feet elevation which contain most of the known archeological sites, separated by a series of relatively deep and narrow canyons with permanent watercourses flowing through them that contain high densities of sites, though lower than that found on the mesas. The mesa-tops are typically covered with Ponderosa pine; but the canyons are a mixture of Ponderosa, piñon-juniper, and riparian vegetation.

Previous Research: Archeological research in the Jemez Culture Area began in the late 1800s and included Bandelier (1892; Lange, Riley, and Lange 1984), William H. Holmes (1905), and others. During 1907 to 1928, a series of excavations was conducted in the area by the School of American Archaeology (later School of American Research) at Giusewa (LA 679), Amoxiumqua (FS 530), and Kwastiyukwa (FS 11)[note: "LA" refers to site numbers assigned by the Laboratory of Anthropology in Santa Fe; "FS" refers to site numbers assigned by the U.S. Forest Service, and are preceded by the prefix AR-03-10-03- in the Jemez area]. Virtually no detailed contemporaneous documents dealing with these excavations are known to exist.

From 1928 to 1934, approximately two-thirds of the pueblo site of Unshagi (FS 337) was excavated in a series of joint field schools of the School of American Research and the University of New Mexico (Reiter 1938). Jemez Cave (FS 9) was also excavated during this period (Alexander and Reiter 1935), although later reinvestigated (Ford 1975), and Nanishagi (FS 320) was partially excavated (Reiter, Mulloy, and Blumenthal 1940). The Jemez Cave excavations resulted in the discovery of the earliest evidence of horticulture in the study area. A piece of corn from the site was radiocarbon dated to about 880 B.C.

A University of New Mexico field school session (Luebben 1970) was held in 1947 to complete the excavation begun by Paul Reiter in the 1930s of site number FS 10, a small cliff house up the East Fork of the Jemez. The Girl Scouts conducted a series of surveys and excavations in the

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1960s (Bohrer n.d.). Two pueblo sites near [redacted] were excavated by Franklin Barnett of the Albuquerque Archaeological Society in 1962-3 (Barnett 1973).

In the 1970s, the German geographer Dietrich Fliedner surveyed (archeologically) the area around [redacted] (Fliedner 1972, 1975). He observed a number of what he termed "field relics" (terraces, check dams, fieldhouses) and other types of sites. The Museum of New Mexico conducted a number of surveys between [redacted] for the State Highway Department in the early 1970s (e.g., Wiseman 1976), [redacted] (Haecker 1986).

The Santa Fe National Forest began its series of cultural resource management surveys in the late 1970s. In 1982 the Forest nominated 33 large pueblo sites in the [redacted] to the National Register of Historic Places (Elliott 1982). The 1980s have seen a continuation of cultural resources management oriented work, primarily surveys, but also including the excavations of several lithic sites near [redacted] (Baker and Winter 1981), and the excavations of several field house sites by the Santa Fe National Forest (Elliott et al. 1988; Gauthier and Elliott 1989).

Culture-Historical Overview: Cultural developments in the The Jemez Culture area generally follow those in the rest of the Upper Rio Grande area. In 1955, Wendorf and Reed proposed a chronological classification based on the changes in material culture they believed were occurring across the Upper Rio Grande area known as the Rio Grande classification. With some additions, the Rio Grande Classification is shown in Table 1.

There is little direct evidence of prehistoric utilization of this area prior to the mid-to-late Archaic Period, or about 2000 B.C. Between about 2000 and 900 B.C., several sites investigated during the Redondo Creek investigations (Baker and Winter 1981) experienced light use. These uses included acquisition of obsidian, biface production, and probably hunting. By the Late Archaic Period, [redacted] began to be utilized. The earliest cultigens in the area were found at Jemez Cave. Corn remains found there dated by the radiocarbon method yielded a corrected date of about 880 B.C. [redacted] continued to be utilized well into the historic period.

The heaviest utilization of the high-altitude settings investigated during the [redacted] investigations (Baker and Winter op. cit.) was

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Table 1
Jemez area aboriginal chronology (modified from Wendorf and Reed 1955).

Dates	Period Name	
10,000-5,500 B.C.	Paleo-Indian	Preceramic Period of Wendorf and Reed
5,500-3,000 B.C.	Early Archaic	
3,000-1,000 B.C.	Middle Archaic	
1,000 B.C.-A.D. 600	Late Archaic	
A.D. 600-1175	Developmental	
1175-1325	Coalition	
1325-1600	Classic	
1600-1630	Early mission	Historic Period of Wendorf and Reed
1630-1680	Late mission	
1680-1696	Pueblo Revolt	
1696-1716	Refugee	
1716-1825	Spanish	
1825-1846	Mexican	
1846-present	Reservation	

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during the period from ca. 600 B.C. to A.D. 400. These sites represented seasonal occupations, however.

The earliest habitation sites known in the Jemez Culture Area date to the early Developmental Period, or during the period A.D. 600 to 900. These sites exhibit pithouse depressions, surface storage facilities, and ceramics such as Lino gray and White Mound Black-on-White (Elliott 1986).

During the Coalition Period, or during the period A.D. 1175 to 1325, population, site size, and site frequency began to increase in the study area, due at least in part to an influx of migrants from the San Juan Basin and Gallina Culture Areas to the west and northwest, respectively. Numerous Coalition Period sites have been recorded and observed in the lower reaches of the Jemez and Vallecitos drainages.

By the start of the Rio Grande Classic Period, or about A.D. 1325, a distinctive cultural adaptation had developed in the southern part of the study area. This cultural florescence resulted in the construction of at least forty large pueblo sites, several thousand small habitation sites known as field houses, and a great areal expansion from the drainage bottoms onto the mesa-tops.

Classic Period Site Types and Distributions: The most common site type in the study area is what has been termed the field house. Field houses are isolated small one to four room structures thought to have been associated with agricultural utilization in the area. However, such sites may have served a variety of functions.

Over 1300 field houses have been recorded in the study area. All but about twenty-five of these (some of the data are contradictory) appear to date to the Classic Period. Jemez field houses are somewhat different than those in adjacent areas such as the Pajarito Plateau. The stereotypical Jemez field house can be described generally as having more and larger rooms, more "formal" architecture in its arrangement of features and orientation, "better" more carefully coursed roughly shaped tuff masonry. Many Jemez field houses have extensive and diverse artifact scatters associated with the structures which tend to indicate occupations of substantial length or intensity at some sites. Most of the recorded field house sites are located at over 7000 feet elevation.

The Jemez Province contains at least forty large pueblo sites. Large in this area means over fifty estimated rooms. Of these forty sites

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nine are termed "Great Kiva" sites. These sites are all over 650 estimated rooms in size, and exhibit a great kiva-like feature. No site has more than one such feature, but several sites have large plaza kivas which approach the arbitrary great kiva size threshold of ten meters in diameter.

None of the great kivas are located within plazas, but are usually located on the edge of the pueblo, most often on the east or south sides. Features of these nine largest pueblo sites include enclosed or semi-enclosed plazas, the smaller plaza kivas, multiple room blocks, multi-storied construction, and dense refuse scatters. All great kiva sites are located on mesas, none in valley or canyon bottoms (with the exception of Walatowa, modern Jemez Pueblo).

Somewhat smaller in size than the Great Kiva pueblo sites are the "Plaza" sites. These sites usually contain multiple, multistoried roomblocks surrounding one or more plazas on at least three sides. Some of these sites have plaza kivas, but none has a great kiva. These sites range in size from 50 to 600 rooms.

There a number of "small" sites known or recorded in the area. These tend to have from five to fifty rooms, usually no subterranean kivas, and no plazas. Most such sites appear to date to the Coalition Period and are concentrated in the drainage bottoms in the study area below 6500 feet. A few such sites were occupied into the early Classic Period.

Possible Explanations of the Jemez Phenomenon

Introduction: Given the number of sites, the density of sites, the elevation range of the sites, and the probable population of the study area during the period A.D. 1400-1600, it seems obvious that a special and unique kind of settlement and subsistence system evolved in the study area. This cannot be categorized as some kind of temporary aberration of a "riverine" adaptation, as some researchers continue to do (Stuart and Gauthier 1986:90). There are approximately 15,000 total estimated pueblo rooms dating to the Classic Period in the Jemez Province, and only about 1,000 of these are near permanent flowing water. The other 14,000 Classic Period pueblo rooms are located on top of high mesas. The Jemez undoubtedly found another way to survive than aggregating in large villages near rivers, as was the case in most of the rest of the upper and middle Rio Grande area during this period.

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The past environment in large part determined the course of human utilization of the study area during the Classic Period. Certain special characteristics of the landforms, soils, water availability, and climate there combined to produce an environment favorable for agricultural adaptations not requiring intensive irrigation in portions of [redacted]

Freezes, Frosts, and Growing Seasons: By way of definition, a clear distinction needs to be made between growing season, frost-free season, and freeze-free season. These terms are sometimes used interchangeably. Growing seasons are usually said to be synonymous with the freeze-free season, or the length of time between occurrences of 32° F. or lower temperatures. However, some cultivated plants, such as cabbage and broccoli, can tolerate short durations of sub-freezing temperatures. Their growing season is therefore longer than the freeze-free season. Growing seasons are therefore species- or even variety-specific.

It is possible that prehistoric corn may have been able to tolerate short periods of 31° temperatures, making the growing season of corn longer than the freeze-free season. The formation of frost is dependent upon the dew point and relative humidity, as well as temperature. Frost can form at temperatures above 32° F., due to the refrigerative effects of evaporation.

Cold Air Pooling: The landforms present in the study area are important because of their effects on weather and climate. Cold air, because it is more dense and heavier than warm air, tends to drain into topographically lower settings. This phenomenon, known as cold air drainage, results in shorter growing seasons in canyons in comparison to relatively flat mesa-tops. This factor would affect much of the lower-lying portion of the study area such as the deep and narrow canyons which form portions of [redacted] Areas exhibiting a longer growing season are generally preferable for agricultural adaptations, if enough water is present.

Adams' (1979) analysis of this effect in the Hopi area concluded that the mesa-top growing season was as much as 20 to 25 days longer than in the valleys. He generalizes that cold air drainage in mesa and canyon country will make the growing season in the canyons 10 to 30 days shorter than on the mesa-tops. On the Hopi mesas, the elevation difference is between about 500 and 700 feet. In the Jemez study area

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north of Cañones, this effect could be expected to be even more pronounced, since the elevation differences between the canyon bottoms and the mesa rims are 1000 or more feet.

The depth, steepness, and narrowness of these canyons reduces the amount of solar radiation available in the canyon bottoms. The canyon rims are the effective horizons in the canyon bottoms. The sun drops below the canyon rim hours before it drops below the horizon on the mesa-tops, and rises over the rim hours after it appears on the mesas.

In the study area south of Cañones to just north of San Ysidro, the Jemez Valley widens to a mile or more, and the elevation difference from the valley bottom to the edges of the valley lowers to between 100 and 500 feet. This difference is enough for cold air drainage to result in shorter growing seasons there as well.

The Jemez area mesas slope generally to the south and southwest. For example, Virgin Mesa, to the west of Jemez Springs, slopes downward from upper to lower end at an azimuth of about 200 degrees. Over a linear distance of about nine miles, the elevation decreases about 1365 feet. This results in an overall slope angle of about 1.6 degrees. The south trending slope of the mesas results in more direct exposure of its surface to the sun, increasing the solar radiation received there.

By way of comparison, the average slope of mesa-top land in the study area would receive the same solar radiation as level land 100 miles south. This exposure would result in higher soil and air temperatures, and longer growing seasons on the Jemez area mesas in comparison to mesas with different slope directions or in the valleys.

Prehistoric Agricultural Strategies: The first crops and agricultural technology in the New World developed in Mexico, at least several thousand years B.C. Corn (maize) was the most important of these crops. Over succeeding millenia, corn seed and knowledge of the process required for growing it spread into the American Southwest. This diffusion probably occurred by at least 1000 B.C., and perhaps earlier. Corn remains [redacted] indicate that maize horticulture was practiced in the study area by at least 800 B.C.

Prehistoric agricultural strategies were quite diverse. There has been a tendency to overstereotype these strategies. Some researchers have tended to view culture as a linear progression from less advanced to more advanced. Some have viewed irrigation agriculture as a

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prerequisite to the development of civilization. The so-called "hydraulic theory" of Karl Wittfogel (1957; Wittfogel and Goldfrank 1943) is illustrative of such an approach.

A number of recent studies have focused on agricultural variability in the Southwest (e.g., Vivian 1974; Cordell and Plog 1979; Woosley 1980; Cordell 1984:181ff; Cordell et al. 1984). Woosley, in particular, discusses the dangers of overstereotyping prehistoric agricultural strategies (1980:317), correctly pointing out that the same people who built a complex irrigation system for one field might have also utilized a simple unirrigated field nearby. She later suggests that "water control and other cultivation strategies are largely induced by highly localized environmental situations".

A variety of strategies were available to the prehistoric farmers of the Southwest. The simplest method of agriculture anywhere is what archeologists sometimes term dry farming. Actually, the term "dry farming" is something of a misnomer, since it implies that the crops receive no water at all. The term rainwater farming is a more accurate description of this methodology. Rainwater farming involves the placement of seeds in the ground, and the reliance on ground moisture and naturally occurring precipitation to supply all the moisture requirements of the plant.

A simple variation of rainwater farming is termed pot irrigation. A ceramic vessel filled with water is poured over each plant. While this is more labor intensive than rainwater farming, pot irrigation could pull some crops through particularly dry periods without the heavy labor investments of irrigation ditches.

Floodwater farming involves the planting of crops in locations that receive periodic flooding. Locations such as the mouths of arroyos are preferred, making crops grown by this method prone to flood damage. This method of farming does not represent the use of technological enhancements and can be considered as another expedient variation of rainwater farming.

At a somewhat more complex level is the use of various water and soil control devices. These include such simple constructions as check dams and terraces. Check dams are low rock walls or even single alignments placed across small drainages to retard or redirect the flow of water towards garden or field areas. Terraces are low walls or alignments constructed perpendicular to the direction of the slope of the land. The purpose of terraces is to retard the flow of water and the erosion of soils in a restricted area. Short, shallow, simple ditches may be

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constructed to divert the runoff from a check dam into field areas. This may be termed expedient irrigation. Various grid gardens, gravel mulch gardens, and other forms of water and soil control features are somewhat more complex variations. The function of these features is to catch naturally occurring moisture, raise soil temperatures, and reduce the evapotranspiration rate of the soil. These devices are still just elaborations of rainwater farming. The Jemez appear to have been relying on rainwater farming or simple water and soil control techniques, since there is no archeological evidence of irrigation facilities in this area.

Corn: The classic conception of prehistoric Southwestern agriculture is that it consisted of three main crops; corn, beans, and squash. These three crops provided prehistoric Southwestern farmers with much of their nutritional requirements, due mainly to the complementary amino acids of beans and corn, and the balance of vitamins and minerals provided by all three plants. This basic triad was supplemented by other cultigens, the meat and eggs from domesticated, hunted animal protein, and collected wild plants.

But while other sources accounted for some of man's nutritional requirements, there is little doubt that corn was the staple crop of prehistoric Southwestern societies. Corn is sometimes characterized as a tropical grass, but there is a pronounced tendency to overstereotype the plant, its moisture and nutrient requirements, and its range of adaptability. Corn is grown at altitudes over 12,000 feet in the Andes Mountains and below sea level in the Caspian plain. Corn is grown in areas with less than ten inches and with more than 400 inches of annual precipitation. Corn is grown from north latitude 58° in Russia and Canada and as far south as latitude 40°. At the time of the discovery of the Americas, native Indian populations were growing all the five major types of corn; dent, flint, sweet, flour, and pop. All these varieties are classified by botanists as a single species, *Zea mays L.* (Mangelsdorf 1974:2).

The growing season required by corn has been estimated by some Southwestern ethnobotanists at 120 or more days (Minnis 1981). Great emphasis is placed on the lengths of the growing season in particular areas as a constraint to agricultural adaptations there. However, the Gaspe flint variety of corn grown in Canada and Spain matures in 60 to 70 days. Some tropical varieties of corn take ten to eleven months to mature (Mangelsdorf op. cit.). The key point here is that corn is genetically mutable and adaptable to a variety of environmental conditions. By simply saving the best plants for seed over several successive generations, prehistoric inhabitants of the study area could

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have easily produced a variety of corn highly suited for rainwater farming in their area.

Climate in the Study Area: The average number of days [redacted] between 32° low temperature occurrences for the years 1911-1983 is 170 (Kunkel 1985; New Mexico State Engineer Office 1956). The shortest freeze-free season between 1948 and 1983 years was 122 days, and the longest 190 days. The standard deviation for this period is 16 days (Kunkel 1985:94). The overall growing season even in Jemez Springs thus seems to be adequate for growing corn. Given the effects of the cold air pooling and the blockage of the sun by the rims of the [redacted], the growing season on the mesa-tops would appear to be more than adequate.

Other edaphic factors affecting the length of time required for corn to mature include the timing and amount of available moisture, available soil nutrients, and solar exposure of the plant. These factors are discussed below.

Corn has also been said to require from 18 and 24 inches of precipitation per year (Minnis op. cit.). The average annual precipitation [redacted] for the years 1911-1983 is 17.15 inches or 43.6 cm (Kunkel 1985; New Mexico State Engineer Office 1956). Precipitation on the mesas around [redacted] could be expected to be higher, since they are higher in elevation. Surface heating combined with orographic lifting as air moves from lower to higher elevation causes convective air currents and condensation (Houghton 1972:2).

The timing of precipitation is as important to the productivity of corn as the total amount. Experiments to determine the effects of soil moisture stress on corn at different stages of growth have established that moisture stress during the tasseling stage, which occurs from 60 to 90 days after planting, can reduce the grain yield of corn plants as much as 50% (Robins and Domingo 1953; Denmead and Shaw 1960; Claassen and Shaw 1970).

At [redacted] the average freeze-free season lasts from May 5 to October 20. The latest freeze has occurred on June 2. On the adjacent mesa-tops, the freeze-free season could reasonably be expected to be at least five days longer on each end. Likewise, one could assume the latest freeze of the year on the mesas could be five days earlier and the earliest freeze to be five days later. Thus corn planted on the mesas between May 1 and May 27 could be expected to tassel between July 1 to July 27. July and August are the two wettest months in the Jemez

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[redacted] Approximately 5.54 inches (or 1/3 of the average annual) precipitation occurs [redacted] during that period. Thus the timing of precipitation in [redacted] area is advantageous for rainwater farming at the present time.

Paleoclimatic reconstructions using the relationship between tree-ring widths and amount of precipitation indicate that the climatic regime between about 1140 and 1580 in [redacted] was quite similar to that of today (cf. Cordell 1979; Dean and Robinson 1977). At no time during this period did the tree-ring indices deviate more than two standard deviations from the mean, indicating relative stability in the rainfall amounts.

Model Building: The preceding discussion was meant to set the stage for an interpretation of the archeological data for the area under consideration. The following model is a preliminary reconstruction of the sequence of occupation, the subsistence system, and the area of land inhabited.

Prior to the Late Archaic Period, [redacted] was probably utilized only on a seasonal, sporadic basis for hunting, collecting, and lithic resource procurement. During the Late Archaic Period, experiments with agriculture occurred [redacted] These early experiments probably did not result in permanent habitation.

By the Developmental Period, [redacted] began to be occupied by small groups of pithouse dwelling agriculturalists. They established a few small villages in the area [redacted], though direct evidence of sites dating to this period have not been recorded in that area. Sites of this period would probably tend to be located at less than 6000 feet elevation adjacent to permanent water. These small Developmental villages were widely separated. Population appears to have been quite low in the study area during this period. No direct archeological evidence for irrigation has been observed in the study area during this period.

By A.D. 1175 or so, it appears that population began to increase, due probably to immigration from [redacted] and from the [redacted] The term applied to the period A.D. 1175-1325, "Coalition" is probably a fairly accurate description of the the cultural processes at work. The baseline Rio Grande style populations of the preceding period blended with the new ideas and people arriving from the west. At this time, site size and frequency increase.

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Habitation sites are found at elevations up to 7000 feet. The lower ends of some of the mesas began to be utilized. One unrecorded cluster of sites in the Ponderosa area exhibits a reservoir. Sites dating to the Coalition Period which have been recorded in the area near Cañones are associated spatially with a variety of terraces and check dams. Since this area has earlier and later occupations, it is difficult to date the construction of these features.

Around A.D. 1325 or 1350, the beginning of the so-called Rio Grande Classic period, the mesa-top population expansion begins. All available bottom lands were occupied, and could only support a limited population size at best. Expansions in other directions were circumscribed by the presence of rugged landforms or other Indian groups, both Pueblo and non-Pueblo. Because of these factors, a unique hybridized aggregated-dispersed settlement system evolved, concentrated on the mesa-tops. This system operated on almost a semiannual basis. For the planting and harvest seasons, much of the population would move out to the field houses, plant, tend, and harvest their crops, utilizing rainwater farming techniques.

Based on her field work and interviews with village elders during her work on land water claims of the Pueblos, Ellis (1978:59) suggests just such a pattern existed during the historic period. The field houses in the Jemez area are much more elaborate than most of those in other areas. They are much more carefully constructed, have larger rooms, often have two or three rooms, and exhibit more diverse artifact assemblages. These characteristics all suggest that the sites were more than just temporary shelters.

During the cold months of the year, the pueblos were the primary places of habitation. Subsistence during this period would have come from stored surpluses of corn produced in the preceding years, and from hunting and collecting. The elaborate storage bins at Jemez sites were quite functional. Detailed spatial analyses of the volume and area of the interiors of Jemez pueblos would probably reveal that a greater percentage of space was allocated for storage than in other areas.

Classic Period population in the study area was concentrated on the mesa-tops. The carrying capacity of the bottomlands north of Cañon was severely restricted for the reasons previously mentioned. The total number of sites, number of pueblos, and number of pueblo rooms all indicate that during the two centuries prior to the arrival of the Spanish, most of the Jemez lived on the mesa-tops. The elevation range of habitation sites peaked during this period. Site number FS 7, the highest large pueblo site, which dates to from ca. 1450-1625, is

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located at 8000 feet. Field house sites are located up to 8445 feet. The Jemez were concentrated in these large mesa-top villages, and a few smaller villages in the bottomlands, when the Spanish first arrived in the area.

The presence of nomadic Athabaskan groups (Navajo and Apache) may have also contributed to the preference for mesa-top locations during the late prehistoric period. The Jemez were among the westernmost of the Rio Grande Pueblos, and were thus the closest to the Navajo and Apache heartland in the San Juan Basin. The exact date of the first arrival of these groups in the Southwest is unclear, but probably occurred by 1500. The Navajo were certainly a factor in determining settlement patterns in the area after 1700.

Early Spanish explorers found the people they referred to as the Hemes clustered in these large mesa-top villages, and some smaller ones in [redacted] The earliest Spanish contact was a Captain Francisco de Barrionuevo, of Coronado's Expedition. He visited the area in 1541 to acquire food and other supplies for the expedition. He reported that the natives of the area came out peacefully and furnished provisions. The Rodriguez-Chamuscado and the Espejo-Beltran Expeditions of the 1580s also contacted the Jemez. The first permanent Spanish colony was established near San Juan Pueblo in 1598 by Don Juan de Oñate. Oñate assigned a Franciscan missionary to the Jemez, Fray Alonzo de Lugo. Lugo did not last long, but the process of missionization and reduction of the Jemez from their many villages to just one had begun in the Jemez area.

The Jemez were active participants in the Pueblo Revolt of 1680, and martyred one of their missionaries. The Revolt resulted in the abandonment of New Mexico by the Spanish for 12 years. Most of New Mexico was reconquered by Diego de Vargas in 1692-3. In July, 1694, Vargas fought a great battle with the Jemez high atop [redacted] The Jemez were defeated by the superior Spanish weapons and tactics. After another attempted revolt in 1696, and another military defeat, most of the Jemez apparently abandoned the area. They went west to join other Pueblos, such as the Hopi, and some Jemez began living with the Navajo. By 1706, present Jemez Pueblo, known as Walatowa, was reestablished. Since about 1716, when 113 Jemez returned to Walatowa from the Walpi Mesa in the Hopi country, virtually all of the Jemez have lived at that site.

The distinctive culture that can be characterized as "Jemez" did not emerge until about A.D. 1350. At about this time, three things occurred: Jemez Black-on-White pottery began to be made; major

(see cont. sheet 15)

population growth occurred primarily on the high elevation (above 7,000 feet) mesa-tops in the area; and the large pueblo / fieldhouse pattern of land-use centered on rainwater farming of the mesa-tops emerged. For purposes of this nomination, sites of the Preceramic, Developmental, Coalition, and post-1700 periods are not under consideration for nomination, only the "classic" Jemez sites dating from about A.D. 1350-1700.

Property Types: The adaptation of the Jemez People to their environment resulted in the formation of numerous sites. A conservative estimate of the total number of sites associated with this phenomenon within the previously defined area based on present knowledge and partial surveys would be 10,000 sites. For purposes of this nomination, the following five property types have been defined:

1. Pueblo Sites
2. Fieldhouse Sites
3. Agricultural Sites
4. Rock Shelter Sites
5. Rock Art Sites

These five types subsume more than 90% of the known sites dating to the period indicated in the study area. Uncommon types of sites include artifact scatters, campsites, and isolated hearths.

National Register Criteria: Sites in the Jemez Culture Area are considered significant at the State level, although a few sites are nationally significant. Criterion D is the principal National Register criterion under which most of the sites in the Jemez Culture Area would qualify for nomination to the Register. Since this criteria involves the information a site has already yielded or its potential to yield information important in history or prehistory, it may be useful to discuss and describe the classes of information available from such sites, and why such information is important. As the discussion of previous research has shown, the Jemez Culture Area suffers from a lack of focused research on a regional level. The emphasis of the early research was clearly on the larger sites. Recent research, while providing significant information about some of the small sites, is still focused at the site level. What is needed is a regional perspective that recognizes the variability in the archeological record in this area.

(see cont. sheet 16)

At least the following eight problem domains can be defined for the Jemez Culture Area:

1. Origins of the Jemez Phenomenon - archeologists have long speculated that immigrants from the Gallina Culture Area moved into the Jemez Region after environmental and social conditions deteriorated in their area. Such a hypothesis could be tested by excavating carefully selected sites.

2. Subsistence - At least two vastly different subsistence strategies were practiced in this area. The first occurs in the riverine environment along the margins of the [redacted]. In these relatively well-watered areas, settlement is concentrated along the watercourses, similar to the patterns elsewhere in the Upper Rio Grande area. Farming strategies may have included low intensity irrigation. This area was the focus of the early development of the Jemez Culture, but was also occupied into the historic period. The carrying capacity of the riverine environment may have been reached relatively early in the development of the Jemez Culture, and this factor may in fact have provided and impetus or prime mover for expansion onto the mesa-tops. The mesa-tops are where most of the pueblos, fieldhouses, and presumably the population were concentrated. There are no permanent water sources on the mesa-tops. Most of the large pueblos exhibit associated large depressions interpreted as reservoirs for domestic water storage. There are also reservoirs located away from pueblos that may have served to impound water for agricultural purposes. There are various water and soil control features such as terraces and grid gardens. The hundreds of field houses on the mesa-tops indicate that dry farming, or perhaps more accurately, rainwater farming, was a successful agricultural strategy.

3. Social Organization - human societies organize themselves differently to respond to the demands their physical and cultural environments place on them. Clues to Jemez social organization can be found in the way which they distributed themselves across the landscape. Another indication of social organization is the way space is utilized within their sites.

(see cont. sheet 17)

4. Technology - technology provided the Jemez with the interface to their environment. The level of complexity of a society is largely determined by the technology available to them. More socially complex cultures tend to exhibit more advanced technology. With the arrival of the Spanish, additional technologies that were formerly unknown became available to the Jemez.

5. Demography - the apparent rapid increase in the size of the population inhabiting the Jemez Culture Area from the A.D. 1200s until Spanish contact is one of the most puzzling aspects of this area. Some would argue they were doing all the wrong things for this phenomenon to occur. Most of the puebloan societies in the Southwest were moving to lower elevation settings and aggregating in large villages near permanent waterways while the Jemez were moving higher in elevation and further from water. Another important demographic factor in this area that we should seek to understand is the rapid reduction of population in the seventeenth century.

6. Trade and Alliance Networks - no culture develops in a vacuum, and the Jemez were part of a historically documented trade and alliance network. These alliances tended to shift through time as old enemies became allies and vice versa. One strong alliance was formed during the Pueblo Revolt, when virtually all aboriginal groups banded together to drive the Spanish from New Mexico. Material cultural remains show trading relationships with other pueblos became stronger in the Jemez area through time, particularly after the arrival of the Spanish.

7. Spanish Contact and Acculturation - the arrival of the Spanish forced great changes upon the Jemez. They had to deal with a new, aggressively proselytizing religion, new technologies, new forms of administration, and new diseases. The way in which the Jemez adapted to these changes forced upon them by a militarily dominant culture can be seen in their physical remains, material culture remains, and historical documentation.

(see cont. sheet 18)

8. Religion, Ceremony, and World View - it has always been difficult to reconstruct religious or ceremonial activities and world view from material culture remains. In the case of the Jemez, historical documentation, and old and modern ethnographies can provide evidence to augment what we can learn from archeological excavations of kivas and studies of rock art.

The previously defined property types could be expected to yield information useful for answering research questions associated with the domains. Table 2 illustrates the information potential of each property type with regard to the previously defined problem domains.

(see cont. sheet 19)

Table 2
Data potential for Jemez Culture Area property types.

prop type \ problem domain	1	2	3	4	5	6	7	8
1	X	X	X	X	X	X	X	X
2	X	X	X	X	X			
3		X	X	X				
4	X	X	X	X	X	X		
5		X				X	X	

KEY

Property Types:

1. Pueblo Sites
2. Fieldhouse Sites
3. Agricultural Sites
4. Rock Shelter Sites
5. Rock Art Sites

Problem domains:

1. Origins of the Jemez
2. Settlement and Subsistence
3. Social Organization
4. Technology
5. Demography
6. Trade and Alliance Networks
7. Spanish Contact and Acculturation
8. Religion, Ceremony, and World View

F. Associated Property Types

I. Name of Property Type: Pueblo Sites

II. Description

The term "pueblo", Spanish for "town", is a general term applied to almost all prehistoric above-ground architectural remains in the Southwest. For present purposes, pueblos are defined as those above-ground architectural features with more than four rooms. An attempt is made here to apply a behavioral distinction between small one to four room sites occupied by only one family, and sites with more than four rooms, since sites of that size were probably occupied by more than one nuclear family. This distinction is felt to be the crucial difference between a pueblo and a small architectural site.

(see cont. sheet 20)

III. Significance

Pueblo sites in the study area are likely to be significant for research for the following reasons. For the most part, pueblo sites in the Jemez area have escaped serious pothunting damage. The remains at these sites should be exceptionally well preserved. Subsurface contexts should for the most part accurately reflect natural site formation processes. Pueblo sites are places where activities occurred that were conducted nowhere else, such as kiva ceremonies. Some pueblo sites were visited by the Spanish, and several may have material culture items of European manufacture.

(see cont. sheet 21)

IV. Registration Requirements

a) National Register criterion: d

b) areas of significance: prehistoric archeology, historic aboriginal archaeology

c) data requirements: A pueblo site must have the potential to yield data in one or more of the following categories in order to qualify for the National Register under criterion d.

1. A site must contain undisturbed deposits sufficient to demonstrate culturally meaningful spatial relationships among artifacts, features, floral remains, and faunal remains.

2. A site must contain structures, features, or artifactual materials that will permit inferences regarding human activities and site function.

3. A site must contain structures, features, or artifactual materials that will permit inferences regarding settlement characteristics.

[X] See continuation sheet

[X] See continuation sheet for additional property types

There is considerable variability in site size and complexity within this property type. The Jemez culture area contains nine examples of what are termed "Great Kiva" sites. These sites are all over 650 estimated rooms in size, and exhibit a great kiva-like feature (a large walled depression more than 10 m in diameter). No site has more than one such feature.

Most of the great kivas are not located within plazas, but are usually located on the edge of the pueblo. Features of these nine largest pueblo sites include multiple enclosed or semi-enclosed plazas, several smaller plaza kivas, multiple room blocks, multi-storied construction, and dense refuse scatters. All nine great kiva sites are located on mesas, none in valley or canyon bottoms.

Somewhat smaller in size than the Great Kiva pueblo sites are the "Plaza" sites. These sites usually contain multiple, multistoried roomblocks surrounding one or more plazas on at least three sides. Some of these sites have plaza kivas, but none has a great kiva. These sites range in size from 50 to 600 rooms. There are about 30 known Plaza sites in the Jemez culture Area.

Two and possibly three abandoned pueblo sites in the Jemez Province are also the sites of seventeenth century Spanish missions. Giusewa (LA 679), present Jemez State Monument, was the site of San Jose de los Jemez mission, extant during the 1620s-1630s. The other known pueblo site with a mission ruin is Patokwa (FS 5). Patokwa was the site of the San Diego del Monte mission. Tree-ring dating and ceramic evidence indicate that another possible mission site could be Boletsakwa (FS 2).

Small pueblo sites range in size from five to fifty rooms. These sites are most typically found in the lower lying drainage bottoms and date to the Coalition Period. There are usually no kiva depressions at these sites. There are at least 20 known small pueblo sites in the Jemez Culture Area.

Previous excavations at pueblo sites have shown that there are likely to be well-preserved vegetal and skeletal remains, both of which can provide important information concerning subsistence and demography. Material culture remains at pueblo sites can provide important information concerning trade and contacts with other Indian groups. Since pueblo sites were occupied year-round, they should contain a full range of material culture remains that reflect Jemez technology, subsistence, social organization, demography, and trade relationships.

4. A site must contain either macrobotanical, microbotanical, or faunal remains indicative of subsistence practices.

5. A site must contain datable wood, charcoal, baked clay, or obsidian that will permit chronological placement.

6. A site must contain intact architectural features that permit analysis of floor space, floor features, and other spatial organizational characteristics.

7. A site must contain intact burials with human remains and other items that can be analyzed to provide information about pathologies, genetic relations, or social status of the individuals.

I. Name of Property Type: Fieldhouses

II. Description

The most common site type in the study area is what has been termed the fieldhouse. Fieldhouses are isolated small one to four room structures thought to have been associated with agricultural utilization in the area. Although such sites may have served a variety of functions, the term "fieldhouse", with all its implicit assumptions, is so widely used and accepted that it will be used generically herein as well. Over 1300 fieldhouses have been recorded in the study area. All but about twenty-five of these (some of the data are contradictory) appear to date to the Classic Period.

There is considerable variability among the fieldhouse type sites. At least two subtypes can be empirically defined. The more complex fieldhouse sites exhibit more than one room, dense and diverse artifact assemblages, and more subfloor features. The simpler fieldhouses exhibit one room only, often small in size, and are evidenced only by a low mound of rubble; few or no artifacts; and no hearths or other features. Some fieldhouses are also associated with check dams and other agricultural features.

III. Significance

Because of the great number of such sites, fieldhouses in the Jemez Culture Area obviously fulfilled a very important function in Jemez subsistence. They served a variety of possible functions, including temporary habitation, storage, hunting lodges, vacation homes, lookouts, and probably others that are not immediately obvious. It seems most likely that initially such sites were short-term residences for a single individual or family during the planting and harvesting seasons. The variability observable empirically in size, artifactual assemblages, and condition suggests that field houses evolved during the period under consideration here into more than just temporary shelters.

As the most numerous type of site in the area, fieldhouses were obviously an important element in the unique Jemez style dispersed-aggregated settlement system. Such sites have the potential to yield important data for reconstructing Jemez agricultural technology, subsistence, social organization, and chronology. Previously excavated fieldhouses have exhibited intact features such as flagstone floors, hearths, ventilators, and benches. Such sites have

(see cont. sheet 24)

yielded datable chronometric specimens, and preserved macrobotanical and microbotanical remains.

Locational and distributional information regarding fieldhouses and other agricultural sites is an important class of information in itself. Such data can be used to help characterize the relationships of the Jemez to their environment, how they organized themselves to take advantage of the opportunities their environment presented them, and how they buffered themselves from its challenges.

IV. Registration Requirements

a) National Register criteria: d

b) areas of significance: prehistoric archeology, historic aboriginal archaeology

c) data requirements: a fieldhouse site must have the potential to yield data in one or more of the following categories in order to qualify for the National Register under criterion "d".

1. A site must contain undisturbed deposits sufficient to demonstrate culturally meaningful spatial relationships among artifacts, features, floral remains, and faunal remains.

2. A site must contain structures, features, or artifactual materials that will permit inferences regarding human activities and site function.

3. A site must contain structures, features, or artifactual materials that will permit inferences regarding settlement characteristics.

4. A site must contain either macrobotanical, microbotanical, or faunal remains indicative of subsistence practices.

5. A site must contain datable wood, charcoal, baked clay, or obsidian that will permit chronological placement.

6. A site must contain intact architectural features that permit analysis of floor space, floor features, and other spatial organizational characteristics.

(see cont. sheet 25)

I. Name of Property Type: Agricultural Sites

II. Description

Agricultural sites include isolated fields, terraces, grid gardens, irrigation ditches, and reservoirs not associated with other structures. Such sites are relatively rare in the Jemez Culture Area, particularly when compared to nearby regions such as the Pajarito Plateau and Chama Valley. Known agricultural sites in the study area tend to be located in lower elevations (below 7,500 feet). Field areas were defined by Fliedner (1975) in the upper Jemez Canyon area around Unshagi. Other apparent field areas are known on the mesa tops. These are generally flat areas, usually gently sloping to the south, characterized by a lack of large trees, and apparent field clearing marked by non-linear rows or rocks on their margins. Terraces are linear rows of stones placed on the ground parallel to the ground contour. These are usually found on somewhat steeper slopes than field areas, but generally also southward sloping. Grid gardens are similar to terraces but have interconnecting rows of stones which form a checkerboard pattern. Irrigation ditches are creases in the earth which cut off from a drainage and run across and slightly downhill. Their function is to divert water from drainages to field areas. Such features probably did not appear with any frequency until after the arrival of the Spanish. Isolated reservoirs are usually created by the building of earthen dams across shallow drainages. Their function may have been to impound water for irrigation purposes, or for domestic uses such as cooking and cleaning.

III. Significance

Agricultural sites could provide microbotanical or macrobotanical information regarding the types of crops grown at particular locations. Isolated reservoirs and irrigation features relate to more intensive agricultural utilization of the study area. If such features were to be found in some abundance (they are not at the present), then a more centralized social organization would be suggested. Thus such sites could provide important information regarding social organization and land-use. The distribution of such sites across the study area can provide important information regarding the land-use patterns of the Jemez.

(see cont. sheet 26)

IV. Registration Requirements

a) National Register criteria: d

b) areas of significance: prehistoric archeology

c) data requirements: an agricultural site must have the potential to yield data in one or more of the following categories in order to qualify for the National Register under criterion "d".

1. A site must contain undisturbed deposits sufficient to demonstrate culturally meaningful spatial relationships among artifacts, features, floral remains, and faunal remains.

2. A site must contain structures, features, or artifactual materials that will permit inferences regarding human activities and site function.

3. A site must contain structures, features, or artifactual materials that will permit inferences regarding settlement characteristics.

4. A site must contain either macrobotanical, microbotanical, or faunal remains indicative of subsistence practices.

(see cont. sheet 27)

I. Name of Property Type: Rock Shelters

II. Description

Rock shelter sites are not common in the Jemez Culture area. They fall into two main groups, those with architectural remains, and those without such features. Since the geology of the study area is not conducive to the formation of large shelters [redacted], most of the shelters in this area were formed as small voids in the tuff. Most of the rock shelter sites with architectural remains appear to be functionally similar to field houses or small pueblos. The shelters merely provided a "free" wall or a roof for a small structure that otherwise is simple a small structure.

III. Significance

The significance of rock shelters lies in the information they contain, information that in many cases is not preserved, or not preserved as well, in open sites. These classes of data include macrobotanical, microbotanical, and faunal specimens; human remains; and basketry, sandals, blankets, textiles, and artifacts made of wood. Perishable datable specimens such as tree-ring samples and carboniferous materials are also usually exceptionally well-preserved in rock shelter sites. Rock shelters are also often well-stratified and thus preserve a long sequence of occupation not seen in sites occupied for a shorter period.

IV. Registration Requirements

a) National Register criteria: d

b) areas of significance: prehistoric archeology, historic aboriginal archaeology

c) data requirements: a rock shelter site must have yielded, or must have the potential to yield, data in one or more of the following categories in order to qualify for the National Register under criterion "d".

1. A site must have yielded cultural deposits, or must contain undisturbed deposits, that demonstrate culturally meaningful spatial relationships among artifacts, features, floral remains, and faunal remains.

(see cont. sheet 28)

2. A site must contain structures, features, or artifactual materials that will permit inferences regarding human activities and site function.

3. A site must contain structures, features, or artifactual materials that will permit inferences regarding settlement characteristics.

4. A site must contain either macrobotanical, microbotanical, or faunal remains indicative of subsistence practices.

5. A site must contain datable wood, charcoal, baked clay, or obsidian that will permit chronological placement.

6. A site must contain intact burials with human remains and other items that can be analyzed to provide information about pathologies, genetic relations, or social status of the individuals.

(see cont. sheet 29)

I. Name of Property Type: Rock Art Sites

II. Description

Rock art sites consist of either pictographs (figures painted onto rock), or petroglyphs (figures pecked, ground, or scratched onto rock). Most rock art sites are found on cliffs or other bedrock exposures, or in rock shelters. The Jemez Culture Area exhibits a large number of rock art sites, panels, and isolated figures.

All of the recorded rock art sites in the study area consist of figures classified as belonging to the Rio Grande Style. This style of rock art is defined by Schaafsma (1975:129, 1980:254ff) as consisting largely of petroglyphs "characterized by large outline designs which are highly stylized and very decorative." Common figures include mask depictions, box-like anthropomorphs, shield-bearers, shields, cloud terraces, crosses, stars, pecked handprints, spirals, concentric circles, kokopelli, and various zoomorphs; especially eagles and snakes. Very little detailed recording or analysis has been conducted at Jemez rock art sites.

III. Significance

Our understanding of the function of rock art in Southwestern societies is based on studies of the rock art of still-living cultures, ethnographic studies of living Southwestern pueblo groups, and archaeological remains. Studies of rock art provide some of the few insights into Pueblo religious activities and beliefs, and, in at least one instance in the Jemez Culture Area, possibly show a historic figure.

Rock art is also, of course, the artistic expressions of individuals who were products of a society about which we know little. The distinctive Rio Grande rock art style which developed during this period is fully represented in Jemez rock art.

IV. Registration Requirements

a) National Register criteria: d

b) areas of significance: prehistoric archeology, historic aboriginal archaeology

(see cont. sheet 30)

c) data requirements: a rock art site must have the potential to yield data in one or more of the following categories in order to qualify for the National Register under criterion "d".

1. A site must have interpretable rock art figures (either pictographs, petroglyphs, or both) datable to the period indicated and attributable to the Rio Grande Style.

2. The site must be sufficiently free of vandalism to permit analysis of the figures present.

G. Summary of Identification and Evaluation Methods

Discuss the methods used in developing the multiple property listing

(a)

The archeological remains of the Jemez Culture Area were first mentioned in English in the report of Lieutenant James Simpson, an American soldier conducting reconnaissance of the area shortly after the American conquest of New Mexico in 1846 (Simpson 1964). Other documents concerning nineteenth century exploration of the archeological remains of the area included Loew (1875), Bandelier (1892), and Holmes (1905).

Archeological excavations in the Jemez Culture Area began in 1907. The goals of these early excavation projects were little more than acquisition of artifacts for museum display and human remains for further study. No reports were ever written concerning these excavations, and only a few contemporaneous documents even exist concerning this work. Excavations are known to have occurred at the large pueblo sites of Kwastiyukwa (FS 11), Amoxiumqua (FS 530), and Giusewa (LA 679).

[X] See continuation sheet

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[X] See continuation sheet

Primary location of additional documentation:

- [ ] State historic preservation office
- [ ] Other State agency
- [X] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Specify repository: Santa Fe National Forest

I. Form Prepared By

name/title Michael L. Elliott/Principal Investigator
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Systematic recording of sites in the area began in the late 1920s with the survey work of Harry Mera. Mera assigned LA (Laboratory of Anthropology) numbers to the sites, drew sketch maps of their main features, made collections of pottery, and recorded other information at each site. Although most of the sites he recorded were large pueblos, he did record a number of small sites in the Vallecitos drainage. Mera defined and named the most prevalent decorated ceramic type found in the area, Jemez Black-on-White. Another survey of large sites in the area was conducted in the 1930s by Reginald Fisher, who drew several excellent maps of some of the sites he recorded.

The main investigative phase in the Jemez Culture Area occurred from 1928 until 1938. From 1928 to 1934, approximately two-thirds of the pueblo site of Unshagi (LA 123) was excavated in a series of joint field schools of the School of American Research and the University of New Mexico (Reiter 1938). [redacted] was also excavated during this period (Alexander and Reiter 1935), and Nanishagi (LA 541) was partially excavated (Reiter, Mulloy, and Blumenthal 1940). The [redacted] excavations resulted in the discovery of the earliest evidence of horticulture in the study area. A piece of corn from the site was radiocarbon dated to about 880 B.C.

Subsequent work was sporadic in the area until the 1970s. A University of New Mexico field school session (Luebben 1970) was held in 1947 to complete the excavation begun by Paul Reiter in the 1930s of Bj 74, a small cliff house [redacted] The Girl Scouts conducted a series of surveys and excavations in the 1960s (Bohrer n.d.). Two pueblo sites [redacted] were excavated by Franklin Barnett of the Albuquerque Archaeological Society in 1962-3 (Barnett 1973). In the 1970s, the German geographer Dietrich Fliedner surveyed (archeologically) the area around [redacted] (Fliedner 1972, 1975). He observed a number of what he termed "field relics" (terraces, check dams, fieldhouses) and other types of sites. The Museum of New Mexico conducted a number of surveys between [redacted] for the State Highway Department in the early 1970s (e.g. Wiseman 1976), [redacted] was also surveyed (Haecker 1986).

The Santa Fe National Forest began its series of cultural resource management surveys in the late 1970s. In 1982 the Forest nominated 33 large pueblo sites in the [redacted] to the National Register of Historic Places (Elliott 1982). The 1980s have seen a continuation of cultural resources management oriented work, primarily surveys, but also including the excavations of several lithic sites near [redacted] (Baker and Winter 1981), and the excavations of several field

(see cont. sheet 32)

house sites by the Santa Fe National Forest (Elliott et al. 1988; Gauthier and Elliott 1989).

(b)

The result of all the surveys and limited excavations in the area has been the accumulation of data of variable quality on over 1600 sites, of which some 1400 are associated with the Jemez phenomenon previously described. The data were researched for preparation of this nomination by compiling a data base consisting of site numbers, locational data, environmental data, and descriptive information regarding site type, features, probable dates, and size. These data were analyzed to produce breakdowns of sites by type, date, elevation, environmental zone, condition, and landforms. These breakdowns produced the definitions of the property types contained herein, and the data requirements for determining the eligibility of specific properties.

The historic context for this nomination was prepared by conducting extensive library and archival research into the prehistory and prehistory of the area. The geographical and chronological bounds of the historic context were determined through this research.

(c)

The typology of significant property types is based on functional site types in common usage in the area for the relevant time periods. These types were utilized because they are in common usage and provide for convenient comparisons to sites in other areas.

(d)

The requirements of integrity for the listing of related properties were derived both from the preparer's extensive personal knowledge of sites in the area and from information recorded on site forms, maps, and photographs of the sites.

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