Crossroads of Change: An Environmental History of Pecos National Historical Park

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Railroads, Timber, and Tourists, 1880-1925

Adolph Bandelier rattled across the Pecos River in the comfort of a railroad car, gazing out the window at the landscape that slid past him. While traveling by rail through New Mexico, Bandelier wrote, the tourist becomes "fascinated . . . by the beauty as well as by the novelty of the landscape." The Atchison, Topeka, & Santa Fe railroad crossed the Pecos River at Bernal, then turned northwest and headed for Glorieta Pass. A few months earlier and Bandelier would have been riding in a wagon or on a horse through the Pecos valley. The railroad had just entered New Mexico—workers crested Raton Pass in 1878 and laid tracks through Pecos and Glorieta Pass in late 1879 and early 1880. Bandelier arrived in the valley in August of 1880, intent on investigating the region's Indian cultures and ancient Pueblo ruins.[1]

Bandelier could see the ruins of Pecos Pueblo from the train as it chugged past the mesilla. "The red walls of the church stand boldly out on the barren mesilla; and to the north of it there are two low brown ridges, the remnants of the Indian houses." The train then passed through Apache Canyon, "which overlooks the track in awful proximity," Bandelier remarked. Bandelier paused for some sightseeing in Santa Fe before taking a wagon back to Pecos to study the ruins that had captured his attention. He did not stay at Pigeon's Ranch or Kozlowski's while at Pecos, as so many travelers had before him. Instead, Bandelier found lodging at Baughl's Sidings just east of Glorieta Mesa, a "switch and storing-place for ties" that had sprung up next to the railroad tracks and boasted a small, temporary community. Bandelier lodged at a boarding house owned by Mrs. Root and remarked that he owed to her "kindness and motherly solicitude . . . a tribute of sincere gratitude."[2]

Born in Bern, Switzerland, Bandelier moved with his parents to Illinois in 1848. He received an extensive education and became interested in archaeology and pre-Columbian Mexican cultures. The anthropologist Lewis Henry Morgan encouraged Bandelier's pursuits. Morgan traveled to the Southwest in 1878 to conduct archaeological studies of Pueblo ruins and helped Bandelier obtain a contract from the Archaeological Institute of America to do field work in the Southwest as well. Under this contract, Bandelier set off for Santa Fe and Pecos in 1880. He stayed at Pecos for ten days, investigated both the ruins on the mesilla and others in the vicinity, and compiled a brief report on his findings.

Bandelier arrived at Pecos when the valley was on the cusp of immense change. The railroad that he traveled on brought many of those changes. Bandelier saw the railroad as a convenient means of transportation, but for the residents of Pecos, the railroad represented a transforming force that affected their lifestyles and economy. Baughl's Sidings, the small community where Bandelier stayed, was just one example of the changes the railroad brought to Pecos. Besides being a railroad passenger, Bandelier was also an academically trained professional who utilized scientific knowledge in his studies of the Pecos landscape. A reliance on science to manage land came to characterize many people's interactions with the Pecos environment in the twentieth century. As the government set aside forest reserves, professionally trained land managers began transforming the valley. Bandelier also traveled to Pecos as a tourist, interested in experiencing Puebloan culture firsthand. Tourism, too, became an important force in the valley that altered people's relationship with the environment. Bandelier may have been interested in the past, but when he wandered over the pueblo ruins in August of 1880, he represented the valley's future.

Pecos, 1880-1925

The Santa Fe Trail had connected Pecos to eastern markets for many years, but only so much trade and transport could occur by wagon train. Although fur trappers had succeeded in exploiting one local resource to its utmost limits, other industries—particularly mining and logging—remained limited by a transportation system that relied on animal power. The arrival of the railroads in New Mexico in the late 1870s and early 1880s removed these limitations. Suddenly, New Mexicans had a means of transporting high volumes of goods both quickly and efficiently. The railroad consumed resources itself but also carried resources to hungry eastern American and western European markets. The arrival of the railroad fully integrated New Mexico into the American capitalist economy, a state it had been slowly developing towards for years. Pecos happened to be one of the communities located close to the Atchison, Topeka, & Santa Fe tracks. The company chose to build the route over Glorieta Pass in part because of the valuable timber located in the valley and the natural pass to the Rio Grande drainage. Pecos's geographical position once more placed it in the path of change.

The arrival of the railroad enabled intensive resource exploitation. The 1880s through the early 1900s witnessed the most intensive use of resources in Pecos history, with attendant environmental effects. The timber industry boomed and loggers exploited the dense forests extending up the Pecos River Canyon into the Sangre de Cristos. Large livestock herds also proliferated—in the Pecos valley as well as in the southern Sangres where ranchers from the surrounding plains summered their stock. The combined effects of timber cutting and overgrazing denuded the forests around Pecos, increasing erosion and flooding. Human population increased in the Pecos valley as well, as people followed the economic opportunities afforded by the railroad. Those people built homes, cut firewood, and hunted game. Many of the large mammals around Pecos were either hunted to extinction or declined precipitously.

As the resources of Pecos increased in economic value, but also suffered from overuse, control of the land and resources became even more contentious. Hispanic residents of the area, and northern New Mexico as a whole, found themselves marginalized by the increasingly dominant role of Anglo capital and Anglo control of land. Racist ideology forced Hispanos into subordinate roles, stereotyping them as lazy and ignorant, depicting their villages as stagnant backwaters riddled with Catholicism. As a demographic majority, Hispanos managed to maintain a strong base of political control, but most Hispanos found themselves integrated into a migratory, wage labor economy over which they had little control.

Two cultural systems of land use also collided in the Pecos valley. In response to the exploitation of western resources, the conservation movement, coupled with unprecedented support for federal government regulation, reversed American land policy. No longer would the federal government obtain land only to transfer it to private citizens. Instead, with the creation of national parks and forest reserves, the federal government became the permanent owner and manager of a substantial portion of western lands. At Pecos the creation of a federal forest reserve under control of the Forest Service introduced ideas of scientific, professionalized land management into the valley. The management policies of the Forest Service often created resentment among local farmers and ranchers who felt the policies unfairly prevented them from using the land as they had for generations.

New perceptions of the Pecos environment and land use also followed the burgeoning tourism industry. Traveling to scenic destinations, particularly in the West, became a popular

pursuit for Americans—first the wealthy, but then growing numbers of the middle class as well. The Southwest became the "Land of Enchantment" with its ancient ruins and stunning landforms. The ruins of the Pecos Pueblo and rustic lifestyles of Pecos residents attracted many Anglos who depicted the environment as a timeless one, free from the effects of modernity.

Such romantic impulses were a response to industrialization, but the Pecos environment was not untouched by modernizing influences. Adolph Bandelier represented those influences—traveling by railroad, a member of a professional discipline—even as he sought out evidence of ancient cultures in the Pecos valley. Through the effects of industrialization, the Pecos landscape shifted. Railroad tracks bisected the valley and sharp train whistles and smoke filled the air. New communities appeared, and then faded away. The sounds of axes and sawmills echoed from the mesas. Erosion cut deep arroyos and muddied the river. Weeds appropriated overgrazed fields. Wolves, deer, and elk became scarce or disappeared altogether. Although tourists gazing at Pecos Pueblo may have convinced themselves they stood in a landscape that reflected ancient history, in fact the Pecos valley showed them the consequences of their own modern society.

"Railroad Iron Is a Magician's Rod, In Its Power to Evoke the Sleeping Energies of Land and Water"

The construction of railroads transformed Pecos and the entire American West. Suddenly people could travel great distances in a fraction of the time and transport goods over the rough terrain with ease. The railroad's arrival was no fortuitous accident. The federal government provided land grants to railroads and eastern capital subsidized the immense construction costs. The extension of the railroad represented a deliberate plan to exploit the vast lands and resources of the West. Most Westerners welcomed the arrival of railroads. Railroads provided consumer goods at a fraction of the old cost and fostered local industries as well—timber cutting, mining, ranching, and farming. The power of a steam engine propelled the raw products to distant markets. The railroad itself transformed the landscape—miles of land for tracks, acres of timber to build them. Ralph Waldo Emerson captured the transformative power of the railroad when he said, "Railroad iron is a magician's rod, in its power to evoke the sleeping energies of land and water." At the same time, the railroads tied the West to the fortunes of eastern and world markets, taking the region on a roller coaster ride through depressions and prosperity. Many Western regions remained dependent on eastern capital and subsidies from the federal government.[3]

The railroads changed people's relationship to the environment at its most fundamental level—the consumption of resources. The process became abstracted—instead of raising a pig for slaughter or at least knowing where the pig came from, people paid cash for cut and packaged meat sold at a store. Instead of using local timber for construction, trees were harvested hundreds, perhaps thousands of miles away and transported to growing communities by train. Although resources had always been traded and transported over long distances, the railroad made it possible to treat almost every resource this way and completely separated consumption from production. [4]

Buying and selling resources also became an abstract process. Precise surveying, using standardized measures, had allowed people to exchange land even if they never set foot on the land itself. The railroad created the same situation for the products of that land. A person no longer had to inspect a farmer's sack of wheat for they trusted the railroad to deliver grain that had been measured and weighed according to a standardized system. People used slips of paper

to buy and sell wheat or timber. In such a system, cash became a necessity, and many Westerners turned to wage labor to earn it.[5]

The New Mexican economy and environment underwent this transition when three railroads converged in the region in the late 1870s—the Atchison, Topeka, & Santa Fe; the Denver and Rio Grande; and the Southern Pacific. The AT&SF and Denver and Rio Grande approached northeastern New Mexico from southern Colorado, both laying tracks towards Raton Pass. In February 1878 the AT&SF won the race and became the first to extend its tracks into New Mexico. A year later, the railroad had reached Las Vegas, which became a center for shipping and commerce in the region. The AT&SF chose to follow roughly the same route as the old Santa Fe Trail—through Glorieta Pass and the Pecos vicinity—because of the valuable timber in the area, the mines around Galisteo, the presence of Santa Fe, and the natural pass afforded at Glorieta that people had used for centuries to cross into the Rio Grande drainage.[6]

The railroad changed the economy and demographics of the Pecos area. New communities—many of them short lived—proliferated along the railroad tracks. Geographer J. B. Jackson describes how these short term settlements differed from older villages. They "testified to the existence of a new relationship with the landscape: the dwelling, and even the community, moved to be near the source of employment, in contrast to the traditional relationship where employment centered on the dwelling and the land."[7] Settlements like Baughl's Sidings served as short-term living quarters for the numerous workers employed in building the railroad tracks and cutting railroad ties in the surrounding forests. Rowe, first called Kingman Station, but renamed by 1889, appeared west of the Los Trigos village. Los Trigos itself disintegrated as its inhabitants moved to Rowe. The entire Los Trigos grant had already passed from Hispanic ownership to Anglos by the time the railroad arrived. Those Hispanos who did stay on the grant became tenant farmers.[8] Across Glorieta Creek, north and west of the pueblo ruins, two clusters of buildings formed in the 1880s, large enough to be marked as separate villages in the 1880 census. These were Baughl's Siding, also called Baughl's Switch or Bowll's Switch, and La Joya. Baughl's Siding only lasted two years and La Joya probably not much longer.[9]

Adolph Bandelier described Baugh's Sidings as being a mile and a half from the Pecos Pueblo ruins, adding that "it is about 800m.—2,620 ft.—from the foot of the *mesa*, in a belt of fine large pine timber, very high, and gives glimpses of splendid views over the valley of Pecos to the Sierras beyond. Climate fine, but nights very cold. The buildings are as yet nearly all temporary; it is more a camp than a place as is it now."[10] Other settlements appeared later, replacing Baughl's Siding and La Joya, although located in the vicinity. A map from 1915 shows two "towns" along the AT&SF tracks. One, called Decatur, stands opposite the Pecos Pueblo ruins. The other, Fox Siding, was at the western edge of the Pecos grant.[11]

All of these communities were temporary affairs—put up to accommodate the needs of the railroad and disappearing when the requests for (and availability of) timber decreased and railroad construction moved to other parts of the region. A diverse population called these settlements home while they lasted, and some probably stayed in the Pecos area permanently. The 1880 Pecos census recorded people who hailed from Ireland, France, England, and other areas of Europe. The influx of new people pushed the population of the "precinct of Pecos" upwards from 536 in 1900 to 667 in 1910. In 1910 forty-two local men worked for the railroad. New industries thrived in Pecos, providing services for the railroad workers. The 1880 census showed a restaurant keeper and a saloon keeper in Pecos. Three blacksmiths worked "within

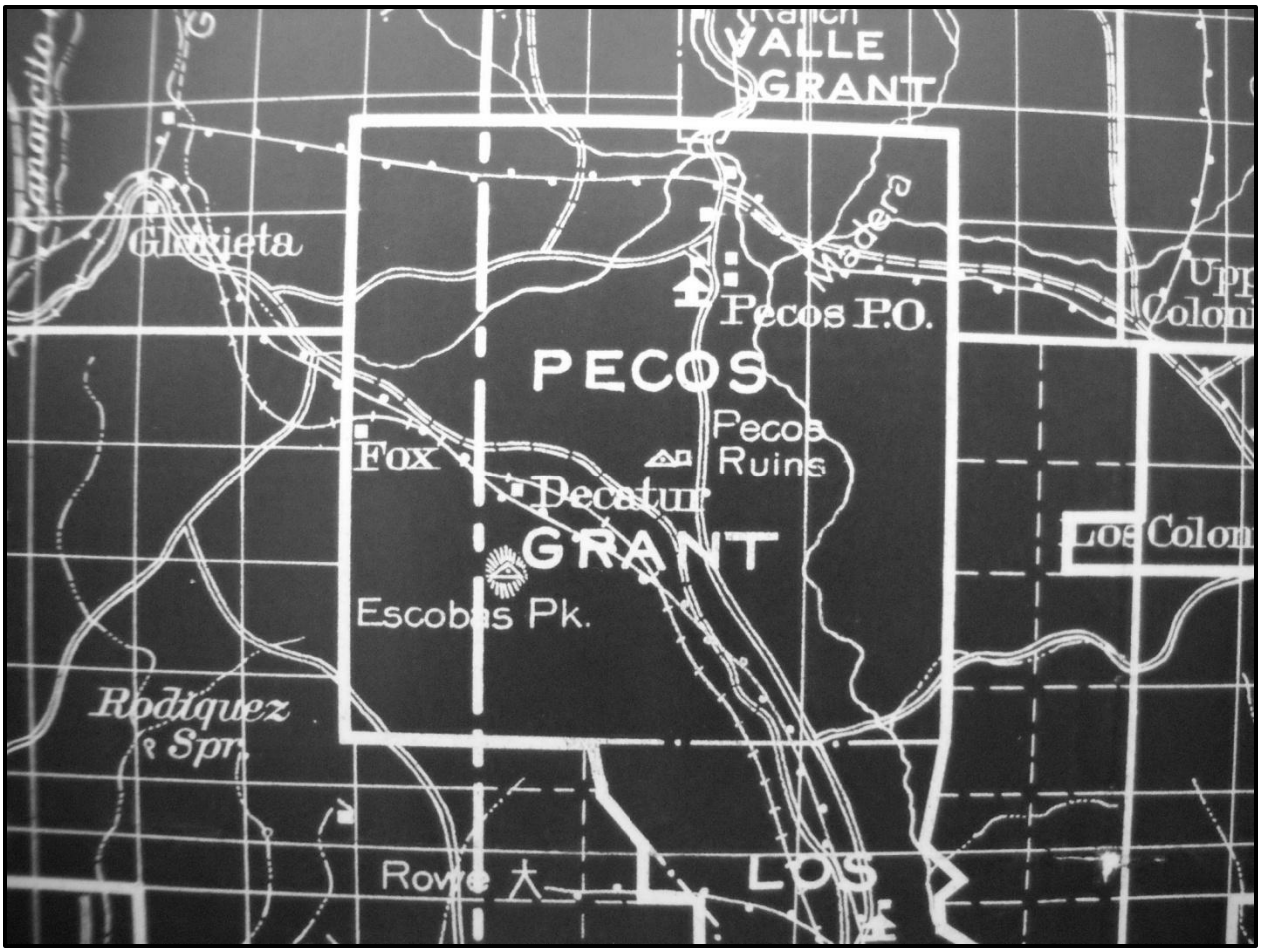

Figure 8. Section of 1915 map showing temporary settlements located along the AT&SF railroad tracks. Source: Forest Service "Santa Fe National Forest, Pecos/Jemez Division, Temporary Base Map" 1915 in Pecos River Forest Reserve Maps, Drawer 10, Folder 49, New Mexico State Archives, Santa Fe, NM.

five miles of each other." By 1900, a "whiskey salesman, jewelry salesman, grocery salesman, and others" plied their trade. A simple division of Pecos residents into "farmer, laborer, and farm laborer" no longer accurately described the area.[12]

Wooden railroad tracks, railroad cars, telegraph poles—all demanded timber. A mile of narrow gauge track consumed 104,000 board feet of lumber, which translated into roughly ten to fifteen acres of New Mexican forest.[13] In just two years following the arrival of the railroad, about thirty sawmills churned out lumber in the southern Sangre de Cristos.[14] Timber cutting occurred on the Pecos grant. Andres Dold acquired the title to the Pecos grant in 1880 from Frank Chapman, his business partner. Dold managed a mercantile store in Las Vegas, and when he received the grant several tie camps operated on it already. Dold received rent and stumpage fees from these itinerant businessmen. A later owner of the Pecos grant, John L. Laub, was a timber cutter and railroad tie contractor based in Las Vegas. Laub had already been cutting timber on the grant for several years before becoming the owner in 1896. Laub "went on using the property for the next year and a half, cutting more timber and hauling more ties."[15]

The majority of the timber cutting probably took place in the northern sections of the grant where ponderosa pine, Douglas fir, and other coniferous species were more prevalent. Glorieta Mesa also offered good timber. Bandelier climbed the mesa on his 1880 visit to Pecos, ascending a tie-shoot west of Kingman (Rowe). He also noted passing the "tie-camp of Mr.

Figure 9. A portable sawmill cutting ties in Taos County in 1913. Similar operations existed around Pecos. FS#482531. Source: Santa Fe National Forest Historical Photographs, Southwestern Regional Office, Albuquerque, NM (hereafter, SWRO).

Keno" on the mesa.[16] Three sawmills operated on the Pecos grant. Donaciano Vigil, who owned and operated a grain mill in the 1800s, allowed a sawmill in an adjacent arroyo to use the water from his ditch.[17] A map from a government survey in 1877 shows a sawmill on the east side of the Pecos river, directly across from the ruins of the pueblo, perhaps the one mentioned by Vigil.[18]

Piñon and juniper, although not suited to railroad construction, were valuable as firewood and also to make charcoal. Mining smelters used charcoal for fuel, and as mining operations expanded in New Mexico in the late 1800s, so did extensive timber use. Although pine and fir could also be turned into charcoal, green piñon trees were preferred. Charcoal was produced by "partially burning wood in virtually airtight kilns that could systematically and gradually exclude oxygen." Charcoal kilns located at Lamy, southeast of Glorieta, were probably the closest to Pecos and may have used piñon harvested in the Pecos area.[19]

The growth of new and old communities meant that a more extensive transportation system also developed beyond the railroad tracks. The Santa Fe Trail had been the main thoroughfare through the area for years, although informal trails existed between settlements. The railroad's demand for timber necessitated either the construction of new routes or the improvement of existing routes that extended into the timbered high country. A road from the Santa Fe Trail had extended across the Pecos River to the town of Colonias, visible in an 1859 map from the William Garretson survey. It became an important route for hauling ties down from the Colonias area. The AT&SF railroad may have constructed a bridge over the river in

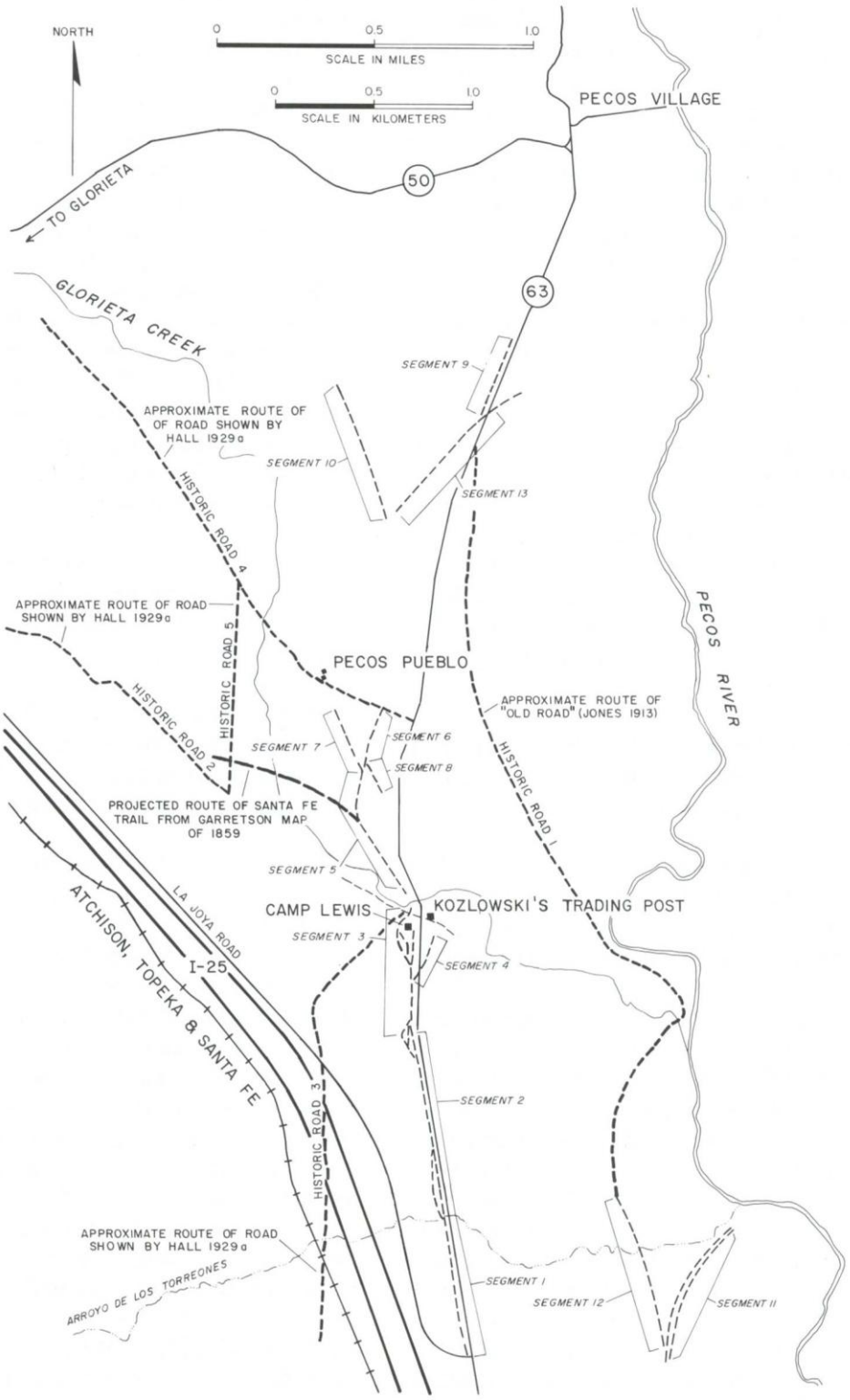

Figure 10. Historic roads in Pecos area, including segments of the Santa Fe Trail. (Reprinted, by permission, from Head and Orcutt, *From Folsom to Fogelson*, 2:413.)

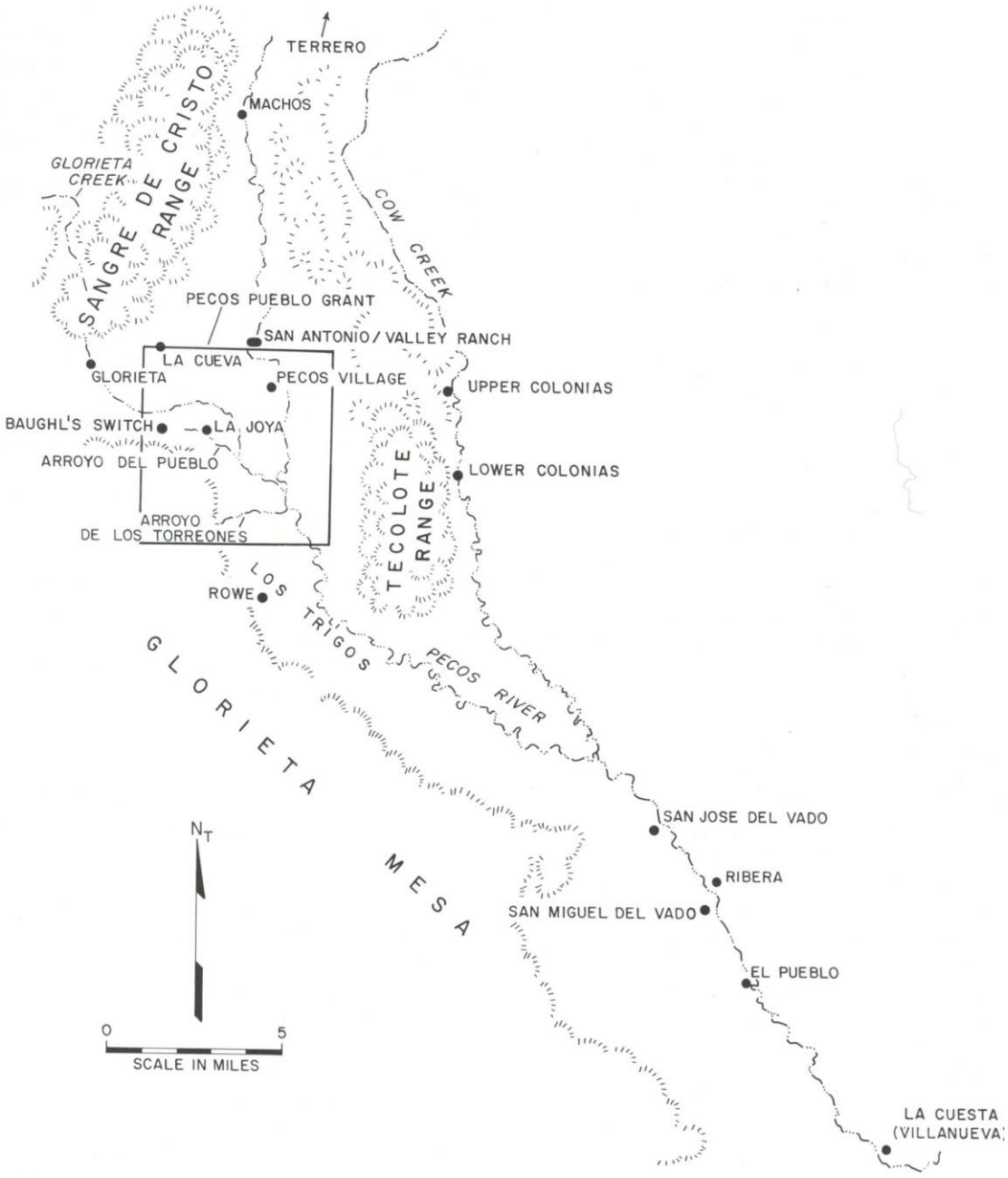

Figure 11. Pecos area, late 1800s and early 1900s. (Reprinted, by permission, from Head and Orcutt, *From Folsom to Fogelson,* 2:401).

order to make tie transportation easier.[20] Residents of Rowe, which did not have a well until the mid-twentieth century, also used the road for hauling water from the river. An east to west road from Pecos to Glorieta, going directly through the Pigeon's Ranch complex, existed at least as early as 1915.[21] In 1917 the State Highway Department constructed State Highway 63 from Rowe to Pecos.[22] Again, this road merely improved upon an existing route, visible on a 1915

map, following part of the Santa Fe Trail before continuing straight north where the trail turned to the west.[23] The Santa Fe Trail was designated as Highway 1 on early road maps from the teens and twenties.[24] The expansion of the transportation network supported the industrialization of Pecos.

The arrival of the railroad transformed the Pecos landscape and did it quickly. Bandelier came to Pecos in August, a few months after the AT&SF tracks had been laid and already found Baughl's Sidings, complete with a boarding house, and tie camps and slides on Glorieta Mesa. An influx of new people followed the railroad, constructing new businesses and homes in Pecos. The valley had always possessed connections to other landscapes and other people, but distance and time had mediated those connections. The railroad erased such inhibitors and brought Pecos into sudden and immediate contact with outside influences.[25]

"Nearly All of the Titles of Land…Have Been Settled"

The railroad raised the economic value of the resources in the Pecos valley, but the situation surrounding title to the Pecos Pueblo grant remained as confused as ever. The Pecos at Jemez had sold the title to the grant to Frank Chapman in 1872 but also sold portions of the grant again in the late 1870s and 1880s to Hispanic inhabitants of Pecos. Meanwhile, many people remained on the land without any title, such as Martin Kozlowski. Chapman's title transferred to his partner Andres Dold upon his death. Dold sold the land to a J. Whitaker Wright of Philadelphia in 1881, and for the next seventeen years the title passed around the stock markets of the east, particularly New York. The men who bought the title had never been to Pecos and had no intention of going there. New York financed the mining and railroad interests, though, and the arrival of the Atchison, Topeka, & Santa Fe railroad with its need for timber had given the land value in the eyes of these distant speculators. John L. Laub of Las Vegas, New Mexico was the last to acquire title to the grant through the New York connections, bringing control of the title back to the region. While these transactions were taking place, the Hispanic inhabitants of Pecos went on selling and trading land themselves. Two separate paths of ownership of the Pecos grant developed—a virtual one in the hands of Anglo businessmen and one in the hands of Pecos residents that was tied to occupation of the land.[26]

The usurpation of land in New Mexico by outside interests, including Anglo ranchers and the railroad, aroused resentment in many Hispanic citizens whose families had lived on the land for decades. In 1889 in San Miguel County, a group calling themselves the *Gorras Blancas* (White Caps) formed in opposition to the growing privatization of communal lands. The Gorras Blancas cut fences—both of Anglos and other Hispanos—and destroyed railroad tracks. They also undertook more conventional forms of protest by attempting to force companies to set standard prices for hauling and cutting railroad ties and encouraging railroad teamsters to strike. The Gorras Blancas enjoyed a great deal of local support, but their activities lasted little more than two years. Upon the formation of an area chapter of the People's Party, most of the members of the group joined, and their more subversive activities ceased.[27]

Some men from Pecos may have joined the Gorras Blancas. Despite attempts to keep land in local hands, business interests continued to pursue property in the Pecos valley. In 1898 the operators of Gross, Kelly, & Company, based in Las Vegas, purchased the title to the grant from John Laub. The Gross Kelly Company operated wholesale and retail stores throughout the region, including one in Pecos. They also dealt in timber cutting, and purchasing and shipping wool, sheep, and cattle. They purchased the Pecos grant for its timber and continued to carry out tie cutting operations on the grant.[28] A 1913 survey noted that the Gross Kelly Company

reserved a tract of land near Decatur for "switch purposes" and loading timber onto railroad cars. Jerome Kunkle, who owned a section of land located north of Glorieta Creek, sold the timber on his tract to the Gross Kelly Company even though, as part of the grant purchased by the company, the timber technically already belonged to them.[29]

The Gross Kelly Company recognized the contradiction in having to buy timber for which it had already paid. Unlike previous owners, the company decided to do something about the situation and initiated a suit to gain clear title to the grant. The Gross Kelly Company had acquired the title to the grant through the chain of Chapman and the New York owners. In the meantime, local land deals had been ongoing. In the 1890s the Pecos Indians at Jemez once again sold some land to the Pecos citizens—for perhaps the third time. After 1910 a few local landowners began selling their property to the D.C. Collier Company. Collier lived in California and served as president of the Panama-California Exposition Company and as an officer in the San Diego branch of the American Institute of Archaeology. Collier was interested in Pecos for its archaeological potential and also entertained schemes for a summer resort and irrigation development. Collier's ownership of the land conflicted with that of the Gross Kelly Company. Francis C. Wilson, who acted as attorney for both Collier and the Gross Kelly Company, filed a quiet title suit on behalf of Gross Kelly in 1914.[30]

No one involved in the endless transactions over the Pecos grant ever stopped to consider whether the grant's origin as a Pueblo Indian grant might invalidate all titles to it. Debate over the status of Pueblo Indian land had continued in Congress and the Courts following the *Joseph* decision of 1877. The 1912 act granting New Mexico statehood defined the Pueblos as "Indians," a status denied to them in the *Joseph* case. Immediately, a case questioning Congress's ability to designate the Pueblos as Indians went to the Supreme Court. Bearing the same name as the 1897 case concerning Hispanic communal lands, this *United States v. Sandoval* confirmed Congress's power to define a group as "Indian," but left open the question of whether or not *Sandoval* changed the earlier *Joseph* decision. If the Pueblos were Indian tribes did that make any settlement on their lands invalid? Could the Pecos return to their grant and repossess it in its entirety? Or did *Sandoval* simply mean that the federal government had some say in the disposition of Pueblo lands? For the moment, all concerned ignored any potential implications of *Sandoval*.[31]

Gross Kelly's quiet title suit certainly took no account of the Pecos Indians. D.C. Collier quickly sold the tracts he had bought to Gross Kelly, sensing the looming legal battle. Pecos residents, however, prepared themselves for a fight, determined to prove their rights to the land. Realizing that attempting to evict the entire population of Pecos from the grant would be impossible, Gross Kelly settled for the 10,870 acres in the southern portion of the grant. The case made no mention of any possible claims the Pecos Indians may yet have possessed. To the tie cutters and railroad workers, the only evidence that the Pecos had ever lived on the land was the pueblo ruin, slowly crumbling in the winds and rains that swept the valley.[32]

In preparation for the court case, the Gross Kelly Company hired Vincent K. Jones to complete a survey of the grant. In his final report submitted in 1913, Jones confidently stated that "all of the titles of land claimed under adverse possession have been settled" through the quiet title suit and proceeded to provide details of the homesteads located on the Pecos Pueblo grant. The survey, along with archaeological artifacts, offers evidence pertaining to those homesteads near the Pecos Pueblo ruins and Kozlowski's ranch. Some, such as the Benigo Quintana homestead (PECO 270), were no longer occupied by the early twentieth century (see Figure 4). Others evidenced signs of occupation. The Anicieto Rivera homestead (PECO 175)

was probably still occupied through the late 1800s, and around 1890 Pedro Ruiz began occupying a site (PECO 367) that belonged to his father along the southern border of the Pecos grant. Anicieto Rivera may also have owned another homestead (PECO 541), which shows signs of occupation in the early 1890s. The homestead only was in use for around twenty years and had been abandoned by the time of Jones's survey.[33]

Gross Kelly's quiet title suit solidified the borders around the land in the Pecos valley. Land that had once been controlled through use and occupancy now belonged to people through a legal title. Allowing one's livestock to wander freely through the valley brought the risk of legal action. If a land owner such as Gross Kelly protested, the offender could be taken to court on trespassing charges. Although much of the land outside of the town of Pecos remained unfenced, and cattle still grazed along the Pecos River, by the pueblo ruins, or on Glorieta Mesa, the legal mechanisms were now in place to halt free grazing if a land owner so desired.

"I Saw a Herd of Many Hundred Sheep and Goats"

On his visit to Pecos in 1880, Bandelier saw some locals driving "a herd of many hundred sheep and goats" to a spring on the west side of Glorieta Creek across from the pueblo. Bandelier noted that although both Glorieta Creek and the pond in the old irrigated field by the pueblo had water in them, the herders "still preferred the old source."[34] Many other residents of the Pecos valley continued to own livestock, and new ranchers moved into the area as the railroad provided ready access to eastern markets. Many livestock owners in New Mexico continued to herd sheep, which, although they required greater supervision than cattle, adapted to the arid climate more comfortably. The sheep population peaked in New Mexico in the late 1880s, numbering around 5 million. However, cattle numbers kept increasing. Raising sheep required a greater input of labor than cattle. As more people became dependent on a wage labor economy, providing the required labor proved too difficult. More and more ranchers switched to cattle. In 1879, the year before the railroad arrived, 137,000 cattle grazed in New Mexico. By 1883 the number had risen to one million and continued to increase. In San Miguel County, there were 20,867 cattle in 1880 and 389,934 sheep. After 1900, the numbers of sheep steadily decreased, falling to around 40,000 by 1920. Cattle, in contrast, numbered around 50,000 by that year. In the Pecos area ranchers grazed both sheep and cattle in the high pastures of the Sangre de Cristo Mountains as well as on the forests and mesas closer to the Pecos River.[35] Several ranches were noted on an 1899 map of the area, most of them located in the Pecos canyon. The Valley Ranch Company, in particular, seems to have been a fairly large livestock operation. Expanded market opportunities provided the incentive to increase herds far beyond the capacity of the local environment to support.

Livestock grazing continued in the area around the settlement of Pecos. The wealthy Anglo owners of the Pecos grant, such as Chapman, Laub, or the Gross Kelly Company, apparently used the grant strictly for timber cutting purposes and never pastured any livestock there. The residents of Pecos, though, continued to own livestock and pastured that livestock in the surrounding area. Donaciano Vigil, one of the prominent members of the community, included in his 1877 will a list of the various livestock he owned including "'a certain number' of cattle, oxen, cows, yearlings, calves old enough for branding, one mare with colt, two burros, three pigs, and interests in numerous other herds let out on *partido* ('share-ranching') contract to

Figure 12. Section of 1899 Forest Reserve map showing the many ranches up the Pecos Canyon. Also note the sawmill in tributary canyon. Source: "Map of the Pecos River Forest Reserve," 1899 in Pecos River Forest Reserve Maps, Drawer 10, Folder 49, New Mexico State Archives, Santa Fe, NM.

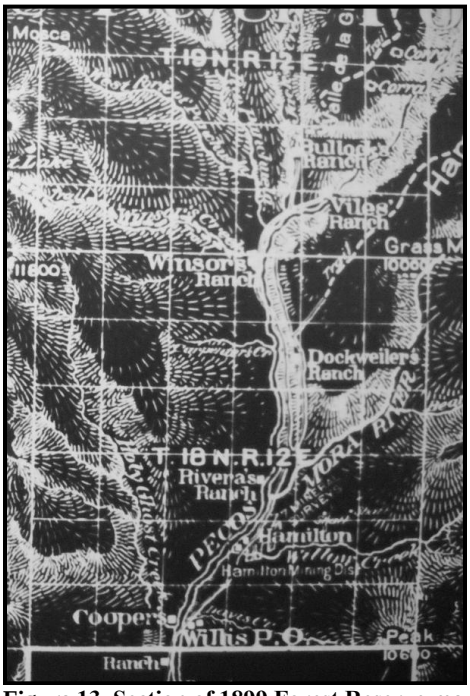

Figure 13. Section of 1899 Forest Reserve map showing the many ranches up the Pecos Canyon. Source: "Map of the Pecos River Forest Reserve," 1899 in Pecos River Forest Reserve Maps, Drawer 10, Folder 49, New Mexico State Archives, Santa Fe, NM.

friends and Pecos neighbors." He "kept upwards of five hundred sheep" on the Pecos grant itself.[36]

Although livestock remained in the Pecos valley, livestock concentrations no longer followed the same patterns as in earlier times. As the Santa Fe Trail became obsolete, so did the cattle, mules, and oxen that used to travel and graze along it. The arrival of the railroad also signaled the demise of the many hostelries along the Trail. The railroad drew business to the communities alongside its tracks, and the old ranches no longer attracted many travelers. Alexander Valle had already sold his ranch to George Hebert in 1865. Hebert, who continued to operate the ranch as a stage stop and also added a post office, gave up the business in 1887, selling the ranch to Walter and Sarah Taber. The Tabers built a house on the property and operated a store and the post office for a time but did not use many of the older ranch buildings. The structures suffered from desuetude and by 1920 only a corral, a three room building, and the remnants of an adobe wall remained.[37] Photographs from the 1880s, although they still show wagons and livestock at Pigeon's, already depict an emptier landscape, absent the bustling of people and animals that must have characterized the ranch in earlier decades.[38]

The cultivated fields that soldiers mentioned at Pigeon's Ranch during the battle still appear open in photographs in the 1880s but were no longer actively maintained as the ranch slowly decayed. The center of travel and population shifted to the town of Glorieta where the railroad stopped. A 1901 survey of Glorieta recorded a number of people settled within the vicinity. The surveyor, John Zimmerman, described almost all of these privately owned tracts of land as being "agricultural and small timber."[39] His description suggests that many cleared patches of land existed around Glorieta. Several of the tracts stood within the Forest Reserve, created in 1892, which was opened to homesteaders. Undoubtedly, residents who did not live within the Reserve still pastured cattle on the forest.

Andrew Johnson had sold his ranch in 1869.[40] Johnson's Ranch continued to serve as a stop on the Southern Overland Mail route through 1880, but following the arrival of the railroad and the cessation of the mail route, Johnson's Ranch probably began falling into ruin. Photos from the early twentieth century show a decrepit structure, perhaps abandoned.[41] Certainly, people continued to live in the area, by then known as Cañoncito. A post office was located there briefly, from 1879 to 1880. Between 1880 and 1891 the parishioners of Cañoncito built a church, called the Nuestra Señora de Luz, which remains in use up to the present day.[42] These people probably owned some livestock and carried out small scale farming. A photo of Cañoncito from 1914, possibly of Johnson's ranch, shows a horse grazing in a landscape that appears denuded and eroded, probably from a combination of grazing and wagon traffic.[43]

Martin Kozlowski stayed in the area, but his ranch ceased functioning as a waypoint for travelers who, up through the 1870s, continued to stay there and exclaim over the excellent trout obtained from the Pecos River.[44] Adolph Bandelier spoke to Helen Kozlowski on his 1880 visit, and the census of that year recorded some of Kozlowski's children as living in the new town of Baughl's Sidings where they were listed as the only native New Mexicans. Kozlowski himself was in jail in Las Vegas. Apparently Kozlowski "became insane and killed his only remaining son," as the Santa Fe *New Mexican* reported upon Kozlowski's release in 1881, although evidence suggests that other sons still lived.[45] Helen Kozlowski moved to Albuquerque to stay with some of her other children and died there in 1895. By 1913 Tomás Kozlowski, perhaps one of Martin's sons, was back at the ranch and had rebuilt some of the structures. Jones's 1913

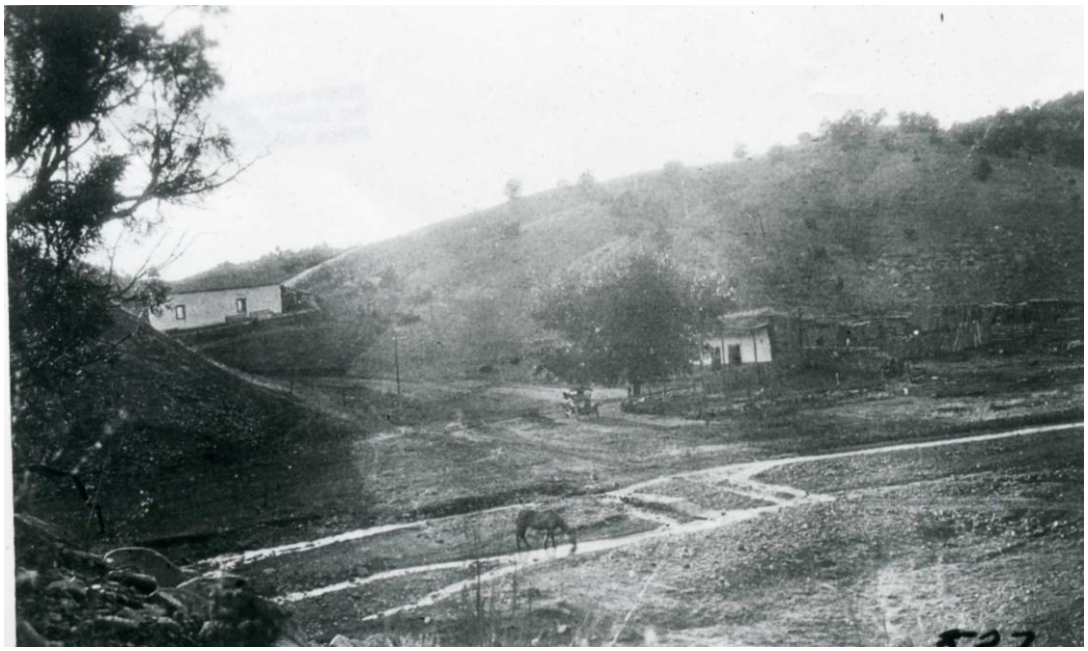

Figure 14. Cañoncito, NM, 1914. Photo by Waldo Twitchell. Source: Park Files, original negative at Museum of New Mexico, negative no. 8834.

survey shows two plots of "cultivated land" surrounding the ranch, where the Kozlowskis probably carried out small scale, temporal farming. The attempts at reviving the ranch failed. In the 1920s Tomás lost the land due to a failure to pay taxes.[46] Although the land around the old hostelries remained in use, they no longer boasted the numerous travelers with their horses, oxen, and cattle that had stayed there during the heyday of the Santa Fe Trail.

The Kozlowskis were not the only ones to face changing times in the Pecos valley. Many of the Hispanic residents became less and less reliant on farming and ranching as they were swept up into the developing regional, wage labor economy. Instead of owning their own herds, men found employment as ranch hands with large livestock operations. By the 1910 Pecos census, more men worked on stock ranches than those who herded their own sheep and cattle. The number of farmers in the valley also began to drop. In 1910 ninety-seven men worked as farmers, farm laborers, or herders. By 1920 more men reported a second source of income—freighting or stock raising—besides farming.[47] People still did raise crops for profit. Newspaper accounts from 1925 refer to the early crop of head lettuce at Pecos. B.A. Ruter (also called Reuter) owned a stretch of land along the Pecos River directly below the Valencia Ranch. Reuter arrived in Pecos around 1920 and by 1925 was reported to be planting sixty acres of head lettuce and had two acres of peas and three acres of cauliflower.[48]

But increasingly, men found employment outside the Pecos valley, sending money home to family members and returning themselves for short periods. The sugar beet fields in northern Colorado drew thousands of workers during the planting and harvesting seasons. The Colorado Fuel and Iron Company also employed large numbers of northern New Mexicans in the coal fields of southern Colorado. Indeed, these industries relied on the low-paid labor of Hispanos and Mexicans. Men were not the only ones to leave home looking for work. The sugar beet industry, in particular, drew entire families to work in the fields.[49]

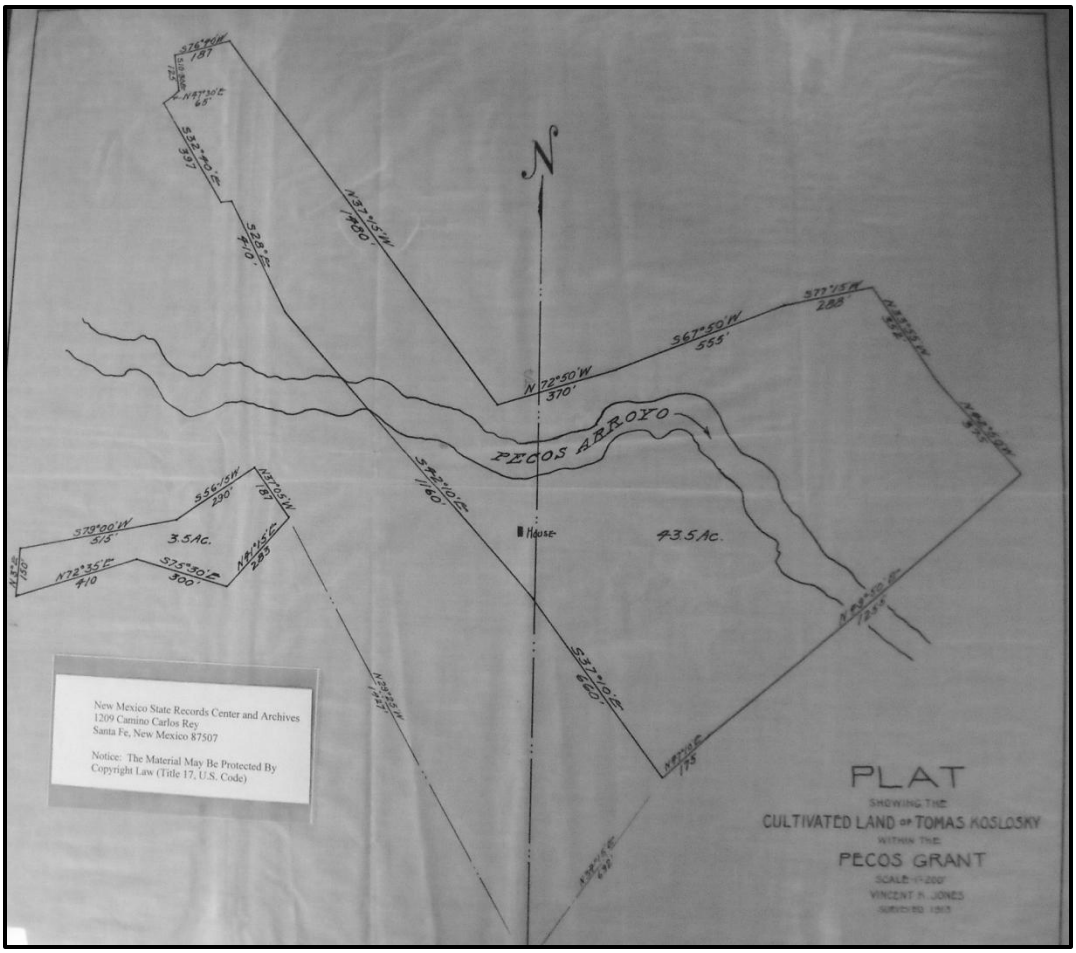

Figure 15. Map from Vincent K. Jones's 1913 showing the cultivated land around the Kozlowski Trading Post. Source: Collection 1959-296, Series: Land Grants-Pueblo Grants, New Mexico State Archives, Santa Fe, NM.

Even as new strategies of migratory wage work replaced a reliance on farming and ranching for Hispanos in northern New Mexico, keeping some cattle and sheep remained a way for them to stay connected to their heritage. Many families continued to own small numbers of animals. These animals not only linked families to a long history of grazing in the region but also provided emergency sources of food during periods when finding wage work was difficult. A similar situation developed in regards to agriculture. Although fewer and fewer families possessed large acreages and extensive fields, gardens, tended by women, became important supplementary sources of food. Families also could sell canned or fresh produce in local markets.[50]

The presence of a grain mill across the Pecos River from the pueblo, built around 1905, and the failure of that mill by the 1920s demonstrates both the continuing importance of home-grown foods and the increasing dominance of store bought consumables. Grain milling had existed in the Pecos area for a long while—Donaciano Vigil owned a mill in the nineteenth century. Vigil's mill probably operated on a toll system—people brought their grain and corn to the mill and gave a percentage to the mill owner. With the arrival of the Santa Fe Trail and the military in New Mexico, milling assumed an increased importance. The army's demand for flour encouraged local producers to build grain mills, and traders brought the technology—cast iron wheels and turbines—that helped turn milling into a profitable business. Millers purchased

grain from farmers and sold flour themselves to consumers. As it did in so many areas, the railroad changed the milling business. Railroads brought eastern flour to New Mexico—more finely milled and less expensive. The milling business declined, but there was still some demand among locals for milling services.[51]

Local demand for milling services motivated the construction of a new mill along the Pecos River after Vigil's had ceased operation. Documentation for the mill, known as the Catanach mill for its operator, Archibald D. Catanach, is scarce. A 1909 deed concerning the land where the mill was located contains the first recorded mention of the mill. As with much of the land in the Pecos Pueblo grant, the area around the mill was owned by a succession of investors located in Santa Fe who never actually lived on the land itself. In 1906 two sisters, Mrs. Minnie DeMier and Mrs. Lilly Bergman purchased the land from a Mr. and Mrs. Phillip Hesch—no mention was made of the mill in this deed. A 1909 deed divides the land between the two sisters, but they retained joint ownership of the "grist mill built on the land." Archibald Catanach bought the mill in 1915. Catanach may have leased the mill from the sisters before purchasing it himself.[52]

Historians Courtney White and Earl Porter, in their history of the mill, speculate that the mill was constructed between 1905 and 1910. Constructed of wood with two to three stories, the mill may have used a stone grinding system if constructed earlier than 1910, but by that date the mill used a roller grinding system. A quarter-mile long acequia brought water from the Pecos River to the mill where a dry reservoir on a small hill to the west held the water. A wooden flume then carried the water to the mill itself. The acequia joins the Pecos at a bend in the river—a dam was probably constructed at this site to force water down the acequia.[53]

Catanach wrote to the U.S. Food Administration in 1918, requesting a license for his mill. In the letter he described the mill as "a small mill about 60 bushel capacity a day and I grind the most on toll for the people and I do not run regular. And I do some buying of wheat and corn on a small scale."[54] Although the Catanach mill may not have been a large operation, it was the largest mill between Las Vegas and Santa Fe. Catanach sold the mill to E.R. Crews in 1918. The mill probably ceased functioning shortly thereafter.[55]

Interestingly, the Jones survey of 1913 did not record the presence of Catanach or the two sisters who supposedly owned the land. In *Four Leagues of Pecos,* G. Emlen Hall provides a map modeled on Jones's survey map. On Hall's map, the land where the grist mill was located appears to belong to Anicieto Rivera with two tracts owned by D.C. Collier (the investor from California) to the north, and a section owned by W.W. Wagner to the south. This map, however, does not conform to the description Jones provides in his report. Jones states that the land adversely claimed by W.W. Wagner forms the *northern* boundary of Anicieto Rivera's tract. From the written report, it appears that, proceeding from north to south, D.C. Collier owned two tracts of land along the river, then Wagner owned a tract, and finally Rivera. In describing the land claimed by Collier and Wagner, Jones mentions the "Hesh Place." The northernmost Collier tract's southern boundary was "a line between two points on the rim rock on each side of the River running through the upper dam which was constructed to irrigate the 'Hesh Place.'" This dam was too far north to be the same one as that used for the mill acequia. Jones says that the actual "Hesh Place," further to the south, was owned and adversely claimed by W.W. Wagner in 1913.[56]

The absence of reference to Catanach or Mrs. DeMier and Mrs. Bergman in Jones's survey may come down to the confused state of land titles in the area. The same pieces of land had been sold to different people numerous times. Perhaps the two sisters first sold the land to

Wagner, who may have leased the mill to Catanach. Two quit claim deeds, one from a Ralph Hinman in 1915 and one from Mrs. Bergman in 1918, release the land to Catanach. Any number of land dealings may have occurred in the interim between the 1909 deed dividing the Hesh ranch land and these quit claim deeds. It is odd that Jones, who carefully noted any signs of possession on the land he surveyed, made no mention of any kind of mill.[57] Also by the mill along the Pecos River was an apple orchard—many of the trees still stand today. A second acequia brought water to the orchard. It is unknown when these trees were planted. A cultural landscape overview of Pecos National Historical Park gives a date of circa 1860, but it is not clear what evidence the authors had to support this.[58]

The Pecos landscape reflected the transitions in the regional economy. Livestock still roamed the mesas and forests, people still planted crops in the Pecos ciénega, but by the 1920s these land uses had become less economically important. Pecos residents, particularly men, left the area to find seasonal wage work. The landscape assumed new, gendered associations as women cared for farms and ranches in the absence of men. Local residents formed connections to other landscapes in Colorado where the presence of certain resources—coal and sugar beets—drew workers from northern New Mexico. The grain mill and apple orchard along the Pecos River testified to the continuing importance of local production; yet by the 1920s the wheels of the grain mill had fallen silent, and the apple orchard was left on its own to thrive or fail without human interference.

"The Pecos District Was Badly Overstocked"

Adolph Bandelier wrote lengthy descriptions of the Pecos Pueblo ruins, but he also included some descriptions of the landscape of the valley in his report. In one section, he compared Glorieta Mesa with the valley:

> Vegetation [on the mesa is] more exuberant than in the valley of Pecos. Not only do tall pines grow everywhere, but there is a thick undergrowth of *encina*; the Yucca is large and green, mountain sage covers the soil, and grassy levels are dotted with flowers. Animal life, also, is more vigorous and more varied. Whereas in the valley crows and turkey-buzzards alone enliven the air, and there are scarcely any beetles; up here there is deer and turkey, and the gray wolf; jays and magpies flutter through the thickets, and the horned lizard is met with occasionally.[59]

Bandelier visited Pecos when the intensive resource exploitation that followed the arrival of the railroad was just beginning. The population in the valley, though, had been increasing for decades. Bandelier's report described a landscape that was showing the effects of intensive grazing, timber cutting, and hunting. In the valley, closest to the center of population, those effects were more evident. One photo taken in or near Pecos around 1880 shows two adobe homes with only sparse vegetation around them. In the distance a hill of piñon and juniper are visible, but the tree cover is not dense.[60] Photos taken around Kozlowski's also show sparse vegetation immediately around the ranch.[61] Had Bandelier returned to the area twenty or thirty years later, he would have found a similar situation on Glorieta Mesa and farther up the Pecos canyon, evidence of the livestock and lumberjacks that stripped grass and timber from the area.

Unregulated timber cutting and grazing wrought havoc on the Pecos environment. Of course, Hispano ranchers and farmers, and the Pecos before them, had never regulated their use

of resources. Timber depletion and overgrazing had been a problem on a local scale before the late 1800s. By the turn of the twentieth century, large ranches spread across northern and eastern New Mexico, the numbers of cattle and sheep had increased, and timber demand had skyrocketed. The forests of the Pecos watershed bore the impacts of such intensive resource use. John W. Johnson, a ranger with the Forest Service who came to Pecos in 1918 stated plainly that "the Pecos District was badly overstocked." Livestock grazed on any available forage. Sheep preferred short grasses and open meadows whereas cattle sought out bunchgrasses and sheltered areas. As historian William De Buys says, "Every square foot of the mountain rangeland was put to full use, and the use continued without a break from snowmelt in the spring to the first white storms of October." An 1898 report from the National Wool Growers' Association stated that around Pecos, "overgrazing…had progressed to the point that the hungry sheep were even stripping the trees of their foliage."[62]

Overgrazing encouraged the infiltration of weeds that replaced perennial native grasses. A researcher from the New Mexico College of Agriculture and Mechanical Arts, E. O. Wooton, completed a report in 1908 detailing the problems. The two most voracious weeds, according to Wooton, were snake weed (also called sheep weed or *yerba del vibora*) and Russian thistle. The Russian thistle, Wooton wrote, "seems to be taking possession of some ranges where the grass is badly killed out." Wooton and a colleague, Paul Standley, also compiled detailed botanical inventories of the state, which recorded the presence of exotic and invasive species. Their *Flora of New Mexico*, published in 1915, mentions many of the species that continue to plague land managers today. The authors noted that tamarix, introduced from Europe, "grows rapidly from cuttings and withstands continued drought very well." *Kochia scoparia* (Mexican fireweed) had been "cultivated at Albuquerque, and probably will be found escaped." *Poa pratensis* (Kentucky bluegrass) was found in a number of locations around the state, including Santa Fe Canyon, Truchas Peak, and Raton. *Verbascum thapsus* (common mullein) grew in several locations, including Pecos.[63]

While overgrazing encouraged the growth of new species in some areas, in others vegetation became denuded. Overgrazing and upstream erosion had particularly severe impacts on riparian areas. Bandelier's description of Glorieta Creek mentions no riparian vegetation. Bandelier wrote that "we have to follow the *arroyo* downwards…till, south of the old church itself, the road at last crosses the wide and gravelly bed, in which a fillet of clear water is running. Then we ascend a gradual slope of sandy and micaceous soil, thinly covered by tufts of *grama*."[64] Photos taken in 1915 of Glorieta Creek reveal a landscape with no willows or cottonwoods. The entire floodplain around the creek appears bare and piñon and juniper on the surrounding slopes are not thick.[65] Similar conditions probably existed along the Pecos River.

Bandelier's account, as well as many earlier descriptions, describe Glorieta Creek as filled with water. Fray Dominguez, in his 1776 description of Pecos, does not refer to the creek as a water source for the pueblo, however. Later accounts in the twentieth century often stated that the creek was dry or had only intermittent flows. Alfred Kidder, recalling his archaeological work at Pecos in the 1910s and 1920s, wrote that Glorieta Creek was "normally dry," but that "the arroyo is subject to furious floods after the violent thunderstorms of the summer rainy season." He also noted that "along the rocky channel beneath its sandy bed there is a limited but seemingly constant flow of good water that can be reached almost anywhere by a little digging and that at several points comes to the surface in small springs."[66] Kidder was told by a local, Señor Roybal, that the creek "never used to go dry."[67] It is unclear exactly how much the streamflow of Glorieta Creek changed. Early descriptions of Glorieta Creek from the Spanish

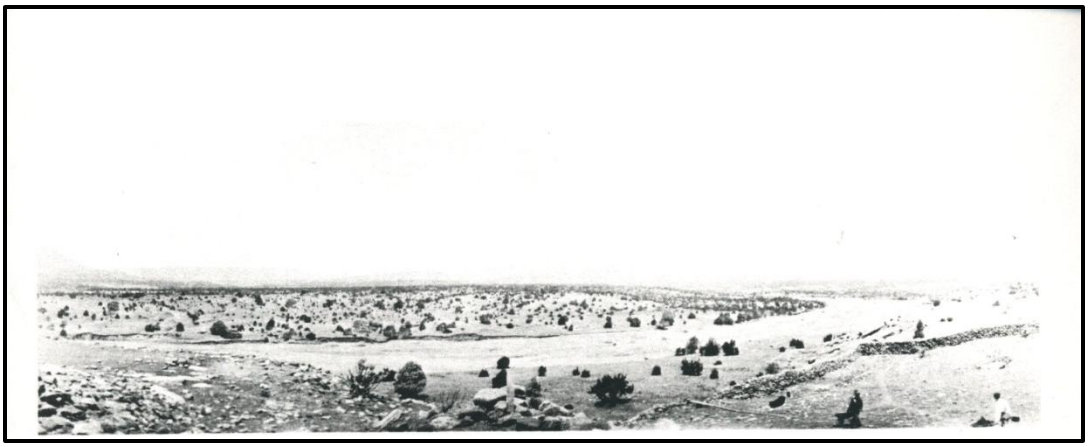

Figure 16. Looking from Pecos Pueblo ruins across Glorieta Creek to the northwest, 1915. Source: Cowley, Joseph, and Rhodes, *Cultural Landscape Overview*, 61, original at Museum of New Mexico, negative no. 12330e.

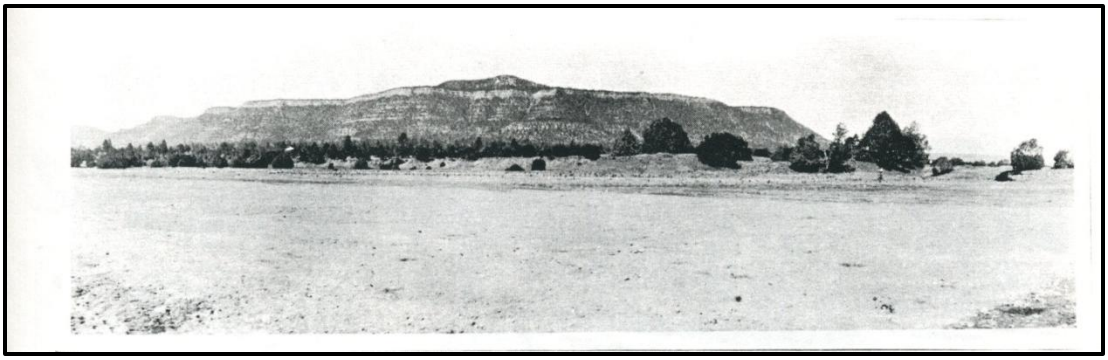

Figure 17. Looking across Glorieta Creek to the west, 1915. Source: Cowley, Joseph, and Rhodes, *Cultural Landscape Overview*, 61, original at Museum of New Mexico, negative no. 12325.

period and eighteenth century were written by people who were in the area only a short time. The memories of local residents, too, can be faulty, particularly in regards to past environmental conditions, which are usually nostalgically described as better than current ones. Records from the late 1960s to the present indicate that water flow in the creek has been constant, but varying in amount.[68] Conditions in the surrounding watershed may well have altered the flow of Glorieta Creek during the various periods of Pecos history.

Bandelier also mentioned the existence of a pond in a walled area directly to the west of the south pueblo, "which, even at the present time is filled with water.…This enclosed area, now covered with tufts of grama, occasional cactuses, knolls and scattered drift and pottery, was according to Sr. Ruiz, the former *huerto del pueblo;* that is, the fields of the inhabitants of the pueblo, where they planted and raised Indian corn, beans, calabashes, squash, and, after the advent of the Spaniards, also wheat, melons, and perhaps other fruit."[69] Ruiz's account matches earlier descriptions of the locations of the pueblo's gardens.

Kidder also found a "reservoir" filled with water.[70] He felt the enclosure could have been either a corral or irrigated garden. This reservoir no longer exists, but the disappearance of the pond is probably due to the disintegration of the ruins rather than any appreciable change in climate. Unless the reservoir was at the location of a spring that has since dried up, it does not seem possible that precipitation alone could fill a depression for any great length of time. Although the early years of the twentieth century brought increased rainfall to New Mexico, it is more probable that the Pecos Indians carefully engineered the reservoir to collect and hold water.

As the ruins fell apart, the irrigation system also failed. With nothing holding it back, water simply ran off the mesilla or formed short-lived puddles after a heavy rain.

Climate did play a role in environmental change, however. A twenty year drought, from the 1880s through the 1890s, exacerbated vegetation loss initially caused by overgrazing. Wet weather returned by 1905—unusually wet. 1905 to 1920 "were the wettest fifteen years in the past two and a half centuries."[71] The increase in moisture probably had a dual effect—it aided plant growth, but erosion on overgrazed land increased. The period of wet weather also influenced people's memories. Ranchers who arrived in the area after the turn of the century and even those whose families had been in the area a long time experienced an unusual climatic cycle, which encouraged them to intensify such practices as grazing in the belief that the land was better adapted to it than was actually the case.[72] When conditions returned to a drier, more characteristic cycle by the 1920s, it appeared to residents that severe droughts had arrived. In fact in the Pecos area, tree ring records show that high precipitation continued until 1942 with only a brief dip in the 1930s.[73]

Rainy periods increased the likelihood of severe flooding and the formation of *arroyos*. Arroyos are "valley bottom gullies characterized by steeply sloping or vertical walls in cohesive, fine sediments and by flat and generally sandy floors."[74] Scientists as well as residents noticed a marked increase in arroyo formation all through the Southwest, including New Mexico, beginning around the late 1860s and accelerating in the 1880s and 1890s. Since the early twentieth century, a number of theories have been put forth to explain the accelerated arroyo formation. Evidence for when arroyos began forming is limited. Certainly some arroyos existed before the 1860s. The southwestern landscape may have gone through several periods of intensified erosion and subsequent deposition. Explanations for arroyo formation begin with the premise that a loss of vegetative cover leads to weaker soil and an increased possibility for erosion. Although a wetter period can intensify erosion, there does not necessarily have to be more water. The intensity of the rainfall can be just as important. Periods with many heavy rainstorms and floods may be more influential than higher rainfall over all.[75]

The twenty-year drought in the late nineteenth century, combined with overgrazing, increasing population, and timber production, decreased vegetation and weakened the soil. When a wetter period arrived in the early twentieth century, the runoff created trenching, deepening existing channels or creating new ones.[76] Photos taken of Johnson's ranch and the bridge in Apache Canyon in the first two decades of the twentieth century show sparse vegetation around homes and the roadway. The arroyo over which the bridge passes appears severely eroded, probably due to grazing as well as its location directly by a transportation route. At Pecos, the first severe flood of the new century occurred in 1904. Heavy rains arrived late in the month of September, swelling the headwaters of the Pecos. On the morning of September 30, the river overwhelmed its banks, sending floodwaters hurtling downstream. Communities all along the Sangre de Cristo range suffered, including Pecos and Las Vegas. The 1904 flood was the worst in the twentieth century, but certainly not the first flood on the river. Residents recalled another, less devastating flood, in 1886. The United States Geological Survey began keeping records of streamflow on the Upper Pecos in 1910. These records indicate a moderate 6.2-foot flood crest in 1929—the maximum recorded amount of discharge for the twentieth century, but the unrecorded 1904 flood was more extreme.[77]

As creek beds eroded and weeds replaced native species, environmental changes affected many species of mammals and birds as well. The increase in human population in the Pecos area, many of whom sought to supplement their diets by hunting and also enjoyed hunting as a

sport, caused the local extinction of elk, the last of which were hunted out of the Sangre de Cristos by 1888. Providing food for railroad workers, in particular, hastened the destruction of elk herds. Bighorn sheep were gone by 1903, and the mule deer population, which had probably declined in the fifteenth century when the population peaked at Pecos Pueblo, also fell in the twentieth century. This time, the population decline occurred over a much greater area. On the Carson National Forest in northern New Mexico only eight deer survived in 1915.[78] Species that depended on riparian vegetation also declined as river banks became denuded and eroded.

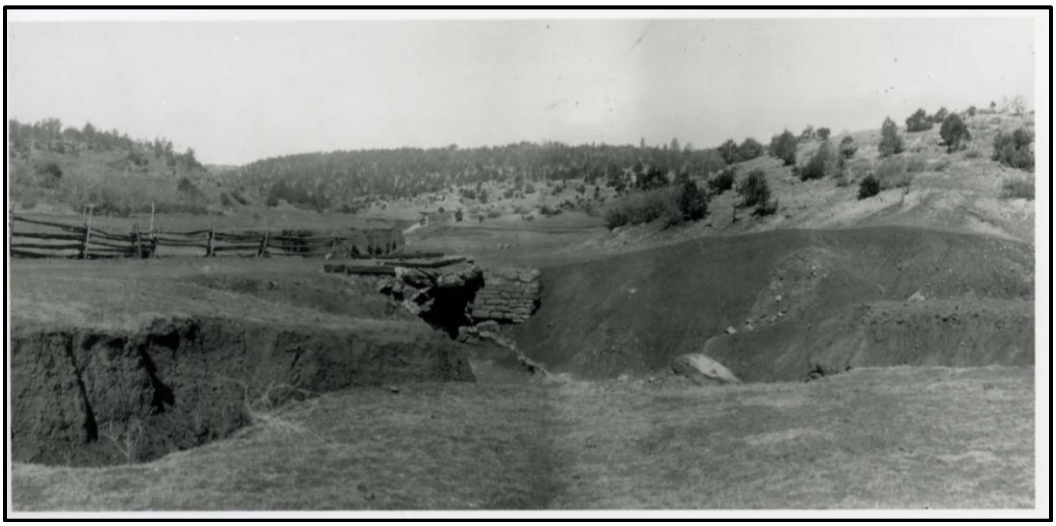

Figure 18. Glorieta Pass, Apache Canyon, circa late 1800s, early 1900s, showing severe erosion. Source: Park files, original negative at Colorado Historical Society, negative no. F4057.

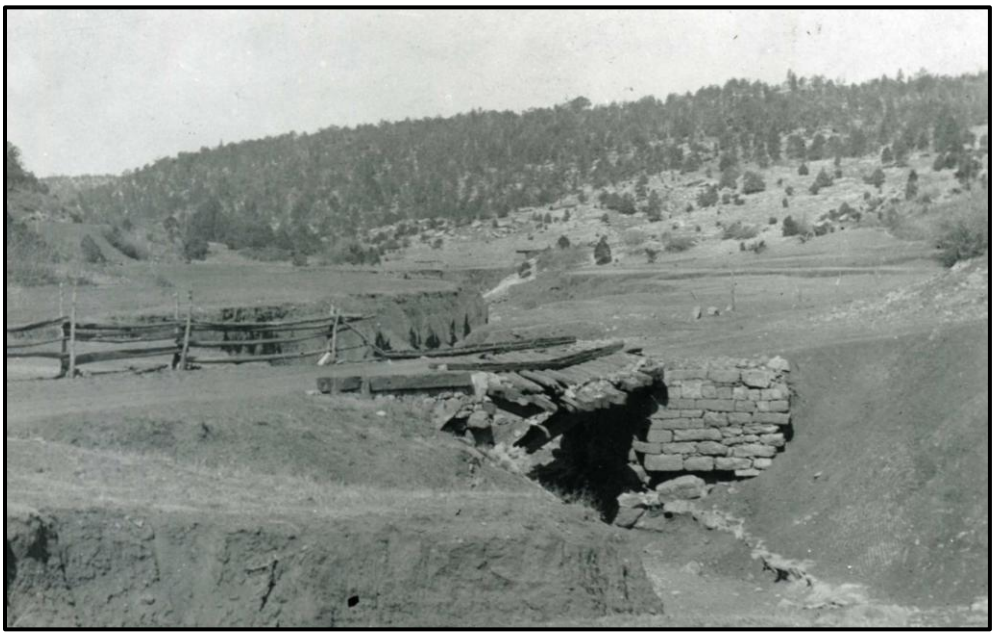

Figure 19. Closer view of Apache Canyon bridge showing erosion. Source: Park files, original negative at Colorado Historical Society, negative no. F34221.

"To Protect and Improve the Forests"

Conditions in forests throughout the nation echoed the conditions at Pecos. The mounting evidence of overgrazing and deteriorating watersheds prompted conservationists to agitate for an increased governmental role in the management of the nation's public lands. Conservationists promoted the creation of forest reserves—land removed from direct citizen ownership but managed by the government for the benefit of the public. Advocating for federal government regulation of land use marked a definite change in American policy. Previously, the federal government had always worked to place land in the hands of private interests. The Civil War started the trend towards a larger government that was increasingly involved in ordering American society. By the 1890s, proponents of Progressivism were arguing for governmental oversight of such problems as corporate monopolies and urban health issues. Conservationists took the ideas of the Progressives into the arena of land control.[79]

The American Forestry Association urged President Benjamin Harrison to pass the Forest Reserve Act in 1891.[80] One year later Harrison approved the creation of the Pecos River Forest Reserve.[81] The 1897 Pettigrew Amendment provided the basic mechanisms for managing forest reserves. Managers were "to improve and protect the forest within the reservation, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber."[82] Neglected for the first years of their existence, as management shifted from the Department of the Interior to the Department of Agriculture, it was not until the USDA's Forestry Division was renamed the Forest Service in 1905 and received control of the reserves under Gifford Pinchot that active oversight of the reserves began. Shortly afterwards, the reserves were renamed national forests. The Pecos Reserve became the Santa Fe National Forest in 1915. A variety of administrative shifts and name changes occurred over the years, but the boundaries of the forest remained basically the same. In the Pecos area, as in most of New Mexico, the national forest consisted of the old communal lands—the land that people had used for grazing, firewood gathering, and piñon nut harvesting for centuries. The Santa Fe National Forest surrounded the Pecos grant and the area around Glorieta and Cañoncito on almost all sides.[83]

The Forest Service approached the management of the national forests from the perspective that trained professionals were the best stewards—far better than local residents who wasted resources and destroyed the forests' sustainability. Many other disciplines, including medicine and history, became professionalized at the end of the nineteenth century. In the Forest Service, academically trained foresters investigated the woodlands of the nation and often returned appalled by what they saw as wasteful and harmful practices, particularly in the large tracts of forests in the West. Justifying their reforms through science, the Forest Service put a halt to unrestrained timber cutting and grazing. Although the Forest Service never intended to stop these practices altogether—the Service stood by the principle that their lands were for public use—they did intend to institute policies and regulations to improve the health of forests.[84]

In many cases the Forest Service was correct in its assessment that forests had been abused. But foresters and other land management professionals often held views that, although in line with the prevailing science of the day, later proved to be ill-founded. Eliminating "bad" species, such as coyotes and wolves, to boost populations of "good" species, such as deer, was common practice. Wolves killed livestock whereas deer provided game for hunters. The ecological role of predators was poorly understood. Aldo Leopold, working as a ranger on the Carson National Forest in the early 1900s, later criticized the Forest Service's predator policy, but at that time was just beginning to develop his ecological ethic. The function of fire in

ecosystems also eluded many early land managers. The Forest Service approached fire from the perspective that all fires wasted valuable timber. Backed by the aura of professional authority, the Forest Service suppressed fires whenever possible. The agency brought these management policies to Pecos, with unforeseen consequences for the Pecos environment.[85]

One of the agency's main responsibilities concerned regulating the numbers of livestock allowed in national forests. Rangers in New Mexico realized that stock numbers would have to be cut drastically in order to improve the health of the range. Beginning in 1905 in New Mexico, Forest Service officials instituted a permit system. Ranchers applied for a permit and were allotted a certain number of cattle or sheep that did not exceed the number determined by managers as the carrying capacity of the range. Prevailing grazing methods also needed to be changed. Graziers drove their herds to the high country as soon as the snows began clearing, usually in early May. Because the animals arrived so early and stayed through the entire summer, grasses received no rest period.[86] Ranchers, although most recognized the problems on the range, were accustomed to grazing their animals without restrictions. They did not always accept Forest Service regulations and resented having to pay a permit fee. The rangers quickly discovered that it was difficult to determine exactly how many livestock permitees owned or actively grazed in the forest. Ranchers were reluctant to reveal the true numbers of their herds because the government also counted animals for tax purposes. Ranchers also slipped greater numbers of livestock into the forest than their permit allowed—an easy matter in mountainous country—and kept stock on the range after the grazing season ended. [87]

Many residents whose families had farmed and ranched in the area for years felt that the old system worked and, moreover, was their birthright. The new rules and regulations on their former common lands threatened their livelihoods and identities. As historian William DeBuys points out, two different perceptions of the land were at work. Residents saw "grass for livestock and land that sustained their fathers and also them." Rangers saw the "last bit of ground cover and land facing ecological disaster."[88] Once again, different cultural systems collided at Pecos—a collision that held the opportunity for violence. Elliott Barker, the son of a local rancher who lived up the Pecos Canyon, became a Forest Service ranger in the early 1900s. Barker first worked in the Jemez National Forest and recalled that "we strictly followed our instructions…never to go anywhere, even from house to barn without our side arms." Although Barker never encountered any problems himself, the threat of violent confrontations over land control existed.[89]

Forest Service officials divided the Pecos Ranger District into several grazing allotments, which remain the same today (Figure 21). The Colonias allotment abuts the Pecos Pueblo grant on the east side and a small portion of the north boundary. The Glorieta allotment joins the rest of the north boundary of the grant and also surrounds the actual town of Glorieta. The Apache Canyon allotment covers the area upstream from Cañoncito. Glorieta Mesa, on the west side of the Pecos Pueblo grant, is called the Springs allotment but was usually divided into sections in actual reports. These sections, proceeding from north to south, are Padre Spring, Winter, Ortiz Spring, No Agua, and Laguna Seca.[90] Notably, the Forest Service maintained the local Spanish names for the landscape. This reflected the agency's attempts to maintain good relations with locals and incorporate local land uses into forest policy.

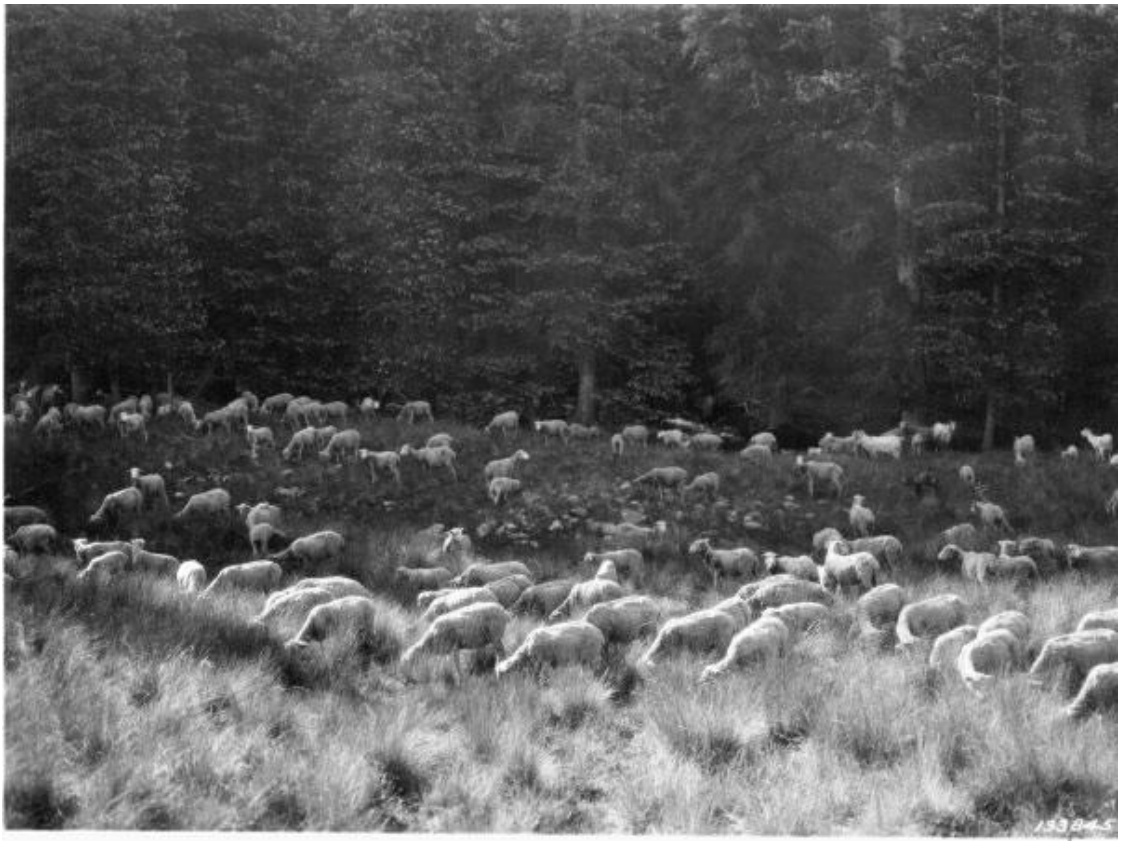

Figure 20. Sheep grazing on the Rito Padre in the Santa Fe National Forest in 1924, photo by E. S. Shipp. FS#193845. Source: Santa Fe National Forest Historical Photographs, SWRO.

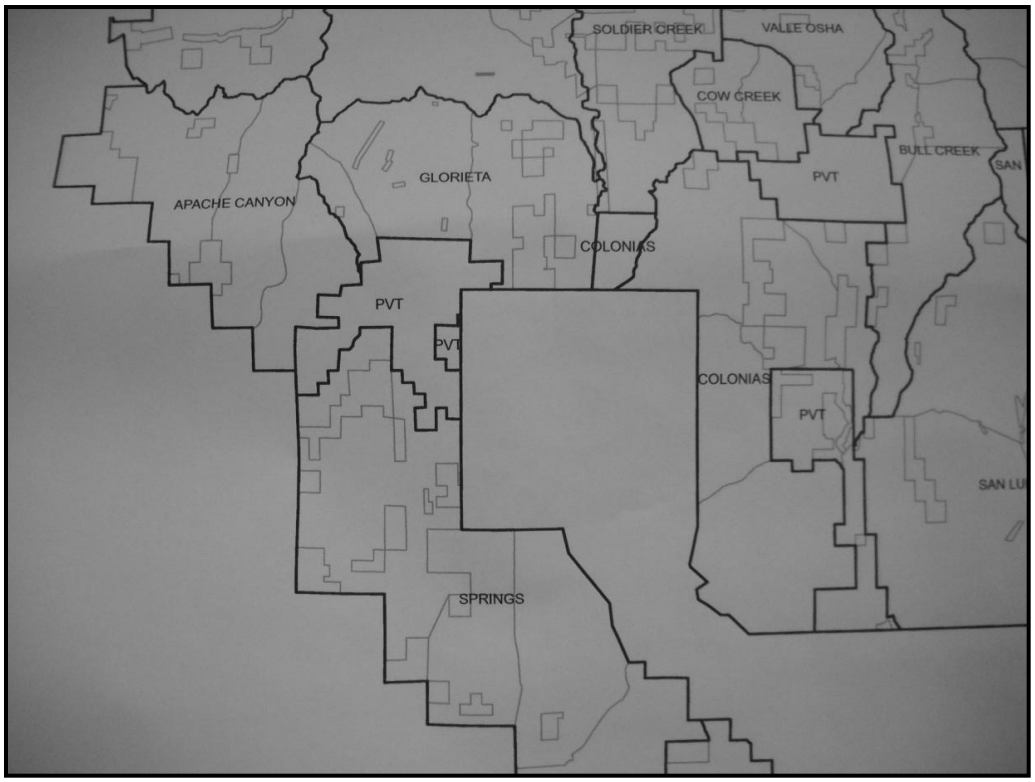

Figure 21. Grazing allotments around Pecos. Courtesy Santa Fe National Forest District Office.

The Forest Service began charging fees for grazing permits in 1906. Fees began at thirty-five to fifty cents per head for cattle grazing year round and five to eight cents per head of sheep for the summer only. The fees did not represent the true value of the range—they were a "token payment" only. Still, stock owners protested having to pay for a formerly free common resource. And although the fees were relatively low, they were another burden for cash-poor families, particularly Hispanos, struggling to keep a few animals to supplement their income.[91] Early attempts to reduce grazing on the allotments fell apart during the First World War. Ranchers used the compelling arguments of patriotism and an increased demand for meat from the armed services to demand that the Forest Service allow higher numbers of livestock onto the range.[92] Following the war, when meat prices fell, the Forest Service again tried to reduce livestock grazing on national forests with mixed success. Declining livestock numbers ultimately had more to do with changing economics than Forest Service policies.

The Forest Service managed forests for multiple uses, and one of the acceptable uses was hunting. Both the Forest Service and the state of New Mexico lamented the loss of game species in the region. Under the supervision of the State Game Warden, a herd of elk was reintroduced on the Upper Pecos River in 1915. The elk arrived from Wyoming and were unloaded at Decatur, the small railroad stop across from Pecos Pueblo. First kept at the Valley Ranch, on the

Alexander Valle grant, the elk eventually dispersed into the mountains.[93] The Forest Service gave no such consideration to replenishing "useless" predator species that, according to ranchers and many land managers, did more harm than good. In the 1920s, a trapper from the Biological Survey working around Pecos killed forty coyotes and ten bobcats in a month.[94] Timber wolves, whose numbers in the Pecos area had always been small, were completely gone by the early 1900s. The last grizzly bear in the area was killed in 1923.[95]

In addition to increasing game species to please hunters, land management agencies also manipulated fish species for anglers. In 1921 the state of New Mexico constructed the Lisboa Springs Fish Hatchery a mile north of Pecos. The operation raised brown and rainbow trout for release into the Pecos River. The decrease in native species, particularly the Rio Grande cutthroat trout, probably began—or at least accelerated—in the 1920s with the introduction of non-native fish.[96] Elliott Barker remembered fishing in the Pecos River in 1896 and how "the black-spotted, red-bellied cutthroat trout were biting fast and furiously."[97] A few decades later exotic species had almost entirely replaced these native fish.

The agency culture of the Forest Service that stereotyped wolves as bad and deer as good also conceived of forest fires as wasteful conflagrations of valuable timber that harmed forests more than they benefited them. After catastrophic fires swept many western forests in 1910, the Forest Service instituted a policy of complete fire suppression that had far-reaching effects for western forests. A study of fire regimes in several locations near Albuquerque showed a general lack of spreading fires at every site in the period from 1906 to 1992.[98] This sharp decrease in fire intervals probably occurred in the Pecos area as well. If a fire did start, the Forest Service made every attempt to stop it from spreading. Fire suppression caused a buildup of fuels in forests, interfered with cycles of plant regeneration, and may have contributed to piñon and juniper infill into former grassland areas.

The Forest Service's control of a large portion of the land surrounding the Pecos valley changed the landscape and how people lived in it. Although the Forest Service made a conscious effort to allow locals to use the forests, requiring a permit to graze animals or collect firewood still represented a change in land use practices and conceptions of the environment. Now, firm borders not only surrounded land within the Pecos valley but surrounded local forests as well. Crossing those borders carried the possibility of legal repercussions if one did not follow the prescribed use of the land. These borders were transgressed in many ways, of course. Weeds spread regardless of fences. Erosion upstream affected the entire river. Fire suppression and grazing changed plant communities on a regional scale. Had Bandelier returned to the Pecos valley a few decades after his first visit, he would have witnessed not only the cumulative effects of Pecos's connection to the national economy but also the attempts to mitigate those effects by placing the Pecos environment under the auspices of science and professionalism.

"That Intangible Air of Mystery"

In 1890 Adolph Bandelier published *The Delight Makers*, a novel about the ancestors of the Queres at Cochiti Pueblo. Bandelier drew on his experiences among the Pueblos as well as his archaeological investigations to write the story. *The Delight Makers* depicted Pueblos in a romantic light—primitive yet intelligent people who practiced strange religions and inhabited an equally intriguing landscape. The railroad capitalized on the growing fascination with ancient Indian cultures, pueblo ruins, and quaint Hispanic villages to draw many tourists to the Southwest beginning in the late 1900s. Many of those tourists visited Pecos, and their presence

brought a new meaning to the Pecos landscape. Under the "tourist gaze," Pecos became romanticized, mythologized, and worthy of preservation.[99]

The ruins of Pecos Pueblo had attracted the curious for years. Travelers on the Santa Fe Trail often wrote about the pueblo, and after the last residents had left, the ruins became an object of mystery and romance. Susan Shelby Magoffin, who followed the Trail with her husband in 1846 in the footsteps of Kearny's army, recorded her feelings upon viewing the pueblo:

> I have visited this morning the ruins of an ancient pueblo, or village, now desolate and a home for the wild beast and bird of the forest.
> It created sad thoughts when I found myself riding almost heedlessly over the work of these once mighty people. There perhaps was pride, power and wealth, carried to its utter most limit, for here tis said the great Montezuma once lived, though tis probably a false tradition.

The story, which held that the Pecos had been charged by Montezuma with keeping a sacred fire burning in an underground chamber, became a popular legend repeated by many who saw the pueblo. According to the story, when the fire accidentally went out, the Pecos left the pueblo, "believing that *Fate* had turned her hand against them."[100] People like Magoffin, and the many others who traversed the Trail for the first time, encountering new places and people, deserve to be termed tourists. They were fascinated by the ancient history of New Mexico, by the numerous Pueblo ruins throughout the region, and began to construct distinctive narratives and images of the Southwest.

Railroad companies realized that tourism could be a profitable business, that railroad cars could be filled with people just as easily as timber and coal. By the early 1900s, railroad companies, including the Atchison, Topeka, & Santa Fe, embarked on a promotional campaign that presented the Southwest as the ideal tourist destination. Many promoters lauded the climate—dry, sunny, and warm with unique landforms, thick forests, and snow-capped mountains. Not only could tourists find a healthful climate but an enchanting history as well. One depiction of Santa Fe described it as possessing "something of that intangible air of mystery that the Moors brought from the Far East to Granada…transplanted to American soil by the conquistadores." Tourist narratives depicted New Mexico as a place that modern life had bypassed, where Pueblo Indians, Navajos, and Hispanos carried out their ancient ways of life unchanged.[101]

Historian Sylvia Rodriguez argues that in the Southwest "the tourism industry has shaped postcolonial cultures and identities by fusing race, landscape, and architecture into romance and commodity." Tourism relies heavily on visual modes of perception, and the landscape of New Mexico with its adobe homes, pueblo ruins, mesas, and piñon trees became as essential an element to the tourism industry as the people tourists encountered. As Rodriguez says, ideas about race became integrated into the landscape. Tourism in New Mexico "is striking for its extraordinarily successful mystification of race. It is successful because of the enduring and pervasive power of the iconic triad of Indian-Mexican-Anglo." Pueblos assumed the role of exotic "others" close to nature and spiritual powers. Such depictions stereotyped Pueblos as ideal stewards of nature, ignoring a long history of resource exploitation in the Southwest. Although Hispanos often were saddled with the negative racist assumptions that came with the term "Mexican," the tourism industry usually depicted Hispanos as rustic villagers who lived

simple, authentic lives. White tourists who came to New Mexico sought to experience such authenticity and exoticism through viewing pueblo ruins, attending Indian dances, and purchasing hand-woven rugs or pottery.[102]

The growth of the tourism industry had implications for the New Mexican environment and the people who lived there. In order to support the romantic narrative developed by the tourism industry, the landscape needed to continue exhibiting the features that tourists expected to see. Suddenly, New Mexicans had an economic incentive to preserve pueblo ruins, provide money for archaeological digs, and also maintain the pristine, "enchanting" environment that attracted people. The tourism industry certainly provided economic opportunities for New Mexican inhabitants, including Hispanos and Pueblos. But tourism also maintained the ethnic boundaries that restricted Hispanos and Pueblos' access to power, including control of land and resources.[103]

Archaeologists were intimately connected to the tourism industry, as they fed the public appetite for relics and stories of Indian cultures. Pecos Pueblo, a substantial yet easily accessible ruin, attracted many archaeologists—both amateur and professional. Adolph Bandelier was the first to perform an actual archaeological survey of the ruins, but the most extensive work occurred under the direction of Alfred Kidder, who worked at Pecos from 1915 to 1929 when the Great Depression halted his activities. Using the newly popular concept of stratigraphy, Kidder excavated both within the actual pueblo and church complexes as well as the midden heap on the east side of the mesilla. The midden heap revealed a wealth of ceramics layered sequentially from earliest to latest. This discovery enabled Kidder and his colleague, Anna Shepherd, to formulate a ceramic typology that became the standard dating method for Southwestern archaeology. Kidder's excavations "started a new era in American archaeology," not only through the development of stratigraphy and ceramic chronologies, but through Kidder's emphasis on data collection and analysis over simply recovering interesting artifacts.[104] Although archaeology encouraged preservation, it also endangered artifacts by raising their value. Ruins and graves became tempting targets for relic hunters.

Tourists, too, often removed artifacts from unguarded archaeological sites. The railroad brought many tourists to New Mexico and soon a new mode of transportation, the automobile, carried tourists down bumpy dirt roads to pueblos and mountain villages. The Fred Harvey Company, in partnership with the AT&SF, started its Indian Detours business in 1925. The three day auto tour took tourists on a circuit between Santa Fe, Las Vegas, and Albuquerque. One of the stops was at Pecos. Visible only from the windows of a train car as it rushed past, in an automobile, tourists could drive directly up to the pueblo ruins and clamber about, searching for artifacts. [105]

Tourism introduced new ways of conceiving of and experiencing the Pecos environment. In economic terms, tourism conveyed value to the environment not for what was extracted—timber, grass, crops—but for what stayed in place. These values provided new rationales for landscape protection, similar to those used in the creation of national forests. Tourism was still a use of the environment, but a use that depended on a certain type of land management. Through tourism, new borders could be placed around landscapes—borders that separated landscapes that were "worthy of preservation" and conveyed certain romantic, idealized values. Although preserving a landscape such as a pueblo ruin afforded the illusion of timelessness and an unchanging nature, providing tourists with what they wanted to see in fact required very active management.

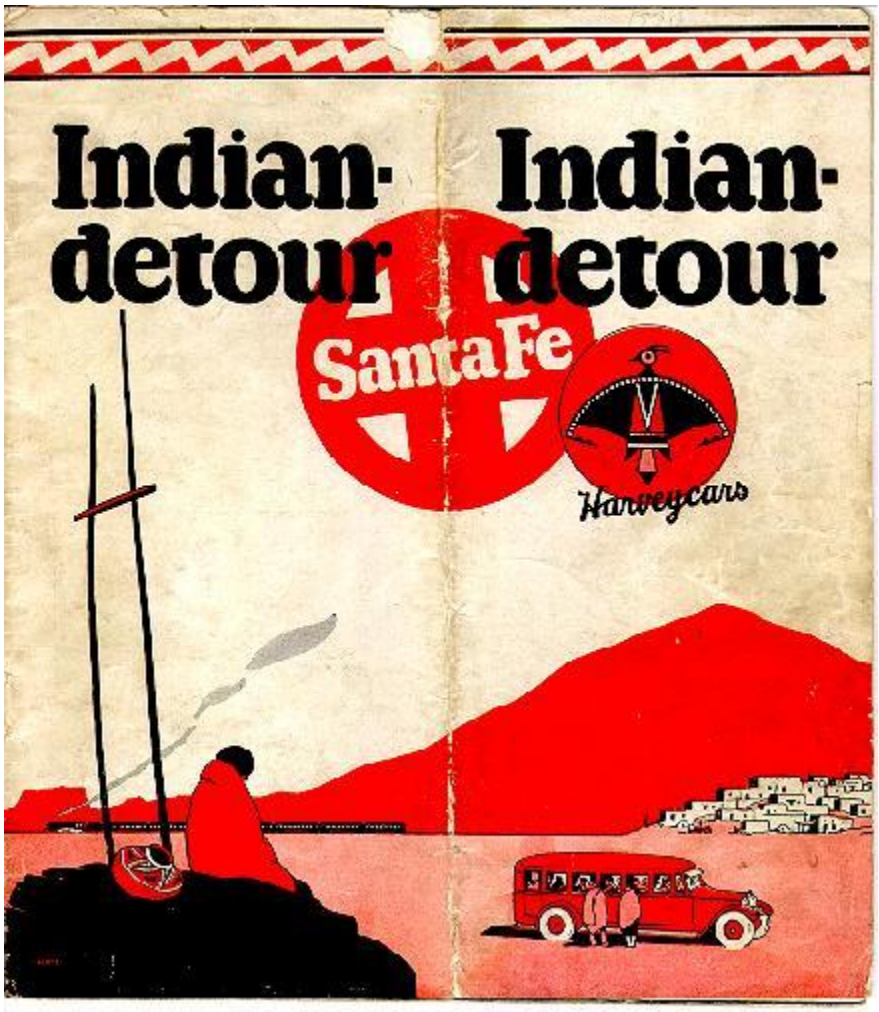

Figure 22. 1927 brochure for the Fred Harvey Company's Indian Detour business. Source: http://classicrail.com/papera.html [accessed May 5, 2010].

Bandelier arrived in Pecos just as immense changes began sweeping through the valley. By 1925 those changes had wrought a new landscape and altered people's relationship to the Pecos environment. Railroad tracks climbed over Glorieta Pass. Eroded riverbanks and barren slopes testified to the demands of the timber and livestock industries. Elk disappeared and then returned, but grizzly bears and wolves no longer roamed the forests. Large companies, such as Gross Kelly, and federal agencies, like the Forest Service, controlled much of the land in the area. Many Hispanos no longer depended on the Pecos environment for their living as they migrated out in search of wage work. Tourists drove along new roads in their automobiles, stopping to gaze at the romantic ruins of Pecos Pueblo and watching as archaeologists uncovered the sheltered secrets of the past.

Chapter Seven

Hard Times in the Land of Enchantment, 1925-1941

Tex Austin urged his horse into the Pecos River, the stones in the shallows skimmed with frost. They splashed across, and Tex glanced back over his shoulder to make sure the party of tourists, astride their own borrowed mounts, made it over safely as well. The tourists were in good spirits despite the chill in the autumn air, looking forward to a day of hunting and riding through the forests and across the mesas. In the evening they would return to the Forked Lightning Ranch and enjoy a hearty meal, happily following the proscriptions printed in brochures for Austin's dude ranch to "pitch till you win" as "no one keeps track of the helpings." Tex relished the chance to get out for a ride in the Pecos country. He had spent much of his time during 1927 organizing a rodeo in Chicago, held at the end of August. [1]

Tex regarded New Mexico, and Las Vegas in particular, as his adopted homeland. When he traveled to Chicago or New York or London with his rodeos, he always touted the virtues of New Mexico as the perfect country to visit on a vacation. Just a few days before, the Las Vegas Chamber of Commerce had designated October 21 "Tex Austin Day" in recognition of his efforts at promoting the state, and held a celebratory banquet in his honor. During the evening, a letter by the author Clement Yore, an acquaintance of Tex, was read aloud. "He shaved, first, when he was nearly four," Yore wrote. "He was chewing Climax then, and they called him Panatella."[2] Yore went on to describe Tex's early career:

> Sometimes, he was so broke he rattled like an old Missouri Democrat wagon, coming to town, after it had wintered in a fence corner, and had been used for a harness rack all summer. Then I was told that he had spilled a lotta jack around Paso, San Antone, Roswell, Tucumcari, and other seaport towns; had stole the Civil War guns out of the post office's front yard in El Paso to help Villa romp into the back-alley of Juarez. Soon somebody asked me if I ever heard of a cow-impresario by the name of Austin. When I said no that bird withered me with a glance![3]

Yore reminisced about when Tex organized a rodeo at Madison Square Garden in New York in 1922. "Then he blowed into New York and I see his pee-rade coming down Fifth Avenue," Yore elaborated. After relating how several of the shows "broncs" had gotten loose and ridden wild through the city, ending up in "night clubs and actresses' dressing rooms," Yore concluded that Tex "set little old Noo Yawk wild with the heaves! Yes sir, they heaved all the things like good luck tokens they could at Tex and said to him, 'Cowboy, we've seen 'em all, but you've give us a bronc show!'" Tex went on to take his rodeo to London, Boston, and Hollywood. "If there's anything in that glass around where this is being read," Yore wrote, "anything of a fluid nature, except buttermilk, coca cola, or hair tonic, then one of you rannihans raise it and gulp it, as my toast to Tex Austin." Yore concluded, "He's a first class showman, a whale of a friend. Lord, how he loves New Mexico and how he's always boosting the state, and if you asks me what my wish for him is I'll sure give it to you in this sentence: "Stay a long time, cowboy, stay a long, long time!"[4]

Tex chose not to comment on the accuracy of Yore's letter. Stories such as Tex riding with Pancho Villa were far more useful to a man who made his living off people's fascination

with the Old West than a more mundane reality. The success of Austin's rodeos, and also the dude ranch he started in the Pecos valley in 1925, depended on the image of a mythic West inhabited by brave and daring cowboys, fiery horses, and Indians who were either helpful sidekicks or villains depending on the needs of the story. At Tex Austin's Forked Lightning Ranch along the Pecos River, tourists expected to find horses, cattle, and cowboys—all of which Austin provided. If he could not manage real Indians, the ruins of Pecos Pueblo at least provided an appropriate setting for the myths and tall tales eagerly consumed by guests.

Tourists came to the Forked Lightning Ranch not only to experience the Old West, but also to pursue outdoor recreational opportunities. Guests wanted to hunt deer and turkey, fish for trout in the Pecos River, and eat chuck wagon dinners on pack trips into the Pecos high country. Although Tex owned a sizeable herd of cattle and horses, his uses of the Pecos environment differed from those who had lived on the land before him. The cattle were not there just to grow fat and be shipped off to market—they also played a necessary role in the cowboy drama. The deer were not hunted to supplement a diet of corn or wheat—they were hunted for pleasure. Whether or not the soil along the Pecos River could produce crops was immaterial—Tex bought supplies for the ranch in Pecos or Santa Fe that had been shipped to the region by railroad. From the porch of his ranch house, Tex looked out on a landscape that he valued for its scenic, aesthetic qualities far more than its productive capacity.

Pecos, 1925-1941

The tourism industry that Tex Austin depended on continued to draw people to the Pecos valley as the twentieth century progressed. As outdoor recreational pursuits, such as fishing and camping, became increasingly popular, the pueblo ruins were no longer the only attraction for tourists in the Pecos area. Tourists valued the river, the forests, and the mountains for the opportunities they afforded to "get back to nature" and rejuvenate the mind and the body. Tourists found other attractions in the Pecos valley developed deliberately for the tourist trade. Tex Austin turned his Forked Lightning Ranch into a dude ranch and vacation resort. Tom Greer, another entrepreneur, bought Pigeon's Ranch and engineered it into a roadside curiosity that boasted a pastiche of attractions related to the Civil War and the Puebloan and Hispanic history of the area. Representing the evolution of the American cultural system's relationship to the environment, and the development of a consumer society, tourism changed the landscape of the Pecos valley.

Not all the people who passed through Pecos were tourists, however. As the Great Depression swept over the nation, desperate migrants traveled west on Route 66, which went past the pueblo ruins and Pigeon's Ranch before crossing Glorieta Pass and heading to California and the prospect of work. Times were hard in Pecos as well. The Depression demonstrated how deeply the West had become enmeshed in the national economy; it could not escape the economic downturn. Many local Hispanic residents who had come to depend on wage work lost their jobs. The few cattle and small garden plots that people maintained in memory of a former agricultural and pastoral lifestyle assumed new importance—the difference between starving and eating. The Depression affected the more prosperous as well—Tex Austin went bankrupt and lost his entire ranch.

Some Pecos residents found employment with the American Metal Company, which opened a lead and zinc mine at Tererro up the Pecos Canyon in 1927 that persisted through the Depression. Along with the timber business, which remained important to the area economy, the Tererro Mine was one of the last extractive resource operations near Pecos—an artifact of an

older relationship to the valley's environment that was becoming less influential. Although the mine lasted only a few years, it did have long-term consequences for the environment—consuming timber, increasing erosion, and releasing heavy metals into the Pecos River and its tributary streams.

The tremendous increase in the federal government's power and role in the lives of private citizens that resulted from the Depression ensured that federal agencies continued to influence the Pecos environment as well. The Forest Service attempted to improve the health of the forests while continuing to provide locals with economic opportunities. The Civilian Conservation Corps occupied a camp at Glorieta for several years and undertook land improvement projects. And social welfare programs allowed many Hispanic Pecos residents to survive and continue to make the valley their home.

Although popular narratives of New Mexican history produced for the tourist industry brushed over the contentious relationship between Hispanos, Pueblos, and Anglos over land, the conflict did not disappear. The Forest Service continued to clash with locals over restrictions on forest use. Tex Austin, the American Metal Company—both represented outside, Anglo interests developing the Pecos environment for their own benefit. Meanwhile, the debate over the Pecos Indians' rights to their homeland continued in the courts and finally resulted in a decision that severed the Pecos' legal ties to the land, although certainly not their cultural ones.

The melding of different cultural systems, now represented by the inhabitants of the Pecos valley, employees of federal and state agencies, tourists who came there on vacation, and the Pecos Indians who no longer lived in the valley but had not forgotten it continued to provide the mechanisms for change in the valley as it had for centuries. Guests watched Tex Austin's cowboys perform rope tricks while cattle grazed in the piñon and juniper and along Glorieta Creek. Miners from Tererro sent buckets of ore down the canyon to a mill above Pecos that leached lead into the water. Forest Service rangers shot wild horses and kept a sharp lookout for fires. Even as the Pecos landscape changed, the two influences that had begun developing in the late 1800s—the role of the federal government and a romantic view of the landscape that privileged leisure activities—continued to become the most important forces for environmental transformation.

"Way Out West an' a Little Bit South"

The Progressive Era witnessed the beginnings of a consumer culture; a culture that came to typify American life in the interwar and postwar years. Americans increasingly defined freedom as a function of consumption—the right to a high standard of living, to leisure time, and to purchase the goods they wanted and needed. For many, ownership of an automobile came to signify their achievement of the American dream. At first merely a toy of the wealthy, automobiles became available to growing numbers of middle- and working- class Americans in the interwar period. Automobile ownership altered people's relationship to nature by allowing them to participate in the developing industry of nature tourism and outdoor recreation.[5]

With an automobile, people could travel to far off destinations quickly and cheaply. Automobile ownership opened up the American continent to leisure travel. Many people desired traveling to destinations that afforded them the opportunity to experience a more rustic, "natural" lifestyle. Concern over the effects of industrialization and urbanization had led to the development of a "back to nature" ethic in the Progressive Era, an ethic that promoted outdoor recreational pursuits as a way to combat the perceived problems of modernity. People were also beginning to participate in nature tourism—going to specific destinations to experience the

qualities—often aesthetic but sometimes recreational—of those places. The growth of the National Park Service in the 1920s reflected the popularity of nature tourism. During the interwar years, automobile ownership allowed growing numbers of Americans to combine these interests and created a new relationship with nature arising from leisure and consumption.[6]

Historian Paul Sutter describes the characteristics of a "leisure-based attachment to nature." In particular, "tourism requires a nature that is separate, distant, and exotic—a nature that one goes to see." Although outdoor recreation is more often "activity specific" than "site specific," it, too, rests on a separation between leisure and everyday life. Hunting, fishing, or camping for pleasure attracts people because such activities represent a relationship with nature very different than what they experience on an everyday basis. Both nature tourism and outdoor recreation are connected to consumption—owning an automobile, purchasing special accoutrements, staying in a motel or eating in a restaurant while on vacation. The consumer goods that support the leisure industry require extractive industries, but production usually occurs in landscapes far removed from those where leisure takes place. These leisure activities also facilitate consumption of nature as experience. Tourism affects "destination" environments through the management of those environments to produce a specific experience.[7]

In the 1920s and 1930s, a "leisure-based attachment to nature" came to typify many relationships to the Pecos environment and influenced how the environment was managed and developed. Tex Austin's Forked Lightning Ranch was one of the manifestations of the growing importance of tourism to the Pecos environment and economy. Located "way out west an' a little bit south," as one tourist brochure put it, the Forked Lightning capitalized on the public's infatuation with the mythic Southwest and its ancient Indian ruins, with a healthy dose of cowboy culture mixed in. The environment was essential to the myth. Sparkling rivers rushing down from the mountains, mesas covered with piñon and juniper, cattle grazing and horses galloping by—these elements provided a well recognized background to the tales of the Western frontier. For the tourists staying at the Forked Lightning, the right environmental setting was just as important to their experience as the activities they undertook in that environment.[8]

Tex Austin's entire career was based on the romance and myth of the West. Born Clarence Van Norstrand in Ferguson, Missouri, in 1888, Austin drifted west to Texas with his family. He later changed his name to John V. "Tex" Austin, a name he considered more suitable for a westerner than Norstrand. As an adult, Austin headed to California where he worked in a few early western movies. By 1910 Austin was producing rodeos, including the Rough Riders Reunion in Las Vegas, New Mexico. His rodeos went to Wrigley Field in Chicago, and also to Boston, New York, and, in 1924, London. His involvement in the Las Vegas rodeo probably served as his introduction to the Pecos region, and his career in the entertainment industry provided ample proof of the profits to be made off people's fascination with the West. Rodeos, like people's desire to "get back to nature," reflected the anxieties of an urbanizing America. Rodeos also harbored the racism and ethnic divisions so evident in the tourism industry's depiction of New Mexico. In rodeos, cowboys were always white, despite the fact that real cowboys came from a variety of racial and ethnic backgrounds, including black and Hispanic. Historian Louis Warren describes the cowboys showcased in rodeos as "racially distilled men, hardened by frontier combat…cowboys were bulwarks against the modern age and all its miscegenated, manufactured, and artificial blandishments."[9]

In 1925 Austin purchased 6,000 acres of the Pecos Pueblo grant, including Kozlowski's Trading Post, with the intention of setting up a dude ranch with accommodations and diversions for tourists.[10] Austin purchased the land from the Continental Life Insurance company of St.

Louis, which had obtained the land through a foreclosed mortgage.[11] It is unclear if the Gross Kelly Company had mortgaged the land or if another owner purchased the land in between Gross Kelly and Austin. Austin also purchased a variety of small tracts scattered around the river. These included the homestead owned by Benigo Quintana and that owned by Pedro Ruíz.[12] A 1934 Bureau of Land Management survey showed Austin and his wife as the owners of 6,229 acres and the Continental Life Insurance company still in possession of around 4,000 acres to the west of the AT&SF railroad tracks—the majority of Glorieta Mesa within the Pecos grant.[13] Reflecting the growing realization that if New Mexico's history were to continue drawing people to the state, artifacts of that history needed to be preserved, the Gross Kelly Company had donated the pueblo and church ruins to the Archbishop in Santa Fe in 1920, who transferred it to the state in 1935.[14] Although Austin did not own the property, the ruins remained unfenced and unmanaged, and visitors to his ranch could wander freely about the site.

Austin named his ranch the Forked Lightning and hired the architect John Gaw Meem to design an attractive ranch house with twelve bedrooms on a plot of land with the Pecos River on the east and Glorieta Creek to the southwest.[15] Meem designed the ranch in the Territorial Revival style, an architectural form that he was helping to develop in the 1920s. The style branched off from the Pueblo Revival and Spanish Colonial Revival architecture by including elements from the American territorial period. All three styles reflected a romanticized view of Southwestern history. Architects in Santa Fe at the turn of the century, seeking a design that would play to Santa Fe's unique history, selectively chose elements from various historic buildings to form the Pueblo Revival style. The style was calculated to appeal to tourists and fit within the mythic historical narrative developed by the tourism industry. The Territorial Revival style Meem used for the Forked Lightning Ranch house also resembled an idealized Southwestern home with its long porch, protruding roof beams, and stucco walls. Kozlowski's trading post was incorporated into Austin's ranch as the foreman's quarters and served other ranch support functions. The trading post may also have offered extra beds for guests.[16] Austin removed the remains of the grist mill by the Pecos River and may also have demolished any structures associated with Hispanic homesteads on his land.[17]

Brochures produced by Austin detailed the numerous activities visitors could enjoy at his ranch. They could "stroll through an old orchard by the murmuring river" or "pull a few trout from the clear, cool waters of the old Rio Pecos."[18] One brochure claimed that the river was "practically infested with trout."[19] Hunting parties occasionally sought out the "deer and wild turkey" when in season. Mealtimes were an important aspect of the visit. "Dinner and supper are served ranch style, placed on the large family table in big heaping dishes."[20] Visitors could choose from a variety of offerings. One menu included a "Special Mexican Plate" of chile con carne or posole and pork with tamales and frijoles. Other choices were Hungarian Goulash, Dinty Moore's Corned Beef and Cabbage, broiled sirloin steak, fresh mountain trout, "imported Italian spaghetti," oysters, and a "Cowboy Steak Sandwich on Toast."[21] Guests also enjoyed "fresh vegetables grown on Austin's ranch."[22] Other activities included "pack and chuck wagon trips to the high peaks" and riding parties. Tex Austin built a polo field adjoining the ranch house.[23] One brochure admiringly stated that at the ranch, visitors could find a landscape of unmatched beauty, where "the night stars glow like headlights," an idiom of mechanization that reflected how people's experiences of nature were mediated by technology.[24]

Providing the appropriate scene for visitors, complete with cattle and horses, as well as the demands of Austin's rodeo business, meant that the Forked Lightning operated as a working ranch with sizeable herds. Tourist brochures boasted that the cattle herd numbered in the

thousands, but numbers were in fact much lower. A history of the ranch, written by historian Andrew Young in 2001, gives the number as "several hundred" cattle, citing an interview with a local resident and ranch manager. Austin leased another ranch near Santa Rosa, known as the Moon Ranch, as well as more land in the Pecos area. His cattle herd was spread out around these areas. Austin also owned a large horse herd.[25] Photos from tourist brochures show both the cattle herd and the horse herd, called the "remuda," watering in and crossing the Pecos River. The herds grazed on Austin's land in the Pecos valley and also on Glorieta Mesa. One brochure said that the mesa "assures excellent summer feed for Tex Austin's cattle…. Dropping by sloping grades from this elevation the cattle are worked through spring to winter feed at the lower pasturage, 3,000 feet nearer sea level, beside the Pecos."[26] These were probably the largest herds that had grazed in the area for a while—perhaps since the mid-1800s when the substantial herds of the Pinos and Vigils roamed the banks of the Pecos.

A letter describing Tex Austin's ranch, written during the 1930s, stated that the land was "open grass land with some scrub cedar, piñon, and a few pine trees."[27] A 1929 aerial photo, looking south from Pecos Pueblo, shows an open area on the west side of Glorieta Creek. This meadow appears to have been actively maintained, perhaps for the purposes of cultivation, as the boundaries are linear and closely surrounded by trees. A thin line of vegetation extending into the meadow suggests an arroyo or irrigation ditch. If the meadow was used for cultivation, it was created prior to Austin's ownership of the Forked Lightning and may date back to early Hispanic settlement. It could also have been an area utilized by the Pecos. There is no evidence that Austin created other open areas on his ranch.

The effects of the animals on riparian vegetation can be seen in a photo of Austin's ranch house. Taken from the banks of Glorieta Creek, looking north up to the house, the photo shows a bank practically bare of vegetation—no willows or cottonwoods grow along the creek.[28] Grazing similarly affected riparian vegetation along the Pecos River on the Forked Lightning Ranch. Not all influences on the riparian ecosystems were negative, however. In the 1930s beaver returned of their own accord to the Pecos River watershed, in the streams up the Pecos canyon. The Game and Fish Department of New Mexico also reintroduced beavers to the Pecos River. [29]

The Forked Lightning hosted a number of distinguished visitors over the years. Alfred Kidder, who conducted archaeological investigations of the Pecos ruins, held the first Pecos Conference on Southwestern Archaeology at the ranch in 1926. Charles and Anne Lindbergh also visited the Forked Lightning in 1929. Under Kidder's direction, Charles Lindbergh took several aerial photos of the area around the Pecos ruins. Kidder's work from 1915 to 1929, which provided the foundation for Rio Grande archaeology, also affected the Pecos landscape. The digging and excavation on the mesilla prevented the growth of vegetation (although the disturbed soil would be a perfect host to weedy species upon the cessation of active work). Photos from Kidder's excavations show a barren area around the ruins with scattered piñon and juniper in the meadows adjacent to the pueblo. Kidder constructed a small work shack on the north-western edge of the ruins and several houses for the workers across Glorieta Creek near the Forked Lightning Ruin. The shifting path of Glorieta Creek can be seen in one of the Lindbergh photos. A wide bend of the creek passing near the ruin had been cut off as the creek moved eastward. In his final report, Kidder noted that a flood from Glorieta Mesa in 1927 had deepened the arroyo around the Forked Lightning Ruin.[30] Although not directly related to tourism, Kidder's work did foster interest in Southwestern history, and many guests at the Forked Lightning probably watched Kidder's excavations.

Figure 23. 1929 aerial view looking south from Pecos Pueblo. Note field in upper left corner with clearly delineated borders. Photo by Charles Lindbergh. Source: Park files, original negative, Museum of New Mexico, negative no. 130352.

Figure 24. 1929 aerial photo of Dick's Ruin, south of Forked Lightning Ranch house, showing open areas mixed with woodland. Photo by Charles Lindbergh. Source: Park files, original negative at Museum of New Mexico, negative no. 1303332.

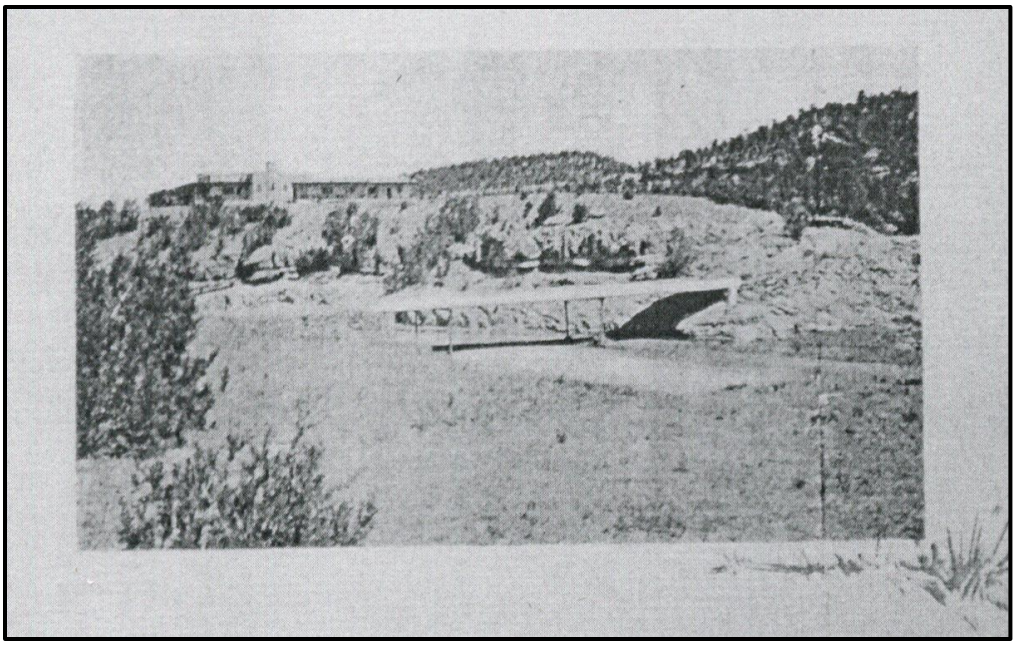

Figure 25. Photo from tourist brochure for Tex Austin's Forked Lightning Ranch, looking across Glorieta Creek at the Forked Lightning Ranch house. Note the barren creek banks. Source: Park files.

Tex Austin was not the only one in Pecos to profit from the tourist trade. Tom Greer purchased Pigeon's Ranch in 1926 and turned it into a tourist attraction. Born in 1881 in Woodruff, Arizona, Thomas Lacey Greer moved to the Pecos Valley in 1914, and by 1920 Greer lived in San Jose, twenty miles from Pecos. Before moving to Pecos, Greer lived in El Paso, Texas and may have known Tex Austin. Perhaps his acquaintance with Austin led him to purchase land in the Pecos area and follow Austin's footsteps in capitalizing on people's interest in the history of the Southwest. Greer developed Pigeon's Ranch specifically to target tourists passing through the valley in their automobiles. Highways now crisscrossed New Mexico, including Route 66. Although the postwar years saw the transformation of Route 66 into a tourist icon, many tourists ventured to the Southwest in their cars in the interwar years as well. [31]

Greer utilized both the Hispanic and Indian history of the area as well as the Civil War Battle of Glorieta Pass to lure tourists into the old adobe building at Pigeon's Ranch. Photos of the ranch as well as the reminiscences of Bill Greer, Tom's son, suggest that Greer merged several attractions related to the Old West into a kitschy conglomeration. In the main building, decorated with animal skins, Greer sold a selection of curios and souvenirs. An adjacent building was advertised as the hospital used by Civil War troops, erroneously claiming that "parts of these old walls" were constructed 200 years before. Greer billed the old well across the road from the main building as "Coronado's Well," although it was probably constructed in the mid-1800s. Like Tex Austin, Greer had no interest in historical accuracy when myth served his purposes. In one photo, a sign mentions the "entrance to the cave" by Sharpshooter's Ridge, probably referencing some rock formation. Photos also show a man, probably of Hispanic or Indian heritage, talking to tourists, dressed in an Indian costume complete with headband and beaded necklaces. Bill Greer remembered his father keeping at least two pet bears, another element of the frontier scene Greer imagined. According to his son, Tom Greer owned livestock as well—about eight to ten horses and about 110 cattle. Besides offering extra income, the cattle and horses also contributed to the western atmosphere, just as they did at the Forked Lightning. Greer probably owned a permit to graze the cattle in the surrounding national forest, but the

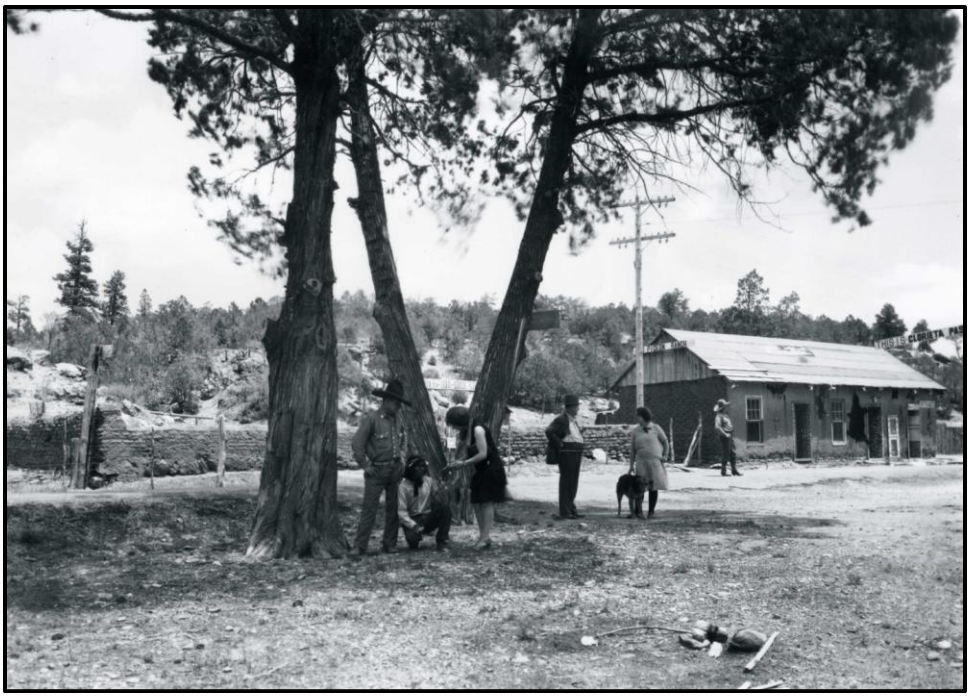

Figure 26. Pigeon's Ranch as tourist attraction, circa 1935. Photo by T. Harmon Parkhurst. Source: Park files, original negative at Museum of New Mexico, negative no. 9689.

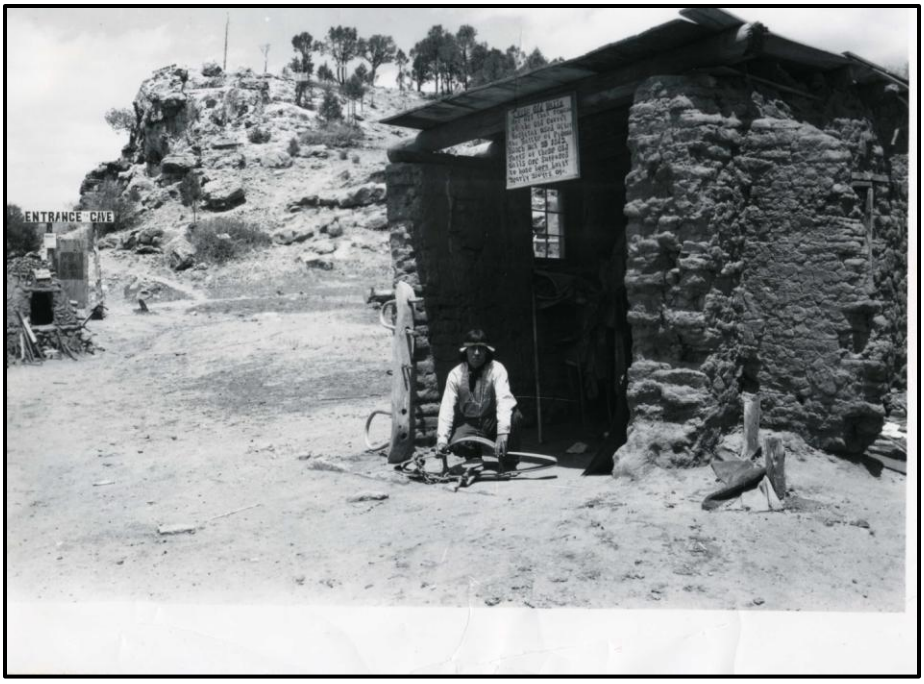

Figure 27. Pigeon's Ranch, circa 1935. Note sign on left—"Entrance to Cave." Photo by T. Harmon Parkhurst. Source: Park files, original negative at Museum of New Mexico, negative no. 9690.

animals also grazed around Pigeon's Ranch, and riparian vegetation along Glorieta Creek may have remained sparse. [32]

New Mexico had been building a profitable relationship with tourists ever since the railroads arrived in the 1880s. In the interwar years, as more people went on vacations, either by rail or automobile, many of them traveled to New Mexico. In the New Mexican environment, they sought not only to connect with a mythical past of cowboys, Indians, and conquistadores, but also to enjoy numerous recreational activities, such as fishing or hunting. Both pursuits required certain landscapes—some more actively managed for tourism than others. Tom Greer used the old buildings at Pigeon's Ranch to support a mythical history of the landscape, a meld of fact and fiction. Tex Austin developed the environment of his Pecos ranch to fit tourist expectations, including maintaining cattle and horse herds. Although tourists were not chopping down trees, mining gold, or planting crops, their presence still affected the environment.

"It Does Not Seem that the Indians Have any Prospect of Making Recovery of This Land"

In 1928 Tex Austin wrote to Herbert Hagerman, member of the Pueblo Lands Board, regarding the title to his Pecos ranch. Austin addressed Hagerman as "Dear Gov," and inquired into the proceedings of the Board regarding the Pecos Pueblo grant.[33] The Board had just begun considering the claims of non-Indians to land within the grant in preparation for awarding a monetary compensation to the Pecos who lived at Jemez. Tex enjoyed having the ruins of Pecos Pueblo nearby, a convenient excursion for ranch guests, but he wanted to make sure there was no chance the board would invalidate his title to the ranch. Although the tourists who admired the ruins viewed the Pecos as a mythical people with no connections to living, breathing persons, the Pecos Indians had not forgotten their homeland. The Pueblos, including Pecos descendants, had long wanted some federal government recognition of their loss of land to Anglos and Hispanos. Recognition of Pueblo losses first involved recognizing their rights to the land. Pablo Toya, a Pecos descendant at Jemez, wrote to the federal land office in Santa Fe in 1921 requesting a copy of the patent issued in 1868 for the Pecos grant. Toya's request may have been in response to the actions of John Collier and other Anglo advocates for Pueblo rights who were agitating in Congress and the courts to have Pueblo lands restored. Local Hispano residents also remembered the Pecos. They continued to observe the Feast of Nuestra Señora de los Ángeles de Porciúncula on August 2 each year. During interviews with Pecos residents in the 1990s, they "referred to their obligation to perform this mass as '*una promisa,*" a promise made to the Pueblo people to honor Our Lady of the Angels perpetually." This promise reflected the cultural ties between the Pecos and Hispano residents. Although the Hispanos may have remembered the Pecos, that did not mean that they supported returning the Pecos grant—on which most of their homes were located—to the Pecos. [34]

As pro-Pueblo forces mobilized over Pueblo land rights, the issue quickly attracted controversy, as many Hispanos and Anglos faced the loss of their land if it was decided that adverse possession—and even sales—of Pueblo lands were invalid. Collier's opposition did not want the issue to go before the courts, where a decision would hinge on whether the Pueblos ever possessed the right to relinquish their lands in the first place. If the decision was no, as the *Sandoval* case suggested it might be, all the Pueblos, including the Pecos, would regain their land. Instead, the question was pushed into Congress. The Bursum bill, introduced in 1922, aimed to decide the question based on adverse possession—a stance that gave landholders firmer ground to stand on and the Pecos none at all. Collier and his allies rallied to oppose the bill. Nineteen pueblos, including a representative for Pecos, also signed a letter objecting to the

Bursum bill and stating that non-Indian settlers should receive money in compensation, and the Pueblos should receive their lands back—not the other way around. Collier hired Francis C. Wilson—who, ironically, had helped the Gross Kelly Company assert its right to the Pecos grant—to represent the case to Congress.

The ensuing debate initially allowed a place for the Pecos who did not possess the same justification as those Pueblos who still inhabited their ancient homes. Ideally, Collier wanted to return all Pueblo land—no matter when that land had passed out of Pueblo control. Wilson adopted a more pragmatic view. He felt that a statute of limitations should be imposed, which would leave no room for Pecos. The split between Collier and Wilson was exploited by their opponents, and soon Pecos became an example of Pueblo land that would not be restored because it had been acquired by non-Indians so long ago. The Pueblo Lands Act, as finally passed in 1924, stated that title to Pueblo land could be proved based on a deed if acquired before 1902, ten years before New Mexican statehood, or could be proved based on adverse possession dating back to at least 1889. Pecos would have no claim under either provision.[35]

The act also created the Pueblo Lands Board, which began considering each grant individually, determining the validity of claims and amounts of remuneration. At first, the board did not think that Pecos needed to be dealt with—it had clearly been abandoned long before the 1889 date. By 1928 the board had changed its position and began an investigation at Pecos. They were not, as historian G. Emlen Hall says, determining "whether the Pecos Pueblo had lost the tract, but rather how and to whom."[36] Locals aided and abetted the surveys completed by the board. Because the board did not recognize communal lands, several Pecos residents extended their private land claims to include communal tracts, particularly to the east of the Pecos River. [37]

Upon concluding its surveys, the board issued deeds to the landholders. After making sure that every portion of the Pecos Pueblo grant had an owner with a deed, the board considered how much the Pecos descendants at Jemez should receive for their lost lands. Typical of the narrow way in which the federal government construed the term "Indian," the board considered only those Pecos descendants who lived at Jemez, despite the fact that others had settled in local communities, such as Glorieta. The board arbitrarily ignored the method it had used to determine the value of land for other grants and assigned the land at Pecos a flat rate of $1.50 per acre, taking no account of water rights. This resulted in the lowest remuneration paid to any pueblo—$28,144.95 for the entire grant.[38] When the Forked Lightning Ranch was sold in the 1930s, the buyer, W. C. Currier, paid $58,000 for just 6,000 acres. [39] The contentious legal disputes over Pueblo land grants showed how issues of land control still aroused deep emotions. And the arbitrary decisions of the Pueblo Lands Board in regards to Pecos demonstrate how issues of ethnicity, power, and inequality continued to dominate that conflict.

"Herds of Wild Horses Scamper Through the Piñon"

The horses that participated in Tex Austin's rodeos bore names such as "Pinto Pete," "Black Thunder," and "Red Bird."[40] The tourist brochures for Tex Austin's dude ranch liked to portray the wild horses that wandered around the Pecos valley in an equally romantic light—"up on that lowering mesa herds of wild horses scamper through the piñon."[41] To the Forest Service, however, these horses represented an uncontrolled, wasteful use of a threatened resource. Many residents of Pecos turned their horses loose to graze in the valley and also cast out old horses to fend for themselves. Congregating into herds, these horses grazed unchecked in the forests, contributing to erosion and overgrazing.

Despite the efforts of the Forest Service, erosion and forest degradation continued to be a problem in the 1920s and 1930s. Ranger John W. Johnson described the state of the range when he arrived at the Pecos District in 1918:

> Removal of the excess [livestock] was necessary. Most of the climax-type forage was gone from the higher elevations and less valuable plants were taking its place. Some of the high open land around the head of the streams had nothing but skunk cabbage and sneezeweed. Erosion was active because summer rains are almost all of the flood type, and every heavy rain filled the streams with silt.[42]

Detailed Forest Service records on the condition of the allotments in the Pecos district and the numbers of animals grazed on them are not available until the late 1940s. These reports make some general references to the preceding decades, usually noting that the range was overstocked. A report on the Springs allotment on top of Glorieta Mesa, for example, stated that past reports consistently mentioned the damage done to the land around the few watering areas on the mesa, which, like riparian corridors, were vulnerable to cattle and sheep overuse.[43] Evidence of sawmills from the early decades of the nineteenth century was recorded on both the Springs allotment and the Apache Canyon allotment.[44] These later reports mention the grazing of cattle, sheep, and goats in past years. Although some reports from the mid-twentieth century record the range condition as fair or even good in some areas, there is evidence that rangers may have consistently overestimated the capacity of the range. A report entitled "narrative report of recommendations to close to all grazing the Apache Canyon allotment," probably written in the 1940s, stated that the range had "zero capacity for grazing, despite higher estimates in the past." The ranger said that the Apache Canyon allotment was "seriously damaged by untended goats from adjacent villages years ago." The ranger mentioned erosion, soil loss, and pine encroachment on the allotment.[45]

Ranger Johnson and other Forest Service employees did what they could to institute better practices. It was often difficult for Forest Service rangers to balance the needs of local ranchers with their quest to improve the health of the range. Rangers lived in local communities, and many of their decisions angered the residents of those communities.[46] Throughout the 1920s and 1930s, the Forest Service tried multiple strategies to reduce the numbers of animals on forest land. The large herds of wild horses presented one difficulty for Johnson and his colleagues. The rangers began trying to remove the wild horses in 1926, notifying owners that they needed to round up their animals and move them elsewhere. They impounded any horses left running wild at local ranches. The rangers shot or sold the unclaimed horses.

Many locals protested the actions of the Forest Service and resented having to remove their horses. The mesas and forests had long been open to grazing, and for many people, it was the only place where they could graze the small numbers of horses they owned. All together, of course, the accumulated horses of Pecos residents formed a substantial herd. Responding to the protests, Johnson said, "I knew that the larger stockmen were all for the cleanup . . . the petition was not instigated by the responsible stockmen."[47] To Johnson, it was men like he, who had professional training, or owners of commercial herds (many of them probably Anglos) who should make the decisions about forest management. The protests came from the poorer, mostly Hispanic residents of the valley. Much as it had in debates over the Pueblo land grants, conflict over land control continued to divide along ethnic and class lines.

In addition to trying to eliminate unlicensed stock from the range, the Forest Service also tried to reduce the numbers of permitted livestock. Johnson attempted to perform accurate

counts of livestock numbers and ensure that livestock were removed at the end of the season—with varying degrees of success. Although sheep numbers continued to decline in New Mexico, herds still grazed in the Pecos area. Sheep numbers had reached their apex in San Miguel County in 1900, with over 490,000 animals. By 1930, sheep and cattle numbers were about equal—around 48,000 cattle and 49,000 sheep. Cattle numbers remained steady in the following decades, while sheep numbers declined sharply. Sheep required too much labor to be profitable to their owners.[48]

Still, some Pecos residents continued traditional practices and persisted in owning sizeable sheep herds. In 1927 Blas Duran and Bert Foster were accused of stealing sheep from the herds of Pecos sheriff J. C. Rivera and his neighbor, Manuel Varela. Blas Duran worked as a herder for the sheriff and Varela. Foster, Duran's son-in-law, owned a ranch and was apparently attempting to increase the size of his own herds. Missing sheep from Rivera and Varela's herds were found on the Foster ranch with altered ear markings.[49] A year earlier, a man named John Condon had been accused of rustling cattle from Tex Austin.[50] Although livestock may not have been as central to Pecos life as in earlier decades, as wage work and tourism slowly assumed greater prominence, it was still an important resource that caused contention and controversy.

In addition to controlling grazing, the Forest Service also carried out an active fire suppression program. Ranger Johnson noted several forest fires during his tenure at Pecos. One occurred in April, probably in the 1920s, at the Reed Sawmill, owned by the Gross Kelly Company. The mill was probably located up the Pecos canyon or else north of Glorieta. Johnson stated that the cause of the fire was never determined. Another fire occurred in the Hagus Canyon (possibly the "Hagen Creek" that appears on current maps), a tributary to Glorieta Creek, in May 1938. A local woman set fire to a cabin to destroy a still inside it. Johnson mentioned another accidental forest fire in May 1938 in Madera Canyon, northeast of Pecos.[51] None of these fires were particularly extensive, and Johnson did not mention any really large fires during his tenure at Pecos. It is notable that the fires he did remember all occurred in the spring, the driest time in New Mexico, particularly if there had been reduced snow accumulation the winter before.

Grazing and fire suppression both affected the density of woodland in the Pecos valley. The issue of piñon-juniper encroachment into previously open meadows became a concern for land managers over the course of the twentieth century. Because historical conditions are often unknown or impossible to quantify precisely, it is difficult to say with certainty that encroachment is taking place. A recent study of piñon juniper vegetation differentiates between "infill"—an increase in vegetation density in a pre-existing woodland—and "expansion"—vegetation colonizing grassland or shrubland. The dynamics of piñon-juniper vegetation are poorly understood, and it is unclear why vegetation density increases, whether it is due to grazing, climatic conditions, fire exclusion, or some combination of factors. The study also emphasizes that expansion may simply be piñon-juniper woodlands recovering after centuries of intensive human use.[52]

At Pecos, although it seems fairly certain that the immediate area around the ruins had been practically bare of vegetation since its earliest occupation, the density of piñon and juniper for the rest of the valley is less clear. 1929 aerial photos taken by Charles Lindbergh provide the first really good depictions of piñon-juniper cover for the area surrounding the ruins. In the photos, piñon-juniper immediately around the ruins remained sparse as did vegetation along Glorieta Creek. More trees appeared as one proceeded south, north, or east from the ruins, including along the old tracks of the Santa Fe Trail on the west side of the creek. A photo of the

Forked Lightning Ruin shows a more extensive tree cover. A photo of Dick's Ruin, further south along the Pecos River, shows large open areas on either side of the river along with denser clusters of trees. It is impossible to say for certain exactly why the landscape appeared this way. Did the stands of piñon-juniper near the ruins—which did become denser over the succeeding decades—represent trees colonizing former grassland as a result of grazing and fire suppression or were they simply returning to areas that had been woodland before humans occupied the mesilla? At Pecos, the vegetation composition in the valley before the arrival of humans may be impossible to determine. Instead, it is probably best to recognize the Pecos landscape as in a constant state of change—both gradual change over a long period and change caused by short term events—affected by a variety of factors, some better understood than others.[53]

The Forest Service, by intensively managing the land, became one of those agents of change. Fire suppression, reducing livestock numbers—all of these tactics transformed the Pecos landscape. These methods, drawn from a scientific and professional bureaucracy, did not go uncontested. Many locals continued to resent Forest Service regulations, seeing the agency as an unwanted symbol of federal oversight or as the latest in a long line of Anglo interests usurping Hispanic rights. Confrontations could turn violent. On the Lincoln National Forest in 1927, forest homesteader Thomas Shumaker shot and killed W. C. White, a young ranger. Shumaker "generally opposed the Forest Service," and sent many threatening letters before turning to murder.[54] Although Ranger Johnson escaped violence, he too encountered disagreements and conflict.

"There was a Feeling of Fellowship Among all the People in Tererro"

Among the many stories about the West that tourists avidly consumed were narratives of mineral wealth—the hard luck prospectors who struck gold and became millionaires, the lost mines that promised fantastic riches to any who re-discovered them. The Upper Pecos valley had seen its share of hopeful prospectors throughout the late-nineteenth century. The area did not yield many promising hits, however. Tailings piles, adits, and two shafts east of the Pecos River near the pueblo ruins (PECO 548, Figure 4) attest to one of the many attempts to strike it rich. Named the Jose Baca mine site after a local judge, recovered artifacts date the site to the early decades of the twentieth century. The prospectors were not rewarded for their efforts.[55]

One find that did hold promise was made by a prospector by the last name of Case in 1881. Case discovered outcroppings of mineralized ores at the junction of the Pecos River and Willow Creek, north of the town of Pecos. Case began to develop the mine under the title of the Pecos Mining Company, but by 1886 he had sold his interest to another local, A.H. Cowles. Under Cowles the mine was called variously the Cowles Mine or the Hamilton Mine. Cowles managed to start a small operation where ore was hauled by wagon to Glorieta and thence, presumably by railroad, to El Paso for smelting. Cowles quickly discovered that a large investment of capital was needed to make the mine profitable—too much for a small operator. Cowles shut down his operation in 1907 after trying and failing to make his Pecos Copper Company succeed.[56]

The ores included the sulfide ores of copper, lead, and zinc as well as small amounts of silver and gold. In the early twentieth century, the mining industry had not yet perfected the processing of sulfide ores. Despite the technological drawbacks, the Goodrich Lockhart Company purchased the mine in 1916. The company expanded the mine, drilling down 518 meters. Once again, costs proved prohibitive. Finally, in the 1920s, technology caught up to people's hopes. The industry developed a process for extracting sulfide ores. Armed with this

Figure 28. Cutting and log ways on the American Metals sale, Indian Creek, Pecos Division, 1936, photo by R. C. Salton. FS#329890. Source: Santa Fe National Forest Historical Photographs, SWRO.

new technology, the American Metal Company purchased the mine, usually called the Tererro Mine by this point. In addition to deepening and lengthening the tunnels at the mine, the company built the Alamitos Canyon mill, half a mile above the town of Pecos. A twelve- to thirteen-mile aerial tramway transported ore from the mine to the mill where the ore was extracted.

The American Metal Company began substantial mining in 1927. A newspaper article from August of that year reported that the company had used more than 250,000 feet of timber for construction at the mine. The company cut its timber in the area around Willow Creek and Indian Creek on national forest land, under the supervision of ranger John W. Johnson.[57] Production at the mine continued until 1939, through the height of the Great Depression. The company town of Tererro grew up around the mine and soon boasted a population of 3,000. Developments included a grade school, post office, and hospital. One miner, Wes Darden, recalled years later that the doctor at the hospital owned "several herds of sheep that were pastured over the mountains to the east. If one of his herders arrived at the office during hours, the patients would have to wait a little longer than usual while the good doctor inquired about his sheep."[58] The mine itself employed several hundred men. Darden stated that the company was required to hire local men as part of its lease of the mineral rights—at least seventy-five percent of its workforce. Darden remembered the many Hispanic families who lived in Tererro and also a number of men from lead and zinc mines in Oklahoma, Missouri, and Kansas who "worked hard and played hard." Although Darden claimed that "there was a feeling of fellowship among all the people in Tererro," conflicts arising from ethnic tensions may well have been common.[59]

Every day, heavy buckets of rocks traveled the aerial tramway to the Alamitos Canyon mill. Inspectors rode the ore buckets, too, making sure that the cables were sound. At the mill, engineers used a flotation process to extract the valuable minerals. The mill utilized water from

the creek, a tributary to the Pecos River. Tailings ponds located downstream from the mill collected the detritus. As ore production increased, the Tererro mine grew into an extensive complex. Two vertical shafts extended downwards. While drilling them, miners hit an underground water source. The lower depths of the mine were always wet, despite pumps that operated constantly to keep the mines open. It may have been the water that kept the mine in operation during the Depression—if the pumps stopped, the mine would have been completely flooded. The mine was not unprofitable for the company, however; in fact it was one of the largest lead and zinc mines in New Mexico. The company extracted 2.3 million tons of ore worth more than forty million dollars. Despite such returns, the company was forced to close the mine in 1939 when the costs of pumping out water became so excessive, they outweighed potential profits.

An intensive resource extraction operation, the Tererro Mine had both short and long term impacts on the Pecos environment. The digging and construction at the mine site itself increased erosion and thus runoff into the Pecos River. More detrimental to water quality was the influx of minerals, particularly lead, into the water of Willow Creek, the Pecos River, and Alamitos Creek as well as into the soil itself. At the Alamitos mill, the tailings ponds became saturated with heavy metals, which leached into the creek. Howard Lowe, who worked at the mill in the 1930s, recalled that to ease the fears of locals worried about the possibility of contaminated water, Lowe and other mill employees would "take people down to the water runoff from the slag and [demonstrate] the lack of danger by drinking the water in the presence of the doubters."[60] Besides chemical contamination, the mining activity also resulted in extensive timber cutting in the immediate area, which also contributed to erosion.

Although the miners who worked at Tererro engaged in a relationship with the environment that centered on work and production, they also enjoyed outdoor recreation activities. Darden recalled how miners loved fishing—both in the Pecos River and in the smaller tributary streams. "It was common for fishermen to catch the limit within a mile of the camp," Darden wrote. "The Mora joined the Pecos a mile upstream from Tererro, and there was good fishing there also." Darden continued, "Hiking along one of these streams or along Willow Creek was the favorite summer pastime of many. . . . Picnics on the river were held often." The company also constructed a nine-hole golf course, and baseball was popular among the miners as well.[61]

Workers at the mine also hunted, particularly elk from the herd that had been reintroduced to the area in 1915. Elliott Barker, who grew up in the Pecos area and served as a Forest Service ranger on the Santa Fe National Forest for three years, felt that many of the mine workers were "drifters with no interest in the local resources of the county." Along with other inhabitants of the Pecos valley, mine employees heedlessly shot elk, regardless of the fact "that there was no open season. The Game Department did not have sufficient funds to cope fully with this lawless destruction of the much-prized game, and the increase was greatly retarded in the Willow Creek, Bear Creek, Valle Medio, and Cow Creek country."[62] Barker was quite the hunter himself, but believed that regulations should govern people's use of resources. In his reminiscences of living at Pecos, Barker rhapsodized about the many hunting trips he took into the Pecos high country. For Barker, hunting went beyond merely catching food. The activity involved escaping "modern high-tension" living for a time and renewing his soul through close communion and interaction with nature.[63] Although people had enjoyed the Pecos environment for centuries, by the twentieth century activities like hiking, fishing, or hunting carried certain connotations distinct to the period. The miners at Tererro, residents like Elliott Barker, and the

tourists at the Forked Lightning viewed their activities in the light of the back to nature movement, concepts of the western frontier, and the growth of a consumer-oriented leisure industry.

"When You Get to the End of Your Rope, Tie a Knot and Hang On"

In 1936 Tex Austin lost the Forked Lightning Ranch. The onset of the Great Depression had curtailed the tourist industry, and Tex's rodeo business failed as well. Despite his best efforts, he could not keep up with his debts and finally declared bankruptcy. Forced to leave the Forked Lightning, Tex and his wife, Mary Lou, moved to Santa Fe and opened the El Ranchero restaurant. Although close to the Pecos valley, the El Ranchero was a far cry from Tex's ranch and the cattle, horses, and cowboys he had spent so much of his life around. When his doctor told him that he was going blind, Tex's despair was complete. He committed suicide in 1938.[64]

"When you get to the end of your rope, tie a knot and hang on," Franklin Delano Roosevelt told Americans suffering the effects of the Depression in the 1930s. Many residents of Pecos besides Tex Austin found themselves in dire straits during the Depression. Although the presence of the Tererro mine may have helped offset some of the Depression's effects in the Pecos area, in general the economic downtown hit northern New Mexico hard. The sugar beet industry in northern Colorado laid off workers as their own profits fell, as did southern Colorado coal mines and the railroads—all of which had become important sources of work for northern New Mexicans over the preceding decades. As opportunities for wage work became scarcer, families depended on their gardens and livestock to a greater extent.[65] In an oral history project, conducted in 2002, elderly residents of Pecos were asked about how their families survived the Depression. Almost all of them mentioned growing their own food, slaughtering livestock, or hunting.[66] Residents could sell crops for cash as well, but the market quickly became glutted and prices collapsed.[67] Farming was never a sure enterprise. Heavy snowfalls in the winter of 1931 to 1932 in northern New Mexico killed livestock, and hailstorms and grasshoppers the following summer destroyed crops.[68] For those who had limited resources in the first place, such disasters could be devastating.

Other resources of the Pecos valley continued to provide economic opportunities as well. John W. Johnson, the forest ranger, felt that timber remained a crucial part of the local economy through the 1930s. "The economy of the area was based largely on timber products, mine ties and props, stulls, piling, railroad ties and sawtimber," Johnson remembered. "Juniper posts were in great demand and a truckload of juniper posts could be sold anywhere at a good price." The demand for timber encouraged people to trespass on the national forest without permits in order to obtain it. Johnson recalled that "timber trespass had always been a problem and as the timber on private land was cut out, trespass on the forest increased."[69] Residents of Pecos also depended on the forest to provide cheap grazing land for their livestock. The Forest Service, however, in trying to remedy decades of overgrazing and unrestrained timber cutting, put restrictions on forest use. As historian John R .Van Ness says, it was during the Depression that "the consequences of grant land alienation, environmental degradation, and the drastic contraction of wage labor opportunities created a crisis of life-threatening proportions."[70]

The poverty of many villages attracted substantial federal government aid. Federal programs such as the Works Progress Administration and National Youth Administration, which often focused on the "traditional" aspects of village life such as crafts and farming, in many ways attempted to contain Hispanos in a static lifestyle—a lifestyle intimately connected to racial stereotypes. In other ways, though, Federal aid did allow Hispanic villagers to maintain their

cultural practices, if not always solely on their own terms. By 1935, sixty percent of Hispanos in northern New Mexico received some form of government aid. [71]

Another federal program, the Civilian Conservation Corps (CCC), provided employment and also affected the environment of the Pecos valley. Part of the various economic recovery acts passed by President Franklin D. Roosevelt to combat the Depression, the CCC offered the chance of a steady job to unemployed men. The CCC crews gave several federal agencies, including the Forest Service and the Park Service, a sudden influx of workers. To the agencies, which usually faced the problem of an insufficient work force, the CCC crews represented an opportunity to catch up on neglected projects or forge ahead with new ones. A CCC camp was built near Glorieta—possibly a short distance north of Pigeon's Ranch—in 1938. The CCC men primarily helped the Forest Service with fire suppression, construction projects, tree planting, and erosion control. Ranger Johnson mentioned recruiting CCC men to help fight the 1938 fire in Hagus Canyon. After the camp closed, according to Johnson, the army considered turning the remnant buildings into an internment camp for Japanese Americans during World War II, but the plan did not proceed. Johnson helped remove the buildings in the 1940s and "cleaned up the area."[72]

As the residents of Pecos scrambled to turn resources into food and cash, Tex Austin also sought a way to make the environment of his ranch yield profits. The mortgages on his ranch and the sums he owed to creditors growing, Austin decided to try and find oil on the ranch. The well he drilled turned up nothing, but interest in the possibility of oil did not disappear.[73] In August of 1934 officials of the Mexada Oil Company, based in Oklahoma, arrived in Francis C. Wilson's office seeking information about leasing the ranch. Wilson was serving as Austin's attorney in the bankruptcy proceedings. If oil was discovered, Wilson felt "everybody's troubles in this case would be over."[74] Nothing came of the Mexada Company's interests, either, and Austin surrendered the Forked Lightning to his creditors. In 1936 Wilson C. Currier purchased the majority of the ranch land for $58,000.[75] Currier was also involved in the oil business and probably hoped the oil rumors would pay off.[76]

Currier was not a stranger to the area—he owned a 3,000 acre ranch at the base of Glorieta Mesa and had vacationed with his family in the area for many years.[77] John W. Johnson recalled that Currier had tried to increase the value of the Glorieta ranch by obtaining a "sizeable grazing preference" in the adjacent national forest but was turned down. Johnson stated that the Currier ranch was approximately three miles from Hagus Canyon, a tributary of Glorieta Creek.[78] The Glorieta ranch may have been a more substantial operation than Currier's share of the Forked Lightning, which he bought based on its potential for oil. The part of the Forked Lightning Ranch purchased by Currier did not include the ranch house and the 135 acres around it. Currier and his family moved into Kozlowski's old trading post, remodeling the buildings and utilities. He kept only a few livestock at the trading post—two milk cows and some horses.[79]

Tex Austin's large horse and cattle herds disappeared from the Pecos landscape when Austin's western romance collapsed under the economic strains of the Great Depression. Under Austin's management, the Forked Lightning had offered tourists the chance to live out their fantasies of western life, complete with hunting, riding horses, and watching cowboys herd cattle. Many others in the Pecos valley experienced the environment at least partly through leisure and aesthetic values. The miners at Tererro enjoyed hiking and fishing along the Pecos River. The Forest Service, although they supported timber cutting and grazing, also managed species specifically for hunters and fishermen, and fire suppression helped create a landscape of dense forest that many viewed as the appropriate setting for western adventures. Although the

Depression curtailed tourism, people clung to the hope that better times would allow them to buy a car and travel westward themselves to experience all the "Land of Enchantment" had to offer.

Chapter Eight

Imagining the Past in a Postwar Landscape, 1941-1965

On a warm June evening in 1964, a small group of Hollywood notables and wealthy Dallas oilmen mingled in the secluded courtyard of the Forked Lightning Ranch house in Pecos. The Pecos River rushed by below them, gurgling over the rocks. The guests breathed in the scent of the dry desert air and walked across the bluegrass lawn in their shiny cowboy boots, warmed by margaritas and the flattering attention of their famous hostess, Greer Garson Fogelson. The day had been filled with activities befitting the guests of a gentleman rancher—a hearty "chuckwagon picnic" by the Pecos River at tables covered with denim cloths, an appreciative inspection of the ranch's picturesque stables and prizewinning herd of Santa Gertrudis cattle, and an afternoon horseback ride among the piñons. The evening would feature a mariachi band by lantern-light before the guests retired to their private bedrooms to listen for the thrilling calls of coyotes in the darkness.

Greer Garson was a well-known movie star in 1949 when she married Texas oilman E. E. "Buddy" Fogelson, who purchased the Forked Lightning Ranch before World War II. Unlike Helen Kozlowski, Greer's first view of the ranch produced no feelings of discomfort or fear about the strange environment. To her, the Pecos River valley and her husband's sizeable property provided a beautiful backdrop for dramatic social spectacle in the tradition of Tex Austin's dude ranch, but made more exclusive because visits to the ranch were now by invitation only. Greer greeted her guests personally at the local train station wearing a colorful Western costume. "It was as if a great director had carefully arranged the scene and she was the cattle queen in some wild Technicolor movie," remembered one famous guest, Art Linkletter.[1] Indeed, the Fogelsons' life on the Forked Lightning Ranch relied as much on theater and romanticized notions of the Old West as had Tex Austin's tourist operation. But unlike Austin, they did not rely on paying guests to keep the ranch afloat—Greer and Buddy Fogelson were so well-off that they could afford to use the ranch as a private retreat for family and friends.

Greer's upbringing in England influenced her romanticized view of the American Southwest, and her experience as an actress working on Hollywood movie sets further affected the choices she made in four decades of summer residence at the Forked Lightning. Greer developed a very personal relationship with the landscape in those years, even as she perpetuated its mythology. The Fogelsons furnished their ranch with Indian and Hispanic artwork and furniture and dabbled in authentic cultural experiences such as baking bread in the *horno* oven they installed behind the ranch house. But they remained somewhat removed from the local community, acting as benevolent philanthropists who valued and protected their privacy and the sanctity of their property boundaries.

The Fogelsons arrived in the Pecos valley with the cultural background of a modern consumer society. Flying to movie premiers, buying expensive pure bred cattle and Indian rugs for the ranch, driving up to the Forked Lightning in a Fleetwood limousine—both Greer and Buddy approached the Pecos landscape from the perspective of people who valued the environment for its aesthetic and recreational potential. They did breed cattle on the ranch, but the operation was always a hobby, never a livelihood. The Fogelsons' experience of the Pecos environment in the context of leisure and recreation became more common for many of the people who traveled to Pecos in the mid-twentieth century. The Pecos Pueblo ruins, the Santa Fe

Figure 29. Greer Garson with one of her beloved poodles on the Forked Lightning Ranch road, undated. Source: PS40, Folder 2, Env. 6, Series 1 Photographs, Greer Garson Papers, Jerry Bywaters Special Collections, Jake and Nancy Hamon Arts Library, Southern Methodist University (hereafter, HAL).

National Forest—these landscapes attracted people interested in recreation and leisure. Yet even as Greer and other visitors lived out their Western fantasies in the Pecos valley, many others continued to depend on the resources of the Pecos environment for their livelihoods. The different types of land use at Pecos and the different visions of how the landscape should appear affected and transformed the environment of the valley.

Pecos, 1941-1965

As World War II began, the environmental conditions at Pecos reflected sixty years of intensive logging and grazing, a brief but damaging period of mining at Tererro, and ongoing subsistence use of the forests, watershed, and meadows. When a severe drought enveloped the region in the 1940s and 1950s, it brought ecological, social, and political changes to an already vulnerable landscape. The postwar economic boom encouraged the exploitation of timber resources and the expansion of the livestock industry. The Forest Service struggled to manage multiple uses of the forests while also attempting to improve ecological conditions. Local traditions survived and endured but in the context of a changing environment.

The demand for resources caused conflict over who should manage and control those resources. Many Hispano residents whose families had lived in the valley for generations resented the continuing dominance of Anglos over the land and economic opportunities. The Forest Service remained a powerful bureaucracy that relied on scientific management of the forests, and although it tried to take local concerns into consideration, the agency culture often

clashed with that of local residents. The Fogelsons' purchase of the Forked Lightning Ranch also aroused some resentment. Many saw the Fogelsons as simply the latest Anglo landowners who breezed into the region and locked up land behind fences and "No Trespassing" signs.

Different cultures continued to meet at Pecos, as they had throughout the centuries. In the postwar era, the piñon pine forests, high mountains, and interesting tourist sites attracted many people to Pecos. By the 1950s individual automobile ownership had become an integral part of a new, higher standard of living enjoyed by many Americans, and economic recovery and greater leisure time brought travelers seeking recreation and diversion in national forests, parks, and historic sites. A modern infrastructure of highways and power lines developed that connected Pecos to the nation and allowed for easy travel to the region. Tourists brought with them their own perceptions of the Pecos environment. They wanted to find clean rivers to fish in and hike in dense forests. They wanted to visit the Pecos Pueblo ruins and find facilities and interpretive exhibits waiting for them. The expectations of tourists influenced the Pecos landscape. The State of New Mexico attempted to manage and protect the ruins despite funding constraints. The Forest Service began to take recreational use into consideration.

As the largest and wealthiest landowners in the valley, the Fogelsons also changed the landscape, and the legacy of their decisions is still visible today. The Fogelsons combined many of the land use practices that typified the Pecos valley as it moved into the postwar era. Just as the Forest Service relied on science for solutions to forest degradation, the Fogelsons employed scientific breeding programs for their cattle. Many of the tourists who came to the valley shared the Fogelsons' fascination with romantic Western history. The Fogelsons' manipulation of the landscape to create a perfect Western ranch was similar to the efforts of the State of New Mexico to manage the ruins to meet the expectations of tourists. Although the Pecos environment suffered from overgrazing, erosion, and drought, it remained a landscape that also offered people an avenue into romance and recreation.

"Instead of Eight Cows to an Acre, It's More Like Eight Acres to a Cow"

Greer Garson first visited the Forked Lightning Ranch in 1948. Elijah E. "Buddy" Fogelson had invited Greer and her mother to spend a week at the ranch after the premier of Greer's latest film, *Julia Misbehaves.* Buddy met Greer on the set of the film and was immediately taken with the red-haired actress. Only a few days later, at a dinner party at Greer's home, Buddy boldly told her "I'm going to marry you some day." Still smarting from two divorces, Greer resisted committing her heart to Buddy. But she immediately fell in love with the Pecos valley. Expecting picket fences, duck ponds, and ponies, Greer wore high heels and an organdy dress. The rugged, arid environment of Pecos surprised, but delighted her. "I was immediately struck by the color of the earth, the sky, and the people," Greer remembered. She took particular note of the "Indian, Spanish, and pioneer American" history embedded in the landscape. "The wonderful thing is that they all get on well together. It's historic. Spacious. Thrilling. It's not like the lush pasturage of, say, Virginia. Instead of eight cows to an acre it's more like eight acres to a cow! I felt so fragile and uncomfortable in that vast, rugged land."[2] Greer's perceptions of Pecos reflect how popular and widespread the romanticized history of the Southwest had become. She did not read evidence of past conflict and change in the environment but rather saw a landscape so immense that it was removed from human influence, its inhabitants cloistered inside the safe confines of an historic narrative developed by the tourism industry.

In reality, the Forked Lightning Ranch stood within a landscape that had experienced centuries of intensive human presence and use. The active management of the land continued under Buddy and Greer Fogelson as they created a new cultural landscape reflecting their perceptions and desires. The ranch had stood idle for five years after Tex Austin's bankruptcy, but with Buddy Fogelson's purchase of the land, the Forked Lightning once again became a working ranch. In the mid-1930s, Fogelson had visited fellow Texan Lyle Brush's guest ranch in the canyon above the Pecos village and developed an interest in owning property in the area. In 1938 Fogelson began negotiating the purchase of the unsold portion of Tex Austin's former holdings—the main ranch house and 135 surrounding acres.[3] He finalized the deal for the ranch house parcel in 1941. After Wilson C. Currier, in failing health, abandoned his hopes of finding oil, Fogelson also purchased Currier's land, which included most of the property between the river and Glorieta Mesa. Later that year, Fogelson bought the Los Trigos Ranch, the former land grant bordering the Forked Lightning Ranch to the south, from Bruce and Dorothy Strong.[4]

Although Fogelson was new to the Pecos valley, he quickly demonstrated his power to influence local land use patterns, much like Tex Austin and other Anglo landowners before him. Ranches like the Forked Lighting—large, commercial operations usually owned by Anglos—occupied much of the best range land around the headwaters of the Pecos River by the mid-twentieth century. The accumulation of land in the hands of a few wealthy Anglos forced all the other residents of the Pecos valley to put their livestock on the national forests. The resulting erosion from overgrazing affected all downstream communities and economic activities in the Pecos watershed.[5]

A native Nebraskan raised by well-educated Finnish immigrants, Fogelson made his fortune as an oil wildcatter in Texas.[6] Coming from an area steeped in cowboy culture and cattle, Fogelson saw the Forked Lightning as a vacation home but also a place to breed cattle. Initially, he stocked it with a mix of purebred and commercial Horned Herefords purchased in Forth Worth, Texas. When the United States entered World War II, Fogelson placed his new project on hold and volunteered for military duty in December 1941. Fogelson was named chief of Eisenhower's petroleum planning division in Europe and served on the Allied War Reparations Commission after the German surrender.[7]

As the U.S. entered the war, the Upper Pecos area contained the highest population density and greatest degree of economic distress in the entire Pecos River watershed.[8] Many local men who did not volunteer or get drafted pursued employment opportunities on assembly lines in other parts of the West. They encountered a wider range of skilled labor positions and opportunities for geographic and occupational mobility.[9] Employment opportunities outside of San Miguel County continued to grow in the postwar period. Many wage laborers settled in cities such as Denver, Tucson, and Los Angeles and other parts of New Mexico that offered employment in the defense and oil and gas industries rather than returning to the Pecos area.[10] The population of Pecos began to decline in 1940 and did not rise again until the 1970s when Pecos became a bedroom community for Santa Fe. The influx of new residents into other areas of New Mexico during the war years created an Anglo majority in the state for the first time. The Fogelsons were part of the Anglo migration to New Mexico. By the late 1940s, Fogelson was a decorated veteran and wealthy philanthropist. He already owned the Forked Lightning Ranch, and after meeting Greer in 1948, Fogelson turned his substantial energies to wooing the reluctant actress. Greer finally consented, and they were married in Santa Fe in the summer of 1949. Together, they began turning the Forked Lightning into their ideal of a Western ranch.

"I've Taken to Ranch Life Like a Duck Takes to Water"

Greer Garson quickly developed a passion for ranching that rivaled her husband's. The Fogelsons arrived at the ranch every June and stayed through Greer's birthday, September 29. As a child, Greer often had visited her grandparents' dairy farm in County Down, Northern Ireland. Those visits instilled in her a lifelong fascination with rural life.[11] Shortly after their marriage, Buddy presented Greer with a section of the ranch for her very own. Greer called the parcel El Rancho Blanco and established a herd of Scottish-bred white shorthorns—six heifers and a bull—that reminded her of her British roots. "I've taken to ranch life like a duck takes to water," Greer wrote in a letter to a friend. "I've switched from bustles and bows to Levis and boots, and I think it's definitely a change for the better."[12] Ranch hands took to calling the parcel the "Greer Garson" pasture. Because the ranch continued to maintain a commercial herd of Herefords, it was necessary to keep the purebred shorthorns away from the other cattle. Greer enjoyed immediate success at the New Mexico State Fair, where her shorthorns won many ribbons and awards. The Forked Lightning Ranch quickly developed a reputation in New Mexico as a first-rate cattle operation. In February 1951 Greer gave an address at the Cattle Growers Association Convention in Albuquerque—the first woman to do so.[13]

The Fogelsons relied on a permanent staff of ranch hands to keep the Forked Lightning in operation year round. They developed strong relationships with their staff built on mutual trust and friendship. Ranch foreman Slim Wasson, a former Texan who had been in the Pecos area since 1921, oversaw the ranch during Buddy's military service and was one of only a handful of attendees at the Fogelsons' private wedding in Santa Fe.[14] Wasson lived in a trailer van on the ranch in the 1940s. Eventually, the Fogelsons established a ranch foreman's residence and headquarters at Kozlowski's old trading post.[15] Jay Kirkpatrick, a local born less than a mile south of Los Trigos, replaced Wasson as foreman in 1954 and later became a managing partner in the ranch. The Fogelsons also hired a veterinarian, Melvin Hinderliter. Another local man, Gilbert Ortiz, began working as a ranch employee under Hinderliter in 1963 and also received a college scholarship from the Fogelsons. Later he was promoted to ranch manager and lived at the trading post. Ortiz developed an extensive knowledge of bovine genetics, which he learned from Hinderliter.[16]

The Fogelsons added to and changed the ranch infrastructure that remained from Tex Austin's ownership. They changed the path of the main ranch road near Glorieta Creek as the road drew near the main ranch house and installed a new bridge over the creek. A wooden mill diversion dam on the Pecos River and an accompanying diversion ditch probably was used through the 1950s for agricultural irrigation on the ranch. After the wooden dam washed out, they switched to using pumps. Remnants of irrigation (black plastic pipe and diversion ditches) are still evident.[17] To the east and south of the ranch foreman's quarters at Kozlowski's trading post, the ranch hands built pens and chutes, corrals, a shop, and storage buildings. In the outer pastures, they added loading and holding pens.[18] At some point, they dug two wells in the Middle pasture south of the road to the ranch house because it did not contain a surface water source for the cattle.[19]

Forked Lightning cattle did not mingle with the herds on the Forest Service lands. The ranch offered plenty of quality grazing land, and the Fogelsons wished to keep the pedigree lines clean.[20] Cattle grazed on the land surrounding the small state monument that encompassed the pueblo ruins, in the pastures between State Highway 63 and the Pecos River, and in fenced pastures on the east side of the Pecos River. Most pastures contained access to an arroyo that served as a water source for the animals. The ranch was divided into eleven designated pasture

areas, some of which were further subdivided at various times in the ranch's history (see Figure 30). The Greer Garson pasture (#6) had no water source and was not grazed after her white shorthorns left the ranch. The steeply sloped Orchard pasture (#1) was rarely used. Pastures used for regular rotation included the Monument pasture (#2), the Horse pasture (#3), Upper Pump pasture (#4), Pump pasture (#5), Windmill pasture (#7), Pajarito pasture (#8), Quintana pasture (#9), the "No Name" area (#10), and the West pasture (#11). When the Fogelsons donated land to create the national monument in 1965, they included land from the West and Monument pastures, thus reducing their original size.[21]

By 1953 the herd of Scottish shorthorns had grown to twenty, but the Fogelsons soon moved them to their Texas ranch or perhaps sold them to another Texas rancher who planned to cross them with white Brahmas to establish a new breed: "white short-horned Greers."[22] The Fogelsons quickly developed a new passion, however. In the late 1950s, they began their long-term involvement in the international experiment to expand and improve the lowland Santa Gertrudis cattle breed. In 1958 Buddy impulsively bought "Gee-Gee," a $10,000 Santa Gertrudis bull, from his friend Winthrop Rockefeller in Arkansas. The Santa Gertrudis breed, formally recognized by the U.S. Department of Agriculture in 1940, was developed at The King Ranch in south Texas—the first breed of beef cattle developed in the United States. After the hasty decision to purchase the sire, Fogelson consulted with Jay Kirkpatrick, who advised him to buy some heifers as well. Fogelson bought three and added thirty Santa Gertrudis cows the following summer, each purchased for an average price of $3,000. As the Santa Gertrudis operation grew, the Fogelsons sold their commercial Hereford cattle to provide more grazing pasture for the purebred livestock. By 1961 they owned seventy-five breeding age females. The Santa Gertrudis breed was noted for the ability to rapidly gain weight by converting food into muscle tissue at a faster pace than other breeds. Although still unusual in the West in the 1950s, the Fogelsons were not the first to export Santa Gertrudis cattle to the arid high county. Tweet Kimbell of the Cherokee Ranch in Douglas County, Colorado, stocked her ranch with the breed several years before the Fogelsons began their experiment in New Mexico.[23]

As year-round ranch manager, Kirkpatrick oversaw the herd's first year in the dry, high-altitude conditions of northern New Mexico. The experiment began in a period conducive to success. After many years of prolonged drought, the summer of 1959 was unusually wet, and the cows did well on the available forage, requiring no supplemental feeding. Although some were concerned that the cattle might suffer during the winter, the Santa Gertrudis fared well. The Fogelsons eventually stocked the entire ranch with about 300 head of the new breed. According to a former ranch employee, there was a five-or six-year hiatus in the early 1960s after the Fogelsons sold the horned Santa Gertrudis herd. During that time, caretaker Luther Hamby ran ten to fifteen head of Angus cattle to keep the ranch going. The small herd and sudden decrease in grazing pressure allowed encroachment of piñon-juniper in unused pastures. When the Fogelsons decided to start a new herd of Santa Gertrudis, the ranch staff undertook extensive piñon and juniper eradication to prepare the pastures for the herd's arrival.

The infill of piñon and juniper into pasture areas also may have been influenced by climatic fluctuations. Dramatic climatic variability from World War II through the early 1960s impacted the New Mexican environment. In the early 1940s, New Mexico experienced an El Niño period of abnormally high precipitation, lasting from 1940 to1941, which resulted in flooding, killing frosts during the summer that damaged crops, and a low number of fires throughout the state. A La Niña period immediately followed, and from 1942 to 1957 drought conditions ravaged the area. The 1950s was New Mexico's driest decade in 400 years.

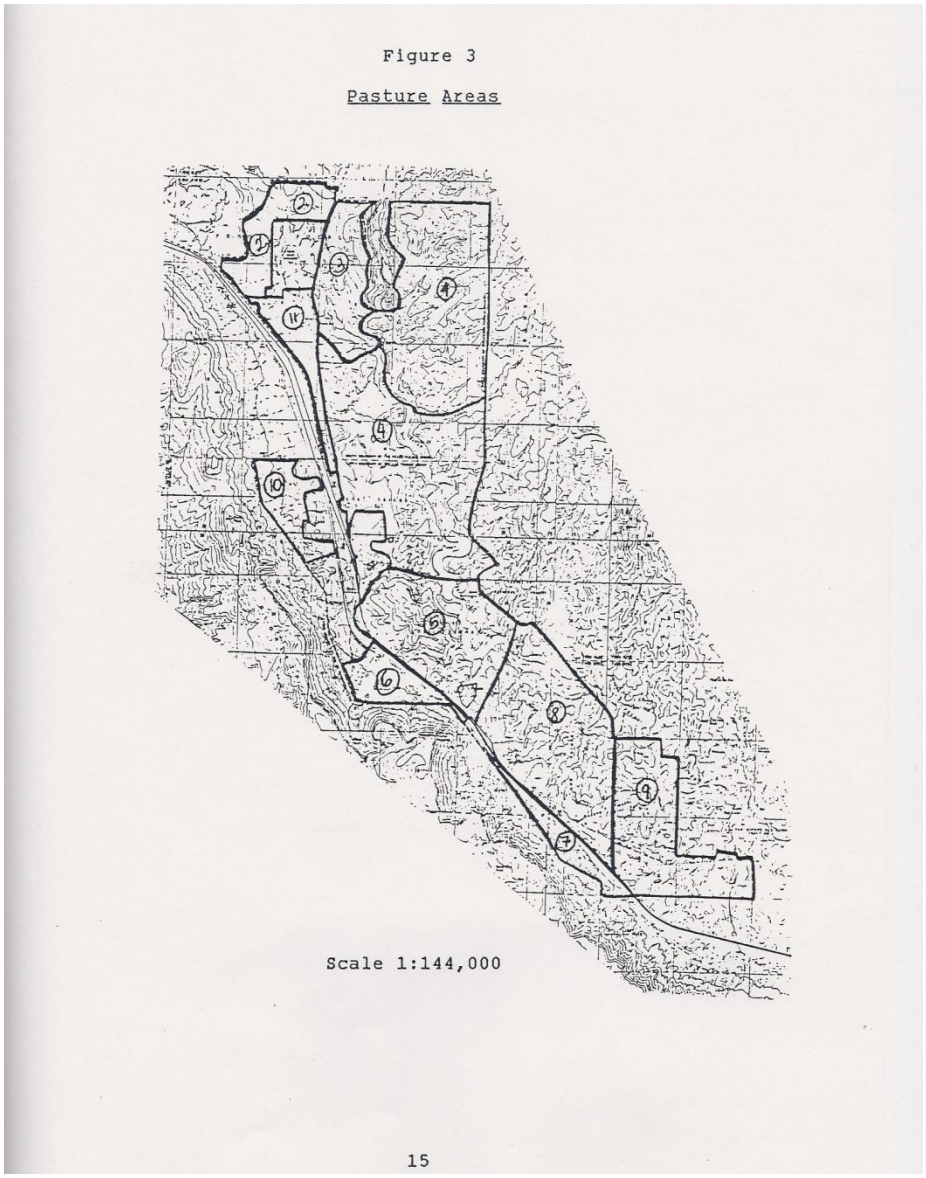

Figure 30. The eleven pasture areas used on the Forked Lightning Ranch. Source: Meszaros, "Vegetation and Land Use History of the Upper Pecos Area," Figure 3, 15.

1956 was the climax of the dry period—as much as sixty percent of the state's crops failed in that year alone. As surface irrigation in the region declined due to drought, well-drilling to access groundwater accelerated to compensate. One Glorieta well digger claimed he had already drilled more than 50 wells by 1950.[24] The drought affected not only agriculture but the livestock industry as well. As a result of the 1950s drought, range management scientists warned Southwestern stockmen that drought planning should take precedence over all other grassland management practices.

The most abundant type of vegetation community in the Pecos valley, piñon-juniper woodland was vulnerable to climate fluctuations. The wet years in the 1940s presented conditions favorable for piñon-juniper invasion in grazed grassland areas. Yet in the 1950s, severe drought conditions caused massive piñon and juniper die-offs in places such as the

Pajarito Plateau west of Santa Fe and the Sevilleta National Wildlife Refuge.[25] Similar conditions around Pecos probably limited piñon-juniper expansion during the drought years. But in general, episodic climate fluctuations over a number of decades, combined with continuing disturbance from livestock grazing, created conditions that altered the age structure and species composition of woodlands and accelerated piñon-juniper encroachment on grasslands.[26] The continued suppression of fire also affected piñon-juniper dynamics. Centuries of human activity radically affected plant communities, and that activity overlay a pattern of large-scale environmental change.

At the Forked Lightning Ranch, although the drought may have inhibited piñon-juniper encroachment to some extent, the ranch managers agreed that too many pastures were being overtaken by the trees. To achieve conversion to grassland, land managers in the Southwest developed mechanical tree removal techniques as early as the 1930s. The most popular method involved using bulldozers with a chain stretched between them to rip out trees. Aldo Leopold was an early critic of the practice—he believed that mechanical conversion ignored the complex relationship between grazing, fire, and encroachment. "Most of conservation is the manipulation of the plant succession, yet the term is seldom mentioned in conservation propaganda," he wrote.[27]

By the mid-1960s, ecologists better understood the role of fire and climatic change in scrub invasion, but until controlled burning methods emerged in the 1970s, mechanical removal was widely regarded as the most effective and safest method. Although burning removed a higher number of trees and allowed grasses to recover quickly, controlled burns were still uncommon. At Pecos the neighboring Forest Service, which controlled a vast amount of land in the valley, discouraged controlled burning. Despite developments in ecological science, many land managers did not yet understand the ecological causes of brush encroachment. When the Fogelsons cleared their pastures in the 1960s, they based their decision to use mechanical removal methods on the livestock industry's continued reliance on technological solutions.[28]

In 1962 during the hiatus from the Santa Gertrudis operation, the ranch hands began clearing piñon and juniper. They consulted with the Pecos District Office of the Soil Conservation Service, which offered a program in the 1950s and 1960s encouraging ranchers in the Southwest to increase grasslands for cattle forage.[29] One former Forked Lightning Ranch manager remembered using a chain dragged between two bulldozers to knock down the trees, but other recollections suggest the trees were removed with bulldozers alone. The recommended method included scraping the removed woody vegetation and some soil into windrows to expose cleared ground for reseeding. Existing forage plants could naturally revegetate the exposed ground, but studies indicated that artificial revegetation in the spring or summer with drilling or broadcast distribution of seeds on prepared seedbeds was a more effective and rapid method of reaching a desired level of productivity. The ranch hands usually burned the stockpiles of uprooted brush in the winter months when fire danger was low.[30] According to the 2002 cultural resources inventory, ranch managers cleared about twenty-five percent of the relatively flat land included within the present-day Pecos Unit boundary. That included most of the ranch's pastures west of the Pecos River, with the exception of the parcel just south of Kozlowski's trading post.[31] In the West Pasture, they cleared the top of the mesilla south of the ruins and several level areas above the slopes west of Glorieta Creek. The 1962 clearing operations also included the Monument pasture north of the ruins. Vegetation patterns on several formerly cleared pastures on the Los Trigos portion of the ranch continue to show evidence of windrows (Figure 32). [32]

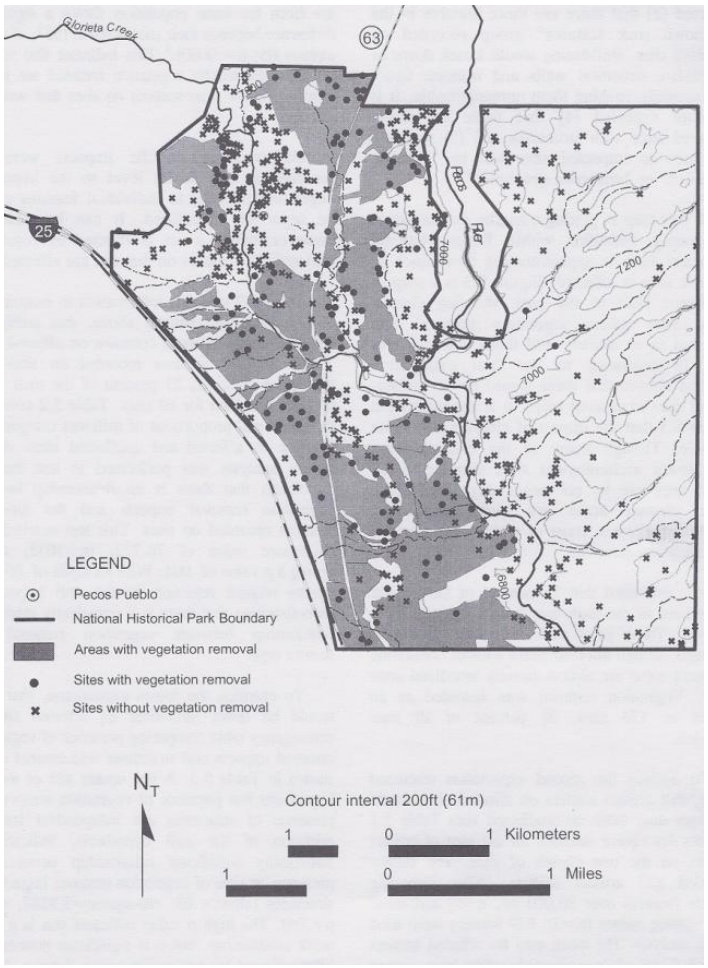

Figure 31. This map of the Pecos Unit indicates sites where vegetation removal impacted archaeological sites. The shaded area provides a general indication of the full extent of brush clearing on the northern half of the Forked Lightning Ranch over time. (Reprinted, by permission, from Head and Orcutt, *From Folsom to Fogelson,* 1:104.)

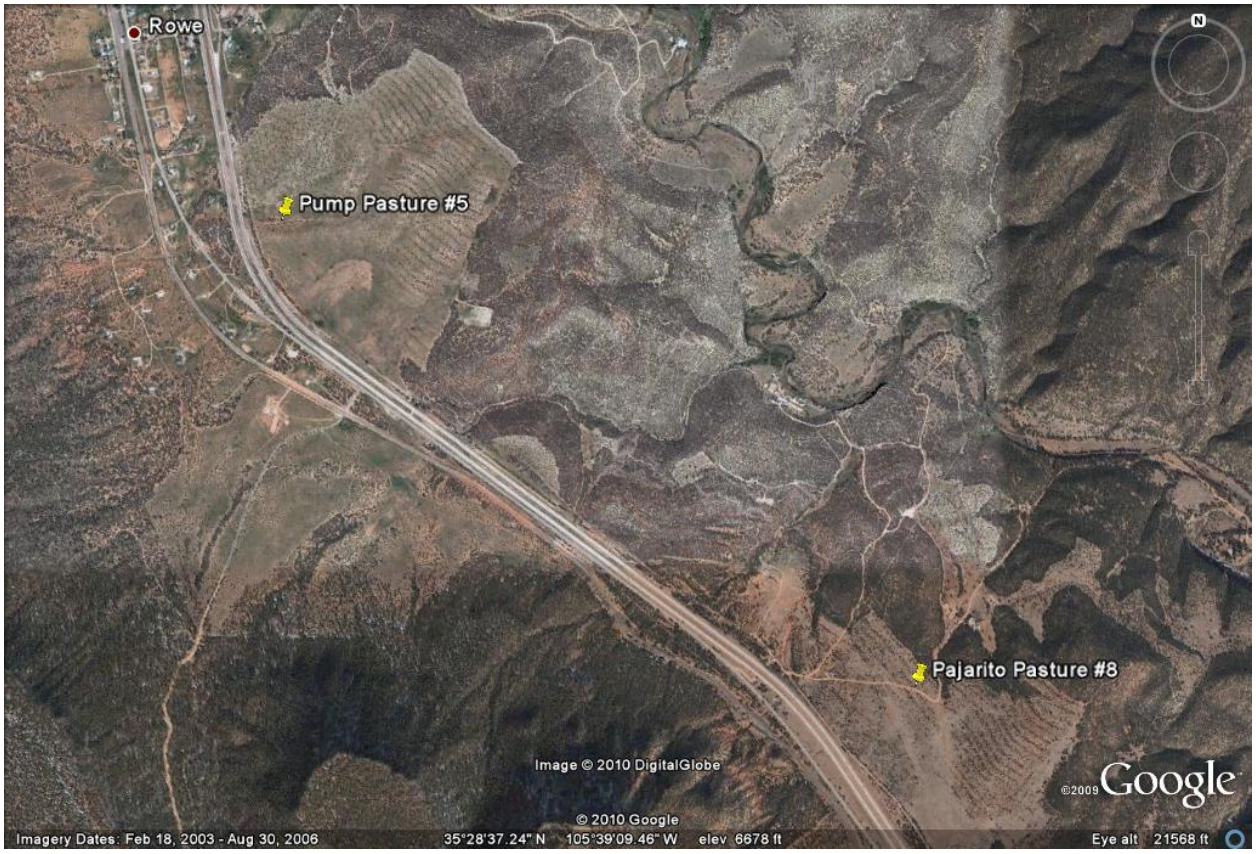

Figure 32. A satellite image from August 14, 2009, indicates windrow vegetation pattern on formerly cleared pastures #5 and #8 on the Los Trigos portion of the Forked Lightning Ranch.

Mechanical clearing was an imperfect method of removing trees. Although quick, chaining missed the shorter, younger trees, which quickly grew after removal of the upper stand. One article on the subject encouraged the combined method of removal, windrowing, and drilling and emphasized the importance of proper site selection for clearing, which included avoiding steep slopes and rocky soils. The article noted that by making these decisions land managers essentially delineated their land into "natural" habitat and "modified" areas of converted grassland.[33] When the Forked Lightning Ranch was in operation, grazing occurred continuously on the newly cleared areas, but in later years, when grazing ended, conditions were ideal for the germination of piñon and juniper. The faster growth and maturation rate of piñon as opposed to the one-seeded juniper may have led to a higher number of piñon in the ranch pastures. According to one estimate, by 1998 piñon-juniper encroachment and/or regrowth had replaced 200 acres of pasture out of a total of approximately 600 acres used in the 1970s.[34]

The effects of mechanical clearing, grazing, drought, and fire suppression acted together to change the landscape of the Forked Lightning Ranch over time. Although the severe drought that swept the region in the 1950s occurred independently of any human action, much of the variability in piñon and juniper cover in the valley arose due to human land use. The primary reason for clearing trees on the ranch in the 1960s was to maintain pasturage for the Santa Gertrudis. However, Buddy and Greer also wanted their ranch environment to be an attractive one. An article on piñon and juniper clearing suggested that "the resulting stands of grass

surrounded by untreated woodland probably have as much aesthetic value to residents and travelers as does the typical piñon-juniper scenery." Actively managing the ranch environment created a landscape that was practical yet also visually appealing.[35]

Figure 32. This Soil Conservation Service image documents an area of piñon-juniper encroachment on the Forked Lightning Ranch before mechanical removal in 1965. The SCS estimated 800 trees per acre in that particular area, with very few grasses present in the understory due to grazing. Source: PS40, Folder 7, Series 1 Photographs, Greer Garson Papers, Jerry Bywaters Special Collections, HAL.

"Everything from Stuffed Lobsters to Filet Mignon Was on the Menu"

The Fogelsons threw a lavish party at the Forked Lightning Ranch in August 1950 to celebrate the opening of Greer's film, *The Miniver Story*, sequel to the immensely popular *Mrs. Miniver.* The *Santa Fe New Mexican* related that "a magnificent buffet had been set up decorated with ice carvings and flowers and loaded with a rich assortment of foods. Everything from stuffed lobsters to filet mignon was on the menu. . . . [The] La Fonda orchestra played for dancing throughout the evening."[36] Even in his heyday at the ranch, Tex Austin never could have managed such a spread.

The lives of the Fogelsons, who kept other homes in Dallas, California, and New York, contrasted sharply with the lives of other residents of the Pecos valley. Although Tex Austin had not been dependent on the Pecos environment for every aspect of his livelihood, the Forked Lightning Ranch did support the cattle and horses he used in his rodeos. When the Fogelsons assumed ownership, the disconnect between the Pecos environment and the ranch owners' livelihoods deepened further. Greer was an actress and Buddy an oilman—neither depended on the Pecos valley to provide food or shelter. For locals who did rely on the resources of Pecos—particularly fire wood and land for grazing—the Fogelsons' ownership of the best land in the valley aroused resentment. To some Hispanos, the Fogelsons represented merely the latest in a long line of Anglos who had usurped the land of New Mexico. For the most part, the Fogelsons remained on good terms with their neighbors and supported many philanthropic causes, but

conflict and tension continued over the land and resources of the Pecos valley, as it had for centuries.

In some ways, the Fogelsons' management of the ranch fit the pattern of professionalization that had begun to influence resource management in the early 1900s—a reliance on scientific management and a conviction that trained professionals were the best stewards. At Pecos examples of this trend included Kidder's archaeological work at the ruins, the growing influence of federal agencies, and the influx of range, timber, and soil scientists into those agencies. As the Fogelsons turned their Santa Gertrudis operation into an intensively managed breeding program, they also relied on professional expertise and modern science for solutions.

In the mid-1960s, the Fogelsons re-stocked the ranch's recently improved pastures with a polled (hornless) herd of Santa Gertrudis cattle. The lack of horns made the cattle more suitable for feedlots and thus more appealing to potential buyers. The Fogelsons brought Kirkpatrick back to expand the breeding operation. They called their new registered bull "Moses" and used artificial insemination to improve the stock.[37] Artificial insemination had become popular in the dairy cattle industry in the 1940s. Cattle owners could manage the process easily with animals confined in barns. Using this technique for beef cattle that roamed across thousands of acres was challenging, but the separate pastures on the Forked Lightning Ranch allowed the employees to control, monitor, and separate the artificially inseminated animals with relative ease.[38] In 1964 in preparation for the new scientific breeding operation, the Fogelsons purchased an additional 31.27-acre lot located behind Adelo's store in the town of Pecos. The new pasture provided a separate holding area for the artificially inseminated cattle.[39] The process of using separate pastures to minimize vegetation damage and soil erosion and to separate the herd into smaller units echoed the Forest Service's grazing allotments and their attempts to manage grazing on public land.

A few locals also saw Fogelson's purchase of the acreage by Adelo's store in the same light as the Forest Service's earlier takeover of Hispano communal lands. Fogelson bought the acreage from Dr. Leslie Fitzgerald in 1964, and the transfer of another parcel of the Pecos Pueblo grant from one Anglo to another sparked some local resentment.[40] No other Pecos area ranches ran breeding operations, although current Park Service employee Eric Valencia claimed that the breed became popular with locals and some still keep them today. Like the Fogelsons, locals often kept cattle for other reasons besides economic ones—as a hobby and as a way of maintaining their heritage. But Hispanos approached the land on which they grazed their cattle with a collective mentality. Few could afford to own and maintain an extensive private ranch—they relied on the former common grazing pastures surrounding the Pecos valley, now controlled by the Forest Service.[41]

Figure 33. The Fogelsons replaced the horned Santa Gertrudis herd with a polled (hornless) herd in the mid-1960s. This undated photo must have been taken between 1959 and 1961-62, when they sold the horned cattle. Source: Photos binder, PNHP archives.

Figure 34. Ranch foreman Jay Kirkpatrick and Buddy Fogelson in the trading post complex, 1961. Source: "Forked Lightning Plans Larger Herd," *The Santa Gertrudis Journal,* September 1961, 13, "Tex Austin's Forked Lightning Ranch" folder, PNHP library.

Figure 35. This 1961 advertisement for the show herd demonstrates the ranch's connection to a larger promotional effort to bring the Santa Gertrudis breed to the arid high country. Source: "Forked Lightning Plans Larger Herd," *The Santa Gertrudis Journal,* September 1961, 24, "Tex Austin's Forked Lightning Ranch" folder, PNHP library.

The Forked Lightning operations required multiple fenced pastures for cattle rotation covering thousands of acres by the mid-1950s. Maintaining fencing on such large parcels of land was an ongoing project. In addition to securing the valuable cattle herds, fencing also inhibited trespass by locals, an ongoing problem for the ranch managers. Kirkpatrick described "wood hauling trespassers" who took advantage of weakened fencing sections to enter ranch property. Often, these security breaches occurred when the highway department, the railroad, and the utility companies entered the ranch to conduct maintenance and cut the fence line but did not properly repair it. In 1954 when the state widened Highway 63, the project required replacement of the ranch's fencing along the new road, as well as the addition of an underpass for access between the east and west portions of the ranch near the turnoff to the ruins.[42] In 1960 Kirkpatrick asked the Atchison, Topeka, & Santa Fe and Mountain States Telegraph & Telephone to install locking steel gates as a solution to the ongoing problem of maintenance personnel cutting ranch fences.[43]

For most of the Fogelson era, with the exception of the early 1960s, the ranch staff maintained about 300 head of cattle on 20,000 acres. They practiced limited rotation and put larger herds in areas with better grass cover. Available forage for a herd of that size depended on sufficient rainfall to support the native grasses in the ranch's pastures and canyons. The ranch hands fed the cattle supplementary alfalfa and hay in drier years.[44] Ranch hands also tried to minimize weeds. Locoweed and broom snakeweed were the most problematic exotic plants—ranch employees controlled both with spraying when they emerged in May. The north pastures bordered untreated neighboring pastures in the village and traditionally had the greatest amount of invasive exotics, particularly around the pueblo ruins.[45]A former employee explained that the ranch managers were able to minimize erosion and overgrazing by using pasture rotation. The staff of five or six employees divided up responsibility for the herd and closely observed the

range conditions on horseback. They used a stable of eight Appaloosa and Quarter horses to work the ranch and move cattle. The Fogelsons used the same horses for pleasure riding—Greer called her two favorite mounts "Kissing Time" and "Ho-Hum Silver."[46]

"Don't Fancy This Place Up"

Greer recalled that shortly after marrying Buddy, who affectionately called her "Rusty" because of her red hair, he teasingly warned her not to turn the Forked Lightning Ranch into a Hollywood socialite's mansion. "Don't fancy this place up, Rusty," Buddy said. Greer promised that instead she would "respect the local environmental harmonies."[47] The cattle operation was the most significant activity affecting the environment within and surrounding the Forked Lightning Ranch, but the aesthetic changes the Fogelsons made to the ranch also changed the environment. Although Greer and Buddy had discussed keeping things simple, their idea of simple reflected their shared notions about how their ranch fit into the cultural landscape of northern New Mexico. Under Greer's guiding hand, the ranch began to reflect a cohesive aesthetic brand that was based on a romanticized, invented tradition. Historian Chris Wilson describes that tradition as a mythic representation of northern New Mexico—a subjective invention of tricultural harmony created to attract tourists and promote a distinct regional identity. The ranch house that John Gaw Meem built for Tex Austin already reflected the Territorial Revival architectural style promoted by Santa Fe tourism boosters, a style that intermixed Pueblo and Spanish elements and obscured the reality of Anglo economic power and interests in the region.[48]

When the Fogelsons took over the Forked Lightning Ranch, they built on and perpetuated that myth even as they created a modern ranching landscape of pastures, fences, and prize-winning cattle. "The house was very plain and manly when I first saw it," Greer recalled. "Now, it's a little more Garson's style—nearly all white walls with brightly colored paintings and Indian rugs as accents."[49] In the 1950s the Fogelsons installed split-rail fencing along the highway and asked John Gaw Meem's firm to design a formal entrance of "adobe" (cinder block) posts and massive walls bearing the Forked Lightning brand at the Kozlowski's trading post entrance.[50] The Mandarin Orange paint used on the ranch house and fences (now faded to pink) and the Bismarck Blue trim and accents instantly identified Forked Lightning lands and property. The Fogelsons extended their romantic aesthetic vision into the Pecos village by donating the same paint to local residents for their homes and businesses.[51]

The cattle, known locally as "Fogelson's toys," were as much a part of the atmosphere for visitors as they were a business investment.[52] Buddy liked to show them off for guests. Like most modern Americans after World War II, the Fogelsons had no direct relationship with their food supply, despite their proximity to nature at their ranch retreat. While their Hispanic neighbors in the Upper Pecos valley continued to keep small kitchen gardens, cows, and other farm animals to supplement their purchased food supplies, the Fogelsons grew no food on their property. As in the Tex Austin era, ranch employees transported all food to the ranch by jeep from Santa Fe, and the Fogelsons' cooks traveled with the couple and hired locals to assist them while in residence at the ranch.[53] Ranch hands also helped to maintain the landscaping around the ranch house complex, a project that received Greer's focused attention. Because they did not need to grow vegetables or keep chickens, the Fogelsons enjoyed the luxury of a bluegrass lawn as well as ornamental trees and flowers planted around the ranch house and casita.

Figure 36. The Fogelsons' moved the main ranch entrance to the road near the trading post and constructed an "adobe" entrance gate painted in the ranch's signature colors. Undated. Source: PS40, Folder 2, Env. 2, Series 1 Photographs, Greer Garson Papers, Jerry Bywaters Special Collections, HAL.

Although the ranch did not produce food, Greer expressed interest in some of the more quaint Southwestern culinary traditions. She had a traditional horno oven installed in the yard in the 1950s, where local women taught her to bake bread. She also enjoyed hosting "chuckwagon" picnic lunches by the river on tables bedecked with blue denim cloths and red bandanna napkins. Guests hiked down steep concrete steps to the picnic area on the signposted "Niñas Trail," built just east of the ranch house in the 1960s.[54] In many respects, the Fogelsons' activities at the ranch seamlessly continued and expanded the inventions that Tex Austin had used so effectively to draw tourists to his dude ranch. The messier truth—a story of land use that also included unregulated resource extraction, soil erosion, water pollution, and struggle for survival and ownership of land—remained hidden behind this façade.

Activities at the Forked Lightning Ranch during the Fogelson era included a mix of serious business and picturesque leisure activities. Although Greer and Buddy demonstrated benevolent interest in local affairs, their activities and mindset revealed their cultural and economic distance from the local population. A natural actress, Greer enjoyed her "role" as mistress of the manor, and her opinions strongly influenced activities at the ranch. For example, she and Buddy prohibited hunting and trapping on their property. Unlike Tex Austin and his guests, who had hunted wild game on the ranch and in the national forest, the Fogelsons and their family and friends shot clay disks on the private skeet range they built northwest of the ranch house in 1955. They allowed only limited fishing from the Pecos River as well. They could afford this sentimental approach to nature more common to her peers in Hollywood than to their local neighbors in New Mexico, many of whom still hunted and fished to feed their families. As

Figure 37. The radio on the table provided a fitting soundtrack for Greer's modern version of a "chuckwagon" picnic by the Pecos River. Source: PS40, Folder 2, Envelope 2, Series 1 Photographs, Greer Garson Papers, Jerry Bywaters Special Collections, HAL.

a result, the ranch became a sanctuary for any wildlife that found favorable habitat conditions within the heavily grazed areas. Perhaps the predators discovered that game was plentiful. In a 1966 interview Greer fondly remembered a thrilling encounter with a "wolf"—probably a coyote or fox—on the dirt road to the ranch house after a night at the Santa Fe Opera.[55] In interviews with the cattle trade press, she boasted of her contribution to roundups, riding fence to check damage after flash floods, and herding wild horses, as well as her regular duties supervising the house staff—butler, maid, and cook. She collected and displayed Indian artifacts and rock specimens, and encouraged Buddy to support the state monument at the pueblo ruins, the arts in Santa Fe, and other charities.[56] Her connection to northern New Mexico, although enhanced by her dramatic skills, was very real. She felt New Mexico gave her a sense of continuity and peace—a sanctuary in a landscape still somewhat removed from modern America. "There is an almost mystical strength about New Mexico," Greer wrote. "The longer you stay it seems to be the center of the world and everything else peripheral."[57]

Greer came to the Pecos valley expecting to find the quaint country scenes she remembered from her childhood. Although the environment she encountered proved to be quite different, Greer was no less enamored of it. She and her husband had distinct ideas about what the landscape of the ranch should look like and how the land should be used. Their cattle operation entailed heavy grazing and an intensely managed landscape. Ranch managers manipulated the vegetation communities to provide pasturage and eliminate piñon and juniper. The Fogelsons also created a visual aesthetic on the ranch that reflected their romantic notions of

New Mexican history. Although many Pecos residents were friends with the Fogelsons and appreciated the help they gave to the community—in 1960 locals began an annual celebration for Greer's birthday—some locals resented the Fogelson's ownership of the ranch.[58] The numerous cases of trespass on ranch land arose from the opinion that the Fogelsons were asserting control over land that rightfully belonged to the Hispano residents who had lived in the valley for generations. The Fogelsons rested their claims on legal title, purchased with their ample supply of wealth. With that money, the Fogelsons turned the Forked Lightning Ranch into their ideal image of a Western vacation home and cattle operation.

"A Link to Bind the Past to the Present"

Intrigued by the Spanish and Indian history of New Mexico, Greer undoubtedly visited the Pecos Pueblo ruins numerous times and showed them off to visitors. When the Fogelsons arrived at the Forked Lightning Ranch, the ruins were still a small, neglected testimony to the nascent preservationist impulses in New Mexico. The Gross Kelly Company had deeded the ruins to Archbishop Albert T. Daeger of the Roman Catholic Archdiocese of Santa Fe in 1920. Throughout the Southwest in the early 1900s, people grew more concerned about protecting archaeological sites. This impetus arose from both the developing profession of archaeology, which brought attention to vandalism of ruins, and also the tourism industry, which promoted New Mexico's Indian and Spanish Colonial history and the protection of the visible artifacts of that history.

The Archbishop conveyed the 62.6 acres to the shared custody of the Museum of New Mexico, the University of New Mexico, and the School of American Research in 1921. On February 20, 1935 New Mexico designated the ruins a state monument.[59] Preservation, interpretation, and recreation became official management priorities during this period. Alfred Kidder continued his work at the site until 1929, which provided some ongoing supervisory presence at the ruins, but lack of a permanent, on-site caretaker and adequate funding meant the transition to a publicly managed resource did not immediately result in increased protection for the property. The monument existed as a fragile, unprotected island of ruins in the rapidly changing landscape of the Upper Pecos, busy with livestock production, logging, and a rural community struggling to make ends meet through the Depression, World War II, and the postwar years.

Pecos still remained a bit off the beaten path in the late 1930s and 1940s. After 1937 Route 66 connected Santa Rosa and Albuquerque directly, bypassing the original, roundabout "Santa Fe Loop" that included Pecos, Pigeon's Ranch, Glorieta, and Cañoncito. The state of New Mexico constructed Route 50 on the old Santa Fe Trail corridor in 1941, and visitors could reach the monument and recreational opportunities in the Santa Fe National Forest via Route 50 and Highway 63. Nearby, Tom Greer continued to operate Pigeon's Ranch as a roadside tourist attraction on Route 50. As traffic and residential development increased on that road, so did threats to the aging structures at Pigeon's Ranch and the archaeological remains of the Glorieta Battlefield. The realignment of US 85 in the 1950s and the subsequent construction of Interstate 25 in 1964 greatly reduced traffic in the vicinity of the Civil War site—and also reduced visitors to Tom Greer's tourist enterprise. He closed the site and sold it in 1971.[60]

Despite changes in the transportation infrastructure, the Pecos Pueblo ruins remained popular. The Museum of New Mexico staff planned to excavate and stabilize the ruins for public viewing in time for the Coronado Cuarto Centennial in 1940, which necessarily delayed additional facilities improvements and further archaeological excavations in the area. Historian

James Ivey characterized the work on the outer defensive wall and South Pueblo, church, and convento completed by the Museum for the Centennial celebration as rushed, poorly planned and poorly documented. Field supervisor Edwin N. Ferdon directed the School of American Research (SAR) in excavations and stabilization work for the Museum. The CCC men, staying in the camp by Glorieta, provided the labor for the work, which took place between 1938 and 1940. To make up for the time constraints, large crews of as many as thirty-five people worked on sections of the ruins. The project involved excavating, mapping, and stabilizing the northern portion of the South Pueblo, excavating and mapping the convento, and stabilizing the eighteenth-century church. "Huge quantities of dirt were hastily removed" in this process, yet by the mid-1960s the excavation work was indistinguishable from areas that had not been touched since the nineteenth century. The excavations, which disturbed the soil throughout the ruins, created ideal conditions for the growth of weeds.[61]

The circumstances of the Depression provided a temporary surfeit of workers for the state of New Mexico to undertake preservation work, but for the most part the state had little funding to devote to the monument. A similar situation existed across the country. A plethora of state and national monuments appeared following the passage of the 1906 Antiquities Act. Too often, though, no provisions were made to provide funding for the upkeep of the monuments.[62] Yet although the Pecos State Monument may have remained ignored and underfunded, the landscape around the ruins was being integrated into the modern age. An entire infrastructure connected the Pecos region to the nation. Pecos had always been connected to other places, but much as the railroad had intensified those connections in the 1880s, developments in the 1940s and 1950s brought Pecos into a modern technological system that wove the country together. Improvements included paved roads, new highways, electricity, natural gas lines, and telephone lines.[63] Butane Gas Company of New Mexico, Pecos Light and Power Company, Benson Electric Company, and Pecos Telephone Company serviced local residents immediately following the war, including Hispanic residents who could afford modernizing upgrades. For example, the Valencia Ranch received electricity in the hacienda in 1951.[64]

The Museum of New Mexico, which oversaw operations at the monument, understood that the facilities at the Pecos State Monument would have to be modernized, too, but the necessary funding remained unavailable. State officials had authorized the construction of caretaker quarters using Works Progress Administration labor after the Cuarto Centennial, in June 1941. F.W. King became the first caretaker of the Pecos ruins, but the well drilled on the monument grounds became contaminated. A second drilling attempt failed and funding ran out before the Museum of New Mexico was able to complete the well. King left, and the lack of potable water and limited funding prevented the hiring of a new caretaker. Pecos State Monument was left untended between 1941 and 1950, leaving the site vulnerable to relic hunters, vandals, and careless tourists.[65]

Despite ongoing financial hardship, by 1950 the Museum managed to scrape together enough money to enlarge the caretaker's residence, construct a small exhibit space, finish the well, and install telephone service and a single phase power line along the south side of the entrance road.[66] The Museum still could not provide a reasonable operating budget and adequate pay for a full-time employee throughout most of the decade. F.W. King returned as caretaker but left precipitously while the residence was still undergoing renovation, requiring the Museum to contract with a local Pecos Power and Light employee, Lewis Stinett, who occupied the house temporarily as a substitute caretaker. A break-in when Stinett was away caused Mrs. Stinett and

Figure 38. In the immediate postwar years, the managers of the Pecos State Monument attempted to attract visitors but imposed few regulations on activity at the site. This photo is captioned "Duck pond at Pecos Ruins, September 25, 1951." Photo by Henry Dendahl, Museum of New Mexico, photo #45403. Source: Photo binder in PNHP archives.

a friend to flee while the "marauders" stole mattresses and tools, thus ending their brief tenure at the monument. O.M. Clark took the post in 1951 and remained until 1956.

When Clark assumed his post, state and federal agencies throughout the country were paying more attention to facilitating visitor use and interpretation at historic sites. The National Park Service pioneered the field of interpretation and visitor services. By the postwar era, people were visiting state parks and historic sites, national forests, and other heritage areas in greater numbers and expected to find facilities and services similar to what they experienced in national parks. In 1952 Clark oversaw the completion of a marked, self-guided trail around the ruins under the supervision of archaeologist Stanley Stubbs from the Laboratory of Anthropology in Santa Fe. "As a result," Clark wrote to Boaz Long, director of the Museum of New Mexico, "visitors now spend about three times as much time on the grounds as before."[67] Additional improvements included a picnic area and comfort station for visitors, although Clark felt they were too close to the caretaker's residence. Picnic groups, including locals, continued to use the monument grounds for social gatherings, which required frequent garbage-hauling trips to the city dumping grounds four miles from the monument.[68]

Despite greater attention from caretakers, the ruins were in poor condition and increased visitor access only worsened the problems. The Museum did not establish regular visitation hours, which would have enabled better control of visitors at the ruins. Most of the caretaker's time was spent battling weeds, livestock, and other trespassers who threatened the archaeological treasures. The Museum paid a crew of locals each year to clear the trails and ruins of invasive weeds by hand. Although the annual celebration of the Feast of Nuestra Señora de los Ángeles de Porciúncula had been held at the ruins since the last Pecos residents moved to Jemez in 1838, it moved to St. Anthony's Parish in the village in 1953 because the ruins were so unstable.[69] After the hasty excavations and stabilization of the ruins in the late 1930s, minimal

archaeological work or preventive maintenance occurred until 1956 when Stanley Stubbs and Bruce Ellis excavated a kiva and portions of the Lost Church, originally constructed by Fray Pedro Zambrano Ortiz in 1617.[70] In 1963 the Museum allowed the Highway Department to create a road into the Glorieta Creek arroyo and remove 21,117 tons of sand and gravel from an existing gravel pit. Excavation at the same borrow pit in 1954 had produced material for the widening of Highway 63.[71]

Struggling to provide adequate services and protection at the monument, the Museum of New Mexico began searching for an entity that could take over the management of the ruins. As early as 1947 the Museum had offered Pecos to the Park Service. The Park Service declined—in the immediate aftermath of the war, the agency was also suffering from decreased funding, personnel shortages, and a backlog of maintenance.[72] In the first years of the twentieth century, when Bandelier and Kidder were conducting the first studies and excavations of the ruins, the chances for admitting Pecos into the National Park Service system would have been slim. Many Park Service officials and conservationists believed that national park status should be reserved for land with outstanding scenic features such as Yellowstone or Glacier. National monuments, created under the auspices of the 1906 Antiquities Act, became the catch-all category that absorbed sites of historic interest, unique natural features, and areas where presidential proclamation provided a surer means of preservation than the uncertain route of Congressional designation. The monuments, managed by a range of agencies, generally were neglected and considered inferior to national parks.[73]

This attitude began to change in the 1930s. Horace Albright, first Assistant Director and then Director of the Park Service, felt that the National Park Service was the agency best equipped to manage sites protecting the nation's history. The Park Service already administered sites rich with historic detail. Albright hired Verne Chatelain as historian for the Division of Education, and Chatelain promoted the idea that the Park Service should develop a comprehensive interpretive program that offered visitors a sweeping view of the nation's history. At Colonial National Monument in the east, Chatelain argued that the historic landscape and buildings, in conjunction with an interpretive program, would "serve as a link to bind the past to the present and be a guide and an inspiration to the future." Other monuments could tell the same stories. Besides seeing the interpretive potential of the national monuments, Albright also wanted to broaden the Park Service's domain into areas untouched by its perennial rival, the Forest Service. In 1933 Albright's hopes were fulfilled when Franklin Roosevelt signed Executive Order 6166, which transferred all national monuments to the Park Service. The influx of workers and funding that the Park Service received during the Depression allowed it to develop facilities at the national monuments, and the lines between a national monument and a national park began to blur. By the 1950s, the addition of Pecos Pueblo to the national park system was a realistic possibility.[74]

In 1958 Robert Utley, a staff historian for the National Park Service based in the Southwest, officially recommended Pecos for eventual inclusion in the national park system. The Museum renewed negotiation with the Park Service for the transfer of the monument.[75] Despite becoming involved in some decisions, the Park Service did not immediately take over management of the ruins—the approval and planning process took eight years. In the meantime, the Museum hired Vivian O'Neal as the new caretaker for the monument while they awaited the transition. O'Neal was an archaeology enthusiast with a longstanding interest in Pecos, and she became the ruins' guardian angel. A conscientious manager, O'Neal was determined to preserve Pecos as an important piece of history, and her husband, Edwin, contributed a great deal of time,

labor, and ingenuity as well.[76] Unfortunately, when the state planners heard that negotiations were underway with the Park Service for the transfer, the state cut off funding for the monument on June 30, 1961. Luckily, the O'Neals were financially secure and continued to live at the monument, occasionally using their own funds to purchase supplies.

The O'Neals served their detail in relative isolation, but they developed and maintained a cordial relationship with the Fogelsons and the ranch hands at the Forked Lightning Ranch.[77] Ranch foreman Jay Kirkpatrick provided occasional advice, such as the suggestion to nurture the growth of grasses around the ruins to crowd out damaging exotic weeds. O'Neal frequently mentioned the constant battle against invasives in her reports to the Museum. Beginning in the winter of 1959, the O'Neals destroyed the weeds around the ruins on the mesilla with a weed burner after the danger of setting off an uncontrolled fire passed. They also mowed the weeds down in the summer months. On October 1, 1960, O'Neal wrote, "We are starting on the weeds and have much of the convento cleared. In the spring they grow so high and strong they can hardly be cleared out. Water stands in the rooms and I only try to keep the front ones cleared but in the fall they can be burned out and it is a relief to see them disappear."[78] Like her predecessors, control of the weeds and livestock that threatened the pueblo and mission ruins was O'Neal's primary concern. For example, she boasted of annual rattle snake kills, presumably because they threatened visitor safety.[79]

O'Neal and earlier caretakers also strove to keep grazing animals away from the ruins. One result of that decision was substantial infill of piñon and juniper, particularly on the western slope of the mesilla below the ruins. The sixty-four-acre state monument was fenced at some point in the 1940s or 1950s, but locals could easily let down that fencing to drive horses, goats, sheep, and cattle onto the property to graze.[80] Some livestock entered on their own through openings in the inadequate fencing. Caretaker F.W. King reported that a herd of four to six horses regularly entered the tract.[81] O'Neal and her husband must have encountered recurring livestock trespassers around the ruins as well. Goat trespass was a particular problem, perhaps because the fence kept larger livestock out but the smaller goats could slip through. The continued grazing as well as increased tourist traffic and active maintenance kept several areas around the ruins clear of woody vegetation. Geographer Donald Burtchin, in a study of aerial photos taken of the monument, notes that 1958 photos depict several barren areas: the top of the mesilla, a few fields, and the historic grassland area east of the monument.[82] The Museum's focus on preservation and protection of the ruins from grazing thus created informal, widely varying zones of vegetation management.

On August 9, 1962 the Secretary of the Interior finally granted his approval for the eventual designation of Pecos as a national monument. The O'Neals provided basic security and maintenance during the planning phase until official designation occurred in 1965. The Park Service officially assumed management on January 1, 1966.[83] The delay of three-and-a-half years from approval to formal inclusion was the result of required planning as well as negotiations to determine whether the site would be added by presidential proclamation or Congressional authorization.[84] In the meantime, the monument acres received only the attention the O'Neals could provide in their informal, interim capacity.

The initial efforts to preserve the pueblo and mission ruins on the mesilla had been halting and piecemeal. Although many people agreed that the ruins were a landscape that deserved to be protected, the site did not possess the scenic grandeur of Yellowstone or Yosemite. The State of New Mexico struggled to manage the ruins and gratefully seized the opportunity of turning the monument over to the Park Service. By the 1930s the Park Service

was developing a broader mission that incorporated not only places of scenic beauty but areas of historical interest as well. As historian Hal Rothman describes it, the Park Service became "guardians of a cultural heritage." When the Park Service took over management of the Pecos Monument in 1965, they intended to develop the site in accordance with prevailing philosophies of providing facilities for visitors and interpreting the history of the monument. This mission would require intensive management of the Pecos landscape.

"A Management Showplace"

When Buddy gave Greer a section of the Forked Lightning Ranch as her own, Greer jokingly wrote that "I considered [stocking the pasture with] a white hippopotamus—but my husband wired a firm 'no.'" Instead, Greer's herd of Scottish white shorthorns grazed in El Rancho Blanco. Greers shorthorns, and later "Moses," "Gee-Gee," and the other Santa Gertrudis cattle, never wandered into the adjacent Santa Fe National Forest. But many other residents of Pecos continued to rely on the national forest for grazing land. By the mid-twentieth century, the national forests of New Mexico bore the permanent effects of overgrazing. Perennial grasses were far less abundant than weedy annuals; compacted, bare soils lacked plant material to maintain temperature and slow evaporation; and arroyos had become widespread. The Forest Service, despite decades of effort, still faced a situation of deteriorating conditions in New Mexico's forests.

Aldo Leopold, the influential Forest Service ranger and conservationist, had already experienced his epiphany that human management interfered with nature's ability to self-regulate healthy complexes of flora and fauna. He understood that eliminating predator populations was disastrous, and the loss was akin to the irreversible process of erosion, which had caused the soil to "slip down the Rio Grande in the night."[85] His *Sand County Almanac* (1949) proposed a land ethic based on preservation of the biotic community rather than on the production of commodities, but popular support and a fundamental shift in resource management policies based on his work and others would not emerge for nearly two decades.

The Forest Service's attempts to limit overgrazing and timber cutting had stalled during World War I and a similar situation occurred during World War II. While a few members of the scientific and conservation communities, such as Leopold, predicted the eventual incorporation of ecological management principles, the war effort and postwar economic expansion continued to create conditions that demanded heavy use. Many foresters joined the military effort, leaving the national forests understaffed during the war years. Hispanos using the forests for subsistence grazing began to convert their herds from sheep to cattle as available labor became scarce.[86] Accelerated timber demand during the war created economic conditions that encouraged the Forest Service to intensify logging, with an attendant increase in access roads and truck traffic. Intensive grazing and timber cutting coincided with the onset of the severe drought in the 1950s.

The end of the war did not bring a corresponding decrease in forest use. Because the Santa Fe National Forest was overstocked by 100 percent in the late 1950s, the Forest Service continued to pursue stock reduction by cutting the number of permit holders and permits in the following decade, to the dismay of stockmen who had failed in their attempt to convince the Eisenhower administration to privatize public grazing lands. Through their Congressional contingents, western stockmen called for investigations of the new federal grazing policies and advocated federal legislation to limit future policy changes. Public backlash against the industry's political maneuvers created an opportunity for ecologists to influence Forest Service policy. The new programs included extensive efforts to increase rangeland capacity with

improved distribution of water sources and the provision of rest periods for grazing areas. Growing concern over the forests' ecological health coincided with the postwar environmental movement and an increase in recreational use of national forests. A powerful constituency developed with the clout to influence Forest Service policy. The 1960 Multiple Use-Sustained Yield Act directed the Forest Service to give equal consideration to range, timber, water, wildlife, fish, and outdoor recreation.[87]

Timber sales continued to expand after the war as a result of a housing boom and efforts to boost the gross national product. Many politicians tied the economic health of the nation to the success of the U.S. in the Cold War, thus encouraging continued resource extraction in national forests. The Forest Service managed its holdings with the optimistic prediction that sustained yield and restoration were easily managed for the public good with technological and scientific solutions. Yet official decisions continued to emphasize use and resource extraction over conservation and rehabilitation. Short-sighted appropriations for resource conservation exacerbated the problem. The national forests in New Mexico provided sixty-five percent of the state's sawtimber, forty percent of cordwood, and sixty-seven percent of timber land in 1945, and these numbers remained high after the war. Although environmentalists stressed the forests' value as watersheds and wildlife habitat, economic concerns often triumphed.[88] The agency began to implement reforestation and reseeding efforts as a result of intensive resource use.

Reforestation brought its own perils. Incidents of insect damage in the forests increased in the 1950s as the intensively managed stands developed the ecological vulnerabilities of a monoculture crop. In New Mexico, pine bark beetles caused epidemic losses of ponderosa pine. Spruce budworm decimated mixed conifer and spruce-fir forests. Most Forest Service officials viewed the episodes as a loss of valuable timber and used salvage harvesting and pesticides to try and control the outbreaks. The agency undertook large-scale DDT treatments in 1950, 1953-56, 1958, and 1962. When Rachel Carson published *Silent Spring* in 1962, the book raised public awareness of the dangers of hydrocarbon-based pesticides and other chemicals. Despite such warnings, the Forest Service continued to use a combination of selective cutting and aerial spraying of DDT from 1963 until DDT was banned on January 1, 1973. The scientific community, however, responded to Carson's warning and began developing biological controls for use in integrated pest management, which minimized chemical use and targeted individual species at certain times in the growing cycle. The Forest Service did not readily adopt such methods, which required greater time and oversight, because the agency continued to operate from an industrial forestry mindset that emphasized market value of timber over forest health.[89]

The timber industry remained an important part of the local economy, but grazing continued to have the most detrimental consequences for the Pecos environment. As it had throughout its history, the Forest Service relied on scientific disciplines to provide the solutions to degraded forest conditions. The science of range management, in particular, influenced agency policies. In 1948 professionals in range science and forestry formed the Society for Range Management in hopes of creating standards and objectives that would address deteriorating range conditions around the country. Within the Forest Service, these professionals recommended livestock reduction policies. These efforts often angered stockmen and their political representatives. As the Forest Service grew more insistent about range improvement measures, scientific management standards and inspections became more common in the 1950s. On the allotments surrounding Pecos, the result was improved, if imperfect, range conditions. A 1947 grazing inspection report estimated that grazing in the entire Santa Fe National Forest exceeded capacity by seventy-three percent. Range inspectors estimated capacity at 37,000 cow-

Figure 39. This 1955 aerial photo of the Panchuela Cabin, about seven miles east of Pecos village, was taken from a DG-2 aircraft spraying insecticide to fight spruce budworm on the Santa Fe National Forest. Note the cleared grazing pasture. Photo by C.C. Ketcham, FS#479333. Source: Santa Fe National Forest Historical Photographs, SWRO.

months for the forest, while actual use was 64,000 cow-months. The Forest Service instituted new range management policies in the 1950s, but in 1964 a similar report noted that livestock remained overstocked by twenty percent, a problem exacerbated by lack of funds to improve and revegetate the range.[90]

The Springs allotment on Glorieta (Rowe) Mesa, bordering the west side of the Pecos Pueblo grant, was in two separate allotments, "Ortiz Springs" and "Padre Springs," until 1968 (see Figure 21). Because the mesa has no perennial water source, ephemeral springs provided the only water for grazing animals. In the 1950s the few small ranching operations that shared common grazing lands on the mesa failed due to drought and changing economic conditions, but other locals continued to use the mesa under Forest Service permits. Ortiz Springs, the southern half of the modern-day allotment, was named after the only water source at its northern end. The grasslands were mostly blue grama, invaded by rabbitbrush (*Chrysothamnus spp*.) and broom snakeweed (*Gutierrezia sarothrae*) in heavily used areas. The Forest Service considered it slightly overstocked in the early 1960s. There were three sheep camps to the east of the springs until Manuel Varela y Gonzales converted his operation from sheep to cattle and transferred to the Valle Grande Allotment in 1964.[91]

That same year the Forest Service created three separate pastures with new stock tanks and fences on Glorieta Mesa to create a rotation system that allowed rest and noxious plant eradication on one pasture each year. Forest Supervisor J. L. Perry hoped to turn the allotment

Figure 40. A summer cattle roundup on Glorieta Mesa in 1957 included Charles Madrid's herd of 58 cattle, about half of his allotment of 113. The Lower Pecos District granted 50 permits that year, which resulted in 900 cattle grazing on a total of 150,000 acres. Photo by D.O. Todd, FS #483010. Source: Santa Fe National Forest Historical Photographs, SWRO.

into a "management showplace." The new fencing allowed the Forest Service to proceed with mechanical removal of piñon and juniper, which temporarily increased the size of available grazing land. Unlike the intensive management related to mechanical removal on the Forked Lightning Ranch, the Forest Service's chaining and bulldozing operation on Glorieta Mesa included no additional treatment, and so the piñon-juniper quickly recovered and increased in density. Soil erosion was an ongoing issue on the mesa just as it was in the Colonias allotment across the valley. The wagon and cow trails that had been converted to roads in the valley bottoms were the primary contributors to soil loss and surface runoff. Records show a gully plugging project in 1963 using brush and small wooden check dams.[92]

The Glorieta Allotment, bordering the Pecos Grant on the northwest, was in the worst range condition of the three allotments bordering the monument and Forked Lightning Ranch in the 1960s. The limited forage areas suffered from overgrazing and trespass. Conditions were so bad that the Forest Service considered ending permitted grazing altogether and reserving it for wildlife habitat and recreational use. Over the next fifteen years, the agency initiated range forage improvement projects involving a variety of mechanical piñon-juniper overstory removal techniques. More than 15,000 acres were treated, and the Forest Service declared excellent results in terms of increased forage production.[93] On both national forest lands and private

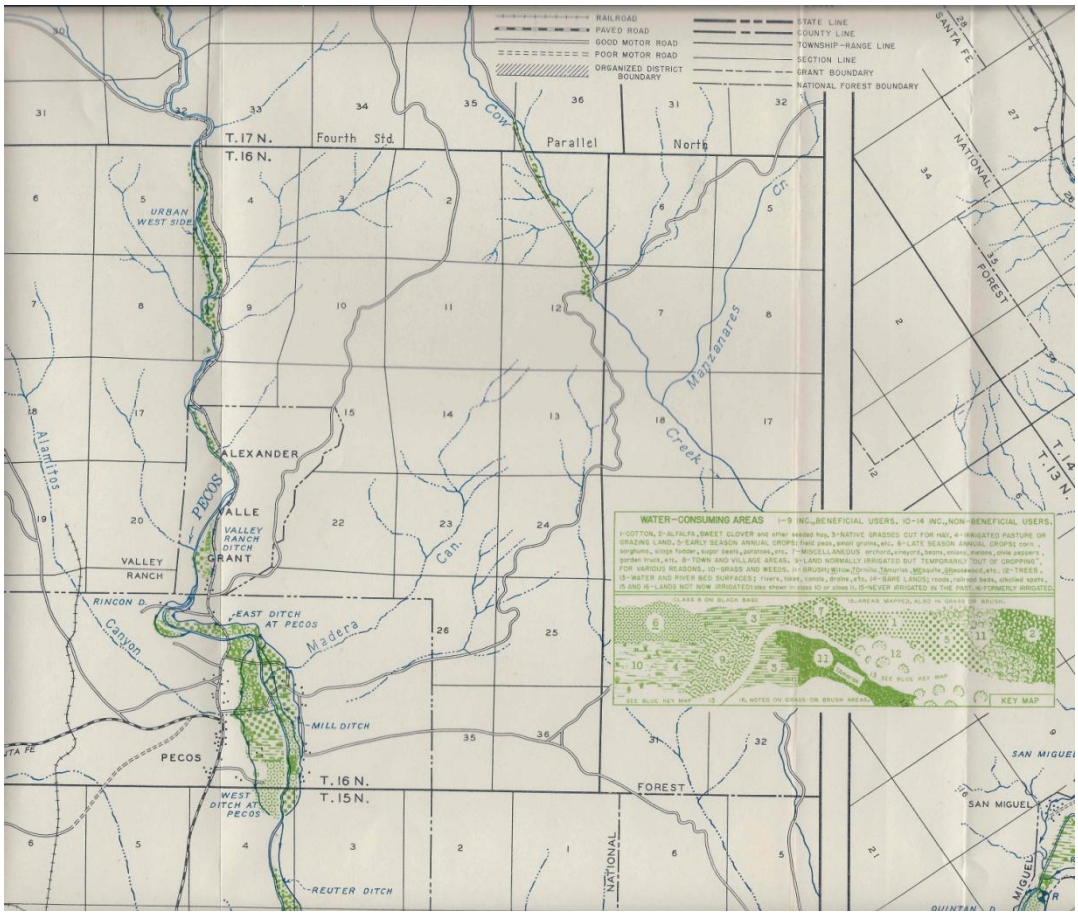

Figure 41. The Valley Ranch Unit base map, 1940. The acequia-fed areas in Pecos village and on the Valley Ranch contained a mix of annual crops, and irrigated pasture. The larger map indicates that several additional irrigated areas below Tererro grew beans, peppers, melons, onions, and orchard trees. Source: Natural Resources Planning Board, Pecos River Joint Investigation, 1942.

property, range managers with science on their side seemed to be winning the battle with woody brush.

The intensive human activity along the riparian corridors in the national forests, including grazing and timber cutting, influenced the water supply and quality in the Pecos River watershed. By the time the United States entered World War II, the entire watershed from Northern New Mexico to Texas was used for farming and grazing. Agriculture in the Pecos village and farther north along the canyon remained at a subsistence level: corn, oats, barley, vine peas, and pinto beans required little irrigation, and some corn required no irrigation at all. A 1940 National Resources Planning Board map shows the types of water-consuming activities in the ciénega of the Pecos River and along the river up to Cowles (Figure 41). In general, the map indicates a combination of early and late season annuals planted in the acequia-fed fields in the village (between the West ditch, west of the river, and the Mill ditch, east of the river), as well as "grass and weeds" and hay.[94] Some of the small subsistence farming operations shown on this map did not survive the drought, which began just a few years later. The residents of Pecos were not the only ones who depended on water from the Pecos River. Large livestock operations downstream required three to four irrigations for their alfalfa crops.[95]

Although most use of the Upper Basin was divided into small, individually owned tracts of land, the density of farming activity and the locations of the tracts right on the stream banks,

combined with overuse of adjacent range lands, filled the water with sediment and increased the possibility of damaging floods , particularly during summer rains. Water quality analysis at the Irvin Ranch gauging station nine miles north of the Pecos village indicated a slight increase in the volume of sediment in the water between the headwaters and Anton Chico. But concentrations increased dramatically downstream—when the water reached central New Mexico it was high enough in dissolved solids to make it undesirable for irrigation. The erosion upstream created downstream floods and buildup of silt in irrigation reservoirs. The Alamogordo and McMillian reservoirs in southern New Mexico both lost capacity due to the high levels of sediment.[96] The declining water quality also affected the native fish population, already suffering from the introduction of exotic species such as rainbow and brook trout. The native trout species in the Middle Rio Grande Basin had been "decimated, or even extirpated" by the 1940s, and the fish in the Pecos River fared no better.[97]

In 1949 New Mexico and Texas signed the Pecos River Compact, which provided for equitable apportionment of water between the two states and created more regulatory pressure for upstream management. However, many early management decisions were short-sighted or carried unanticipated consequences. The Forest Service experimented with watershed management techniques—primarily intensive forest management practices, including clearcutting—to increase streamflow yield as water demand grew and regional water supply considerations emerged.[98] Additionally, the Soil Conservation Service (SCS) planted trees, including non-native species, in the Santa Fe National Forest to reduce erosion in the early 1940s. A list of species the SCS planted near Holman in the northeastern part of the national forest included box elder, honey locust, black locust, Russian olive, and wild plum, among others.[99] Russian olive (*Elaeagnus angustifolia)* proved to be particularly invasive—by 1960, it was a major component of the riparian woodland understory on the Middle Rio Grande, and presumably increasingly common on the Pecos.[100]

Stakeholders concerned with the management of the Pecos River watershed began to call for "good forestry practices, control of forest fires, and better cultural methods on upland farms," and underscored the growth of the livestock industry after 1880 as the major culprit of watershed damage. The authors of the 1942 Pecos River Joint Investigation report recommended reducing livestock in all parts of the watershed except portions of the Santa Fe and Lincoln National Forests, with reductions averaging from fifteen to fifty percent. The highest amounts of silt entered the river in the Pecos headwaters area, so the report proposed acquisition of 10,000 acres held by larger commercial interests within the national forest. This acreage would be made available to those with limited numbers of livestock kept for subsistence or cultural purposes.[101]

Grazing, logging, and mining had long incurred the most substantial impacts on the Pecos River and its watershed. But people also used the forests for recreation. Elliott Barker had hunted in the Pecos high country, miners from Tererro fished in the river, and visitors at Tex Austin's dude ranch enjoyed horseback riding through the forests. In the postwar era, as the numbers of tourists grew due to increased affluence and leisure time, the recreational use of the national forests also increased. In the Santa Fe National Forest, visitor numbers grew steadily from 78,200 in 1947 to 1.2 million in 1964.[102] Recreational users traveled to the Santa Fe National Forest from other states, but most were urban dwellers seeking escape from New Mexico's rapidly growing cities. In addition to the impact of trail and campground development, human-caused fires and erosion increased, and utilities created rights-of way to bring services to rural areas. Tailings from three Tererro mine dump sites served as a convenient source of fill material for new construction projects throughout the Upper Pecos watershed, including the

Lisboa Springs Hatchery, Forest Service campgrounds, state campgrounds, roads, and private projects.[103] As with clearcutting and the introduction of non-native species, using the tailings had unforeseen consequences, leading to soil contamination that was not discovered until decades later.

In their attempts to improve forest health while maintaining economic opportunities, the Forest Service continued to come into conflict with locals over the use and control of the land. In the land grant communities of the Santa Fe National Forest, subsistence logging for fuel wood and other needs did not coexist easily with the growth of timber sales and the demands of timber companies to have large areas of the forests opened to cutting. Geographer David Correia argues that the agency took a paternalistic approach to the problem by encouraging locals to take wage labor jobs in the timber harvests. Forest Service officials often argued that traditional Hispanic forest uses created unsustainable environmental conditions while ignoring the fact that Anglo timber and grazing operations were equally to blame.[104] Even as more people became involved in influencing forest management, Hispanos were often left out. During the debate over livestock reduction in the 1950s, the Forest Service hardly mentioned the subsistence permit holders. Although the Forest Service did try to keep forest resources available to locals, its emphasis on scientific management often excluded area residents from participating in management decisions in a meaningful way.

Timber cutting and grazing in the Pecos valley during the postwar era was not on the same scale as the intensive resource extraction operations of the late 1800s and early 1900s, but the cumulative effects of those operations still lingered. The postwar economy provided new opportunities for the timber and grazing industries, and the Forest Service wrestled with the problem of accommodating such uses while still improving forest conditions. Many Hispanos who continued to gather fuel wood and piñon nuts in the forests and relied on the forests for grazing land felt the professional bureaucracy of the Forest Service excluded their input. At the same time, recreational users of the forests and many environmental groups criticized the Forest Service for its management practices. The resources of the Pecos valley continued to inspire conflict over who would control them. Although Moses and Gee-Gee may not have grazed on national forest land, the Pecos River that wound through the Forked Lightning Ranch carried with it the effects of environmental damage upstream.

As the inhabitants of the Pecos valley emerged from the Depression, they encountered both opportunities and challenges in the war and postwar years. The expansion of the military presence in New Mexico during the twentieth century was not unlike the influx of U.S. Army troops and their forts after the Mexican War. Both periods brought more Anglos to the state, increased production and the economic infrastructure, and demanded more resources from the environment. The Cold War defense industry brought jobs to the region, but the postwar economic recovery also encouraged increased exploitation of the resources in the Pecos region, particularly timber and grazing land. Overgrazed land, changing vegetation communities, and silt filled rivers testified to decades of resource exploitation. A trend that had begun in the late nineteenth century—people relating to the Pecos valley primarily through leisure and recreation—also continued to affect the Pecos environment and grew even stronger in the postwar era. The Fogelsons exemplified the trend—they transformed the Forked Lightning Ranch into their ideal vacation retreat that reflected a mythic understanding of the past. As the tourism industry grew after the war, many other people came to Pecos to fish, hike, and explore the Pecos Pueblo ruins. The designation of the Pecos Pueblo ruins as a national monument in 1965 and its transfer to the National Park Service brought another powerful federal bureaucracy

to the region. Like its predecessor, the Forest Service, the Park Service would become an important agent of change as it created a new cultural landscape in the Pecos valley.

Chapter Nine

Restoring and Managing the Landscape, 1965-2000

The car pulled onto the side of the state highway, its tires crunching through the gravel. The family of tourists inside immediately spilled out, eager to stretch their legs after a long drive on the interstate. The children scrambled down the bank to reach the Pecos River, splashing their hands in the cool water and collecting smooth pebbles. Their father eyed the water, thinking longingly of the fishing rod stored in the trunk. His wife exclaimed over the sweet smell of piñon and juniper that permeated the air. She opened a brochure they had picked up entitled "New Mexico: Where the Fun Never Sets." Inside, the brochure claimed that New Mexico was "exciting and beautiful, as action-packed as a cowboy movie, as new as tomorrow's technology, as old as geology; a combination of cosmopolitan chic and Western expansiveness, warm days and cool nights, the industrial vigor of the modern Southwest and the restfulness of a mountain trout stream."[1]

When this tourist family—we will call them the Davidsons and consider them typical of many who traveled through the Pecos valley in the late twentieth century—arrived in the Pecos valley, they encountered an environment still in the midst of change. Their brochure hinted at many of the changes. Growing urban areas and technology that intensified and quickened Pecos's connections to other regions modernized the environment of the Pecos valley. Yet people continued to find romantic, primitive values in the landscape. The "restfulness" and "expansiveness" referred to in the brochure, the hints of a mythologized Wild West—the tourism industry emphasized these attributes and capitalized on New Mexico's history much as it had throughout the twentieth century.

When this family visited Pecos in the 1970s,the National Park Service managed the pueblo ruins site as a national monument and was struggling to build a a visitor center within the monument boundary. The Fogelsons continued to breed Santa Gertrudis cattle on the Forked Lightning Ranch surrounding the Park Service site. Tom Greer no longer operated Pigeon's Ranch as a tourist attraction, but the old adobe building was still there, a landmark for those few who knew the history of the Battle of Glorieta Pass. Now Highway 50 ran directly adjacent to the structure, and people drove past it at high speed while commuting to jobs in Santa Fe. Development crept from Santa Fe towards Pecos. A new conference center at Glorieta Pass hosted hundreds of people each year. The Forest Service and Park Service instituted new programs to reintroduce fire, clear piñon and juniper, and eliminate exotic species. The family of tourists, who stayed in the valley only a few days, were unaware of these changes. They viewed the mission ruins, ate in one of the small restaurants in Pecos, and fished in the river, enjoying a relaxed and rustic experience. The tourists may have believed Pecos was hardly changed from the days of the Santa Fe Trail, but the landscape reflected new cultural influences, as it had throughout its history. Many of those new influences emphasized attempts at preservation and restoration, yet these efforts to reverse or reduce change still required actions that affected the environment and created new cultural landscapes in the valley.

Pecos: 1965-2000

In the last decades of the twentieth century, the Upper Pecos valley supported a growing tourism and recreation industry but also retained traces of each preceding historic period on the landscape. When the National Park Service assumed stewardship of Pecos National Monument

in 1965, the agency's primary objectives were protection of the ruins and the creation of an interpretation and access plan for visitors. With the Park Service's acquisition in 1990 of the Forked Lightning Ranch and two parcels of land connected to the 1862 Battle of Glorieta Pass, the agency's responsibilities broadened. Under Park Service management, years of extractive use gave way to regulated management and restoration of the environment. Native trees and grasses returned and wildlife populations recovered. The creation of Pecos National Historical Park also granted the Park Service the opportunity to narrate the whole story of human activity in the valley, from the time of the first human settlements to the urban development of the late twentieth century.

Many of the narratives embodied in the park continued to influence the Pecos valley. Control of the land still engendered conflict and dispute. Federal agencies, in particular the Forest Service and the Park Service, managed a high percentage of the land in the valley, and their management decisions sometimes provoked controversy. The Hispanic and Hispano-Indian descendents of the first wave of European settlers maintained a strong cultural connection to the land. In the 1960s during the nationwide civil rights movement, Hispanos in northern New Mexico began agitating for the return of their old communal lands. Descendants of the Pecos, particularly those at Jemez Pueblo, strove to maintain ties to their ancestral homeland as well. Other people, often from distant regions, sought to buy and develop land in the valley, angering those who wanted to protect and preserve the environment. Diverse cultures continued to meet at Pecos and find their own meanings in the landscape of the valley.

The preservation of land in the Pecos valley allowed for the idealization of the valley's environment. Wilderness areas in the national forest, the pueblo ruins in Pecos National Historical Park, the Forked Lightning Ranch house surrounded by piñon and juniper—these landscapes became increasingly important islands of retreat and reflection for locals and visitors seeking a reminder of the region's "simpler" past. Federal agencies and private landholders often engaged in related forms of preservation work. Whether protecting wilderness, preserving historic landscapes, or creating romantic private retreats, people tried to maintain the landscape in its most ideal form. Often, these attempts at preservation ignored or tried to erase much of the valley's history.

People may have yearned for a simpler past, yet their activities occurred in a rapidly modernizing economic context that often had immediate impacts on the environment at Pecos. A network of highways followed the ancient trade and travel routes that had passed through the region, connecting Pecos to the growing urban centers of the West. The construction of Interstate 25 both connected and divided communities, provided an opening for invasive species to spread, and disrupted sensitive riparian zones through the extraction of gravel and sand for fill material. New residential developments crept closer to Pecos as Santa Fe expanded. Residential and commercial development, in conjunction with the legacy of previous decades of mining, grazing, and logging, affected water quality. The physical effects of many decades of transformation and conflict contrasted sharply with romanticized notions of an untouched landscape.

In the last decades of the twentieth century a growing number of environmental restoration efforts, combined with protective regulatory oversight, slowed, arrested, and in some cases reversed the decline of grassland, forest, and riparian areas in the region. Managers tried to approach the land through new ecological principles, stressing the importance of natural processes, disturbances, and complex communities of flora and fauna. Federal agencies were able to influence the condition of the Pecos environment because they controlled a large portion of the land in the region. In the Pecos River watershed alone, the Forest Service managed 81.5

percent and the Park Service a further 1.8 percent. Although many initiatives focused on restoration, federal land management still introduced new disturbances and created a new cultural landscape in the Pecos valley.

As a new millennium approached, Pecos remained a crossroads based on its physical geography and the confluence of Indian, Hispanic, and Anglo cultural elements and land use patterns. The major circulation routes established more than five hundred years before stayed in place although the speed of travel and mode of transportation changed radically. The river corridors were still the vital link to survival for human and animal populations even as new housing developments in the village on the north and northwest boundaries of the park and the modern highway network tested the resiliency and capacity of the watershed. People continued to alter the landscape, but had different visions based on their cultural perspectives. Many sought to preserve and restore certain landscapes such as Pecos National Historical Park or the Pecos Wilderness, created by an act of Congress in 1964. These areas were meant to represent or return to earlier periods, yet people drew on current philosophies of ecology and preservation to manage the environment. Much as it had been throughout the twentieth century, the Pecos valley was shaped by modern influences even as people searched the landscape for evidence of an oft romanticized past.

"Conceived in Harmony"

After a picnic lunch by the Pecos River, the Davidsons decided to investigate the pueblo ruins at the national monument. Their brochures said that the monument was "one of the principal archaeological treasures of the Southwest," and the family was eager to see it for themselves.[2] They may have been slightly disappointed in the facilities at the monument. They had just come south from Yellowstone, after all, which sported new visitor centers with extensive interpretive exhibits. At Pecos there were only a few aging exhibits, created when it was a state monument, and some picnic tables under the trees. Still, the family enjoyed walking the trail among the ruins and imaging Coronado riding up to the pueblo, the sun glinting off his armor.

In the 1970s Pecos National Monument had been a part of the national park system for only a few years—Congress had established it as a unit on June 28, 1965. The Fogelsons had donated an additional 278.7 acres of the Forked Lightning Ranch surrounding the original state monument boundary, bringing the total acreage of the monument to 341.3 acres. [3] The Park Service tried to install visitor facilities quickly, but many obstacles stood in its way. Pecos entered the system near the conclusion of the Park Service's Mission 66 program— a response to the tremendous increase in postwar tourism that created a pressing need for new visitor facilities at national parks. Mission 66 provided funding for extensive improvements to existing sites as well as support for expansion of the national park system. Pecos was one of fourteen new parks added to the Park Service in 1965, and one of eighty-seven units—historical parks, seashores, recreation areas, and larger national parks—added between 1961 and 1972 during the heyday of Mission 66.

Many Mission 66 projects, particularly in the "crown jewel" parks such as Yellowstone or Yosemite, aroused controversy. Environmentalists and wilderness advocates accused the Park Service of over-developing the national parks, recklessly building more roads and facilities to improve visitor access at the expense of the parks' wilderness qualities. The modernistic designs used by architects for Mission 66 construction also upset those who preferred the older style of rustic architecture so prevalent in the parks. How much infrastructure development was

appropriate to national parks and what form that development should take became an increasingly troubling question for Park Service officials. In addition, environmentalists urged the Park Service to prioritize scientific management principles that served the protection of natural resources rather than privileging tourism and recreation.[4] As the environmental movement gained nationwide public support, new laws, such as the 1969 National Environmental Policy Act (NEPA), began affecting Park Service management. A growing historic preservation community also succeeded in passing laws, particularly the 1966 National Historic Preservation Act (NHPA), that Park Service officials had to consider when they made management decisions. Although Pecos escaped most of the Mission 66 controversy, the tensions inherent in the program and the new management culture of the Park Service in the postwar era still affected development and management at the national monument.

Upon taking control of the monument, the Park Service determined priorities for interpretation and development at the site. In his initial assessment of the Pecos ruins, Park Service historian Robert Utley emphasized the period of Spanish colonial contact and settlement. The story provided "an opportunity to savor the gentle, hospitable setting of the upper Pecos Valley that influenced the ancient people to choose it as a site for their pueblo." His interpretation reflected the mid-twentieth century consensus that contact between Europeans and Native Americans was primarily a tale of the "faith, courage, and purpose that motivated the early Spanish Christianizers."[5] When the Park Service finalized the first Master Plan for Pecos in 1965, the major interpretive themes encompassed "the life story of the Pueblo Indian" and "his conquest, revolt, and subordination by the Spaniards." Minor themes included the decline and fall of the pueblo, early archaeological excavations, the Santa Fe Trail, and the history of the site as a monument. Plans for thematic interpretation, excavation, and ruins stabilization evolved throughout the first decade of Park Service stewardship at the site as the agency gathered more information about the history of the area and the extent of archaeological resources. Jean Pinkley's 1967 discovery of the massive church built under the ministry of Fray Juárez was one of the most important archaeological finds.[6]

The dual mission of the Park Service required preservation of resources while simultaneously improving visitor access and maintaining adequate infrastructure. Unrestricted human access to the ruins had been a preservation issue at Pecos for many years. By 1962 the state monument received 14,000 visitors annually, mostly from out-of-state, with as many as 350 in a single day.[7] The Museum of New Mexico had installed basic visitor facilities near the southeast corner of the ruins, including a superintendent's residence, maintenance shed, checking station with exhibits, parking area, picnic site, and pit toilets.[8] The Park Service immediately began designing and planning new facilities. A visitor center was the first priority, but the Park Service also wanted to build designated staff housing and maintenance facilities, located out of sight of the ruins, and an expanded "day use" picnic area.[9]

Although parks had featured museums and information centers before Mission 66, park planners developed the concept of the full-service visitor center during the program and soon it was considered a necessity for every park. The new visitor centers employed modern, minimalist architectural features and materials to facilitate a controlled flow of visitors through interior spaces without drawing attention to the building design itself. Some of the new visitor centers, such as the one located in Beaver Meadows in Rocky Mountain National Park, were considered tasteful constructions in harmony with the landscape. Others, particularly the Jackson Lake Lodge at Grand Teton National Park, were derided for being too modernist and departing from rustic designs of earlier eras. With so much attention focused on park architecture, Pecos

officials approached their new visitor center carefully. The Washington office, the San Francisco Service Center (and later the Denver Service Center), the Southwest Region, and the Superintendent at Pecos, Thomas F. Giles (1966-1978), all cooperated on the design. In 1971 Buddy Fogelson offered $600,000 in matching funds for the new visitor center. According to Superintendent Giles, Fogelson "made it clear that he liked to see things move with efficiency and dispatch—so that's what I tried to do." Giles soon discovered, however, that even at a small site like Pecos, this "golden opportunity" to develop a state-of-the-art visitor center and other needed services was subject to political negotiations and disagreements about the design concept—all taking place in the charged post-Mission 66 atmosphere.[10]

Architect Bill Lumpkin's original visitor center design placed the facility on the east rim of the mesilla, in full view of the ruins, and incorporated indigenous building materials in the ubiquitous Spanish-Pueblo Revival style. As at many other Park Service sites, the Pecos visitor center was originally intended to provide an all-weather interpretive experience for those who might not wish to venture out onto the ruins trail on cold, windy days.[11] Early plans favored visitor access over concerns about impact and reflected a long history in the Park Service of accommodating tourists. The design directive hoped to encourage visitors to explore the ruins by enticing them with a carefully managed series of views as they approached the monument by vehicle from various directions. The ruins were the central component of those views, but the first master plan also included "interesting scenery" in the statement of significance. One document stated,

> "Distant views of the great church ruin from approach highways will introduce Pecos to the visitor. He will lose sight of the ruins as he enters the National Monument and pulls into the parking area under the east scarp of the Visitor Center mesilla. A ramp brings him to the rim of the mesilla, whence he looks across a swale to the Pecos Ruins mesilla—getting a splendid, panoramic, impact view of the entire ruins complex . . . During his short walk to the Visitor Center, this fine prospect remains in view. This is an esthetic factor of great significance, reinforced by the striking background of looming mesas and far-off mountains; it is an interpretive factor, too—giving an awe-inspiring concept of the expanse of the ruins; and it is a lure to all visitors to get out to the ruins and explore them—a motivation that could be instilled in no better way."[12]

The process for approving the design moved swiftly until a group of Park Service reviewers refused to support the plans because they felt the Master Plan and required environmental impact statement had been rushed and might violate NEPA and Section 106 of the NHPA. They also worried that the pseudo-historic design violated the Service's new, modernistic design paradigm that, in part, was meant to ensure that tourists would not confuse the visitor center with an historic building. Park Service officials continued to debate the location and size of the visitor center as well, and considered off-monument sites in the village or on one of the interstate exchanges, on the mesilla, on the smaller mesilla (mesita) east of the ruins, in the grassy meadow east of the pueblo, and in the trees east of the meadow.[13]

At an impasse, the Denver Service Center hired another architect, Tony Predock, to develop an alternative plan with a modernistic design incorporating solar technology.[14] Public reaction to that design, including the Fogelsons', was predictably unfavorable compared to the original Spanish-Pueblo Revival design. The stalled planning process greatly frustrated Superintendent Giles, who felt "the original intent, direction, and momentum of the Pecos project

has been perverted and destroyed." He warned that Fogelson was threatening to pull his support for the project. "I think we have lost Fogelson and his donations," he wrote. "These are two different things. Money might be provided through federal sources; but we can't buy good will from our only next-door neighbor. In the long run, that loss might be a greater one. It makes me sick."[15] Indeed, Fogelson had fully expected to use his considerable influence to foster a locally managed and contracted project, and he had supported the use of solar-assisted heating from the beginning. He remarked to the Southwest Regional Director, "I'm in the energy business myself; if the government doesn't start moving on this soon it will be too late!"[16]

Solar energy was in abundance at Pecos, but water was not. Aridity had always been the limiting factor during the entire span of human settlement in the valley, and the Park Service operated within the same constraints. The visitor center and areas for housing, maintenance, and picnicking required a new well and water system with submersible pumps and pressure tanks. The planners were unsure about the effect of groundwater withdrawal on the recharge area. They also considered the potential effects of a new sewage system on vegetation types and quantity and surface water quality.[17] To conserve water, the original visitor center design incorporated the use of runoff from the parking lot pavement and visitor center roof to encourage re-introduced native species of trees and shrubs to grow around the developed areas.[18] The Park Service hoped the visitor center would provide an example to the community of good environmental management and "tie present day environmental concerns to the 700-year human history of Pecos."[19] With the assistance of modern technology, the Park Service staff strove to recognize the limits of the environment.

Although frustrated with the lengthy planning process, the Fogelsons maintained their support for the project, and by 1975 all of the decision-makers had agreed on a simple adobe structure utilizing solar panels. The building was to be located on the north side of the mesilla. Planners felt the design was "conceived in harmony with traditional materials and forms . . . sympathetic with the site, terrain, and historic influences at Pecos," as well as "compatible with, but not imitative of, the architecture of the people who built pueblos and churches here."[20] But the process was further delayed when the Advisory Council on Historic Preservation requested an in-depth comparative study of twelve potential visitor center sites. By 1976, the Park Service was responding to public feedback about some of the unpopular Mission 66 buildings and had moved towards limiting visual impact on the historic scene. A view of the ruins from within the visitor center was no longer considered essential. Giles's successor, Superintendent John Bezy, signed the final recommendation for an unobtrusive location below and to the east of the rock escarpment of the mesita, which screened the building from the ruins and provided adequate sun exposure for a passive solar design.[21] The delay and timing of the site selection, during which preservation interests within the Park Service gathered strength, thus determined how visitors experienced the landscape and ruins in the following decades.

The choice of Spanish-Pueblo Revival architecture for the visitor center situated the building comfortably within the aesthetics of the Forked Lightning Ranch. Like the Fogelsons, the Park Service initially proscribed to the view of New Mexico as a landscape that had remained unchanged for hundreds of years. In his assessment of the site, park historian Frank Wilson provided only a superficial description of broader landscape changes since the Spanish mission era. "The mountains and rivers are still here, the trees may be growing a little closer to the ruins mesa," he wrote. "The ruts of the Santa Fe Trail are close by and the arroyo where the domestic water came from is still a short distance to the west. The many trails that must have led to the church are now covered over with grass. All is tranquil."[22]

The Park Service hoped to revive just enough evidence of the former pueblo community to keep it alive in the public imagination and connect it to occupied pueblos elsewhere in the region, while still protecting the archaeological resources at the site. In addition to rehabilitation of the existing restored kiva, the national monument staff planned to restore entrances in the North Pueblo, outline the plaza and parts of the exterior walls of the quadrangle, expose terraced walls and a portal area, and restore the Campo Santo at the Mission. These projects would allow the visitor to "reconstruct in his imagination the living Mission and the living Pueblo." Despite the desire to transport visitors to the past, Park Service interpretive planning in the Mission 66 era relied on the latest technological devices. The Pecos plans called for intrusive additions to the site, such as "strategically placed exhibits and message repeaters," although those installations never occurred.[23] More appropriately for the site, Frank Wilson suggested the rehabilitation of the mission's rain-fed kitchen garden near the cemetery. The staff planted the garden with vegetables the Spanish introduced to the area "to show a material contribution made by the priests to the Indian."[24] The Park Service staff completed this project in 1968-69 and maintained it irregularly over the next two decades. In 1991 park staff installed a new drip irrigation system and planted a mix of European and native edible plants, including five varieties of ancient beans, five chiles, Spanish melons, Santo Domingo squash, a dozen or so modern vegetable varieties, and two beds of herbs.[25]

Although some interpretive projects and the visitor center finally came to fruition, the new housing and maintenance facilities did not. In 1974 the Fogelsons donated another 23.5 acres to the national monument in two separate parcels, including a 3.5-acre site northeast of the ruins along Highway 63, which the Park Service initially reserved for a residential and maintenance area.[26] Although it did not construct the facilities, the Park Service installed fencing on the small strip of cleared pasture to keep out grazing cattle. The other 19.99-acre parcel of land on the southwest corner of the monument boundary had been part of the Forked Lightning Ranch's West Pasture, which the ranch staff had cleared with bulldozers at least once in the early 1960s. Cattle grazed the parcel and accessed its stock tank until the Park Service installed fencing after the acquisition, although Park Service records state that the area was not overgrazed. The parcel also contained the exposed Forked Lightning ruins, which the Park Service backfilled. A planned hiking trail to the site was never completed.[27]

By the early 1980s, the Fogelsons had spent more than thirty summers in Pecos, and they continued to support the installation of a visitor center. Unhappy with the long delay, the couple interacted less frequently with the Park Service, but their unswerving dedication to the visitor center project impressed the monument staff. The long-awaited groundbreaking for the visitor center took place on August 7, 1983, and the Park Service dedicated the completed visitor center on August 2, 1987. Buddy Fogelson could not attend the dedication of his namesake building—coincidentally, he was hospitalized that same morning and died four months later in Dallas at the age of eighty-seven. The visitor center became a tribute to his memory for his surviving widow and their family and friends. Greer proudly showed off the new visitor center during her remaining years on the ranch and narrated the introductory film for the park. Greer also asked her friend Ricardo Montalban to visit from Los Angeles and narrate the Spanish-language version of the film. "[The Fogelsons] had a goal, a dream, a vision," remarked Superintendent John Bezy. "It was a personal commitment of the most significant kind. . . . The Rockefellers are responsible for the Grand Tetons. The Pecos National Monument is because of the Fogelsons."[28]

The Park Service assumed management of Pecos near the conclusion of its Mission 66 development program. Although some aspects of the program, such as visitor centers, became an integral part of a national park experience, Mission 66 also caused controversy and contention. Park Service officials struggled to reconcile the construction of new facilities with fears that parks were becoming overdeveloped. The modernist architecture initially favored by Mission 66 planners met with an unfavorable reception. At Pecos, officials grappled with how to develop the site appropriately. Initially, designs for the visitor center located it in full view of the ruins and contemplated using a modernist design. Ultimately, officials decided on a more discreet location and architecture that copied the prevailing design for all of New Mexico's tourist industry buildings. The choice reflected the new pressures against park development and also tourists' desire to find a romanticized landscape on their journeys to the Southwest.

"These Are Our Lands"

After leaving the monument, the Davidsons started off for Santa Fe, reading about the capital city's tricultural heritage in their brochures. One pamphlet briefly discussed the Hispanic settlers and their land grants, stating that "great land holdings were sold with the coming of the Yankee traders," and opining that "the native people of Santa Fe are quietly proud of their heritage, always courteous, dignified and well-mannered. Fortified by a strong religious faith, they now take their positions in the economic contest for survival with the same solid philosophy that has sustained them through 300 years of exploration, cattle raising and agriculture."[29] The brochure glossed over the complicated and bitter legacy of land alienation felt by some members of both the Hispano and Pueblo communities.

Tourists came to New Mexico looking for things they believed had been lost in the disorienting swirl of modern life—peace, rusticity, a simple life. Hispano residents of New Mexico also sought something that had been lost—their control of the old Spanish land grants. In the 1960s a group of *valientes* (militants) known as *Alianza Federal de Mercedes* (Federal Land Grant Alliance) contested the unscrupulous transfer of Spanish land grant titles to U.S. interests. Members of the Alianza drew on a tradition of resistance that stretched back to the Treaty of Guadalupe Hidalgo. *Corridos*, historic ballads, were passed down as oral tradition through generations and provided testimony of a history of lost rights dating back to 1848, as well as moments of resistance such as San Miguel County's short-lived *Gorras Blancas* (White Caps) alliance in the late 1800s. The Alianza also occurred in the context of the Civil Rights Movement. Like their African-Americans and Native American counterparts, Hispanic-American veterans returned from overseas service in World War II with new expectations about rising above minority status. The Civil Rights Movement opened opportunities for ethnic groups to expose a long history of discrimination and prejudice. Alianza founder Reies Tijerina "prospected" for new members in villages around the state and was in Pecos and Rowe in the late 1950s, where he attracted followers. In one impassioned speech, Tijerina shouted, "They took your land and gave you powdered milk, took your grazing and gave you Smoky the Bear, took your language and gave you lies in theirs. There are 1,715 land grants in the United States, and we will get them back."[30]

Supporters of the Alianza not only contested issues of land control but also how that land was being used. Many protested when the Forest Service tightened restrictions on free-use subsistence grazing permits, which permit holders perceived as a threat to maintaining their ancestral way of life. The Forest Service policy reflected the agency's belief that the decline of subsistence practices meant that the grazing animals were essentially family pets kept for their

traditional, symbolic value. The agency determined that the land degradation around village settlements was too high a price to pay for cultural preservation.[31] Hispanic livestock owners, however, viewed the former land grant grazing commons as their birthright. The Forest Service policy privileged for-profit graziers and benefited commercial cattle operations.

While the Pecos area experienced nothing like the civil disobedience and violence associated with the Alianza that occurred in the Carson National Forest and the courthouse raid in Tierra Amarilla, tensions surrounding grazing and private versus communal property were higher than usual during the 1960s. In Pecos the Forest Service eventually eliminated free-use permits on some allotments. On the Colonias allotment east of the village, free-use permits had long been more common than grazing under paid permit. Because of this long period of traditional forest use, trespass grazing was a persistent management issue before and after the reduction of free-use permits.[32] Only three free-use permits were issued in 1969, and by 1980 they were completely phased out. The allotment was marginal grazing land even for permitted animals—it contained only 445 acres suitable for grazing out of more than 20,000 total acres. The range condition report in 1969 described open grasslands containing blue grama (*Boutelous gracilis*), galleta (*Hilaria iamesii*), and western wheatgrass (*Agropyron smithii*) invaded by piñon, juniper, cholla cactus, snakeweed, and sleepy grass. After many decades of heavy use, the dense stands of piñon-juniper covering most of the allotment contained very little herbaceous understory for grazing. [33]

The land showed the effects of decades of grazing, but many people continued to depend on its resources. Although there were penalties associated with trespass on Forest Service lands, many locals took their chances. On the Colonias allotment, the Forked Lightning property provided a boundary west of the forest, but trespass was inevitable from the east because no fencing separated private lands from the allotment. The Forest Service range mangers believed that local cultural beliefs were the biggest challenge to resource protection. "Adjoining private land owners seem to feel that this area is theirs to use as they see fit, because they have historically done so," one report noted.[34] Although rangeland health improved, cutbacks in herd size and loss of free-use permits affected local families and for some ended generations of ranching.

As the Anglo owners of the original Los Trigos grant, the Fogelsons found themselves in the middle of a tense political situation that affected their relationship with local residents. Trespass was an ongoing issue, and they understood that some locals resented Anglo land ownership in general, and their holdings on the former Pecos and Los Trigos grants in particular. Some locations such as roads, fishing areas, and piñon nut-gathering sites on the former land grants had remained "communal property" in the eyes of Pecos residents. The road from Rowe to Colonias was one of these contested sites. In the 1930s the Civilian Conservation Corps (CCC) may have replaced the earlier bridge constructed by the AT&SF over the Pecos River. Locals continued to use it even though it traversed part of the Forked Lightning Ranch. In addition to travel between the villages, the residents of Rowe used the road to collect water from the river before the community water well was established in the 1960s. The stretch of river adjacent to the Colonias bridge was also a popular fishing area.[35]

The Colonias bridge, now in disrepair, received only sporadic maintenance and was already in poor condition by the early 1960s, its lumber stolen or burned. In March 1963 ranch manager and veterinarian Dr. Hinderliter asked Fogelson's attorney, F. A. Catron, to write to San Miguel District Attorney George Martinez and request that he recommend that the County Commissioners close the unmaintained 1.5-mile portion of the Colonias Road across the ranch.

Catron pointed out that locals used the road for "drinking parties and like activities." Catron argued that abandonment of the road and bridge meant that the right of way had reverted to Fogelson as the property owner of all adjacent lands on both sides. Nothing came of the request. District Attorney Martinez joined the Alianza movement, and the commissioners may have held Alianza sympathies as well because two years later they objected to closing the road.[36]

A related dispute over former communal land erupted in the late 1960s when a group of local men from Pajarito, possibly affiliated with or inspired by the Alianza, began to interfere with access to the ranch's fenced, 4,000-acre Pajarito pasture. The community of Pajarito, southeast of Rowe, was an exception to Fogelson's purchased holdings within the original Los Trigos boundary. In 1958 Fogelson had expanded the Pajarito pasture with the purchase of an additional 608 acres on the west side of the AT&SF tracks and on the east side of the Pecos River.[37] The interstate divided the parcel after 1964, but local roads and a concrete underpass provided access to the pasture and the Pajarito community. Pajarito residents claimed that because they were descendents and heirs of the original settlers on the grant, they were entitled to the use of that portion of the grant they recognized as common, unallotted pasture. On April 28, 1969 some local men accosted ranch foreman Hamby on the pasture's access road and threatened him with injury if he returned. Three ranch employees returned one week later to repair the boundary fence, but six men turned them away with threats. The following spring, the same men turned away a surveyor hired by Fogelson to testify in the dispute. The locals also removed one-half mile of boundary fence and allowed their livestock to graze on the Forked Lightning property. As in similar Spanish land grant disputes, the court cared only that the Fogelsons could produce a chain of title for the land going back to the 1909 patent of the Los Trigos Grant, when the land was privatized by Congress. On April 8, 1970 H. Vearle Payne, a U.S. District Judge, ruled against the two Pajarito defendants, Frank Salmeron and Esquipula Padilla "and all persons in active concert and participation with them," declaring that their rights under Spanish or Mexican law were unproven and extinguished by U.S. acquisition of the lands. Payne ordered them permanently restrained from interfering with use of the access road to the pasture, entering Fogelson's property, damaging or removing fences, and placing livestock on the ranch without consent.[38]

Tensions over inholdings and land access on the Los Trigos section of the ranch near Rowe were still a management concern in the 1980s. A 1984 Park Service management analysis of the ranch predicted future growth in the Rowe area and suggested that the ranch boundary should be modified "to exclude all undesirable inholdings" or the inholders should be bought out in the event that the land was ever donated to the Park Service.[39] The Hispanic residents of Anton Chico, Tecolote, and Gallinas all had active associations to represent the rights of land grant heirs at the time, and similar organizations formed in Pecos and Los Trigos in the 1990s.[40] These local residents also experienced increasing conflict with the growing number of newcomers, many from Texas and Oklahoma, who visited the area for recreation in the summer. Recreational users often opposed traditional uses of the forest such as ranching and wood gathering. Tourists who expected to find pristine, solitary forests often could not reconcile cattle or chainsaws with their view of the landscape.[41]

Like the Hispanos who remembered their claims to the land and their long struggle to retain those rights, the descendants of the Pecos Indians also remembered their ties to their homeland. In 1951 the Pecos descendants at Jemez Pueblo had joined with that pueblo in a lawsuit to try and receive a higher monetary compensation for the Pecos grant than had been awarded by the Pueblo Lands Board in 1930. The lawsuit cited the fact that the Pueblo Lands

Board had not given any compensation for the water rights at Pecos. Filed under the auspices of the Indian Claims Commission Act of 1946, the Pecos' claim was part of a larger claim by Jemez Pueblo to land in the Ojo del Espíritu Santo grant. In 1954 the United States government replied that Pecos Pueblo had no right to file a claim because the pueblo no longer existed. The government pointed to Pecos' merger with Jemez Pueblo in 1936 as proof that Pecos was no longer a separate entity. The government ignored the fact that simply joining with another pueblo did not erase Pecos descendants' identity or connections to their homeland. The lawyer for the Pecos and Jemez added Jemez Pueblo to the suit but the commission ruled against the Pecos in 1959.[42]

Despite official claims that Pecos Pueblo no longer existed, developments at Pecos in the 1970s provided new opportunities for Pecos descendants to access their ancient home. The Park Service's restoration of the mission ruins meant that the Feast of Nuestra Señora de los Ángeles could once more be held at the old church. The Park Service also had commissioned historian John Kessell to write a history of Pecos Pueblo during the Spanish period. Although memories of this time had stayed alive in the oral traditions of Pecos descendants, Kessell's work, *Kiva, Cross, and Crown,* restored the history of the Pecos Indians to the knowledge of a broader community. Spurred on by Taos Pueblo's success in achieving title to Blue Lake, a sacred site, the Pecos Pueblo clan at Jemez was able to negotiate with the New Mexico Department of Fish and Game regarding a cave at Tererro which had cultural significance to the Pecos. The Department acknowledged the Pecos' interest in the property. In 1979 the parish council in the town of Pecos formally invited any interested Pueblos at Jemez to attend the annual Feast of Nuestra Señora de los Ángeles. At the mass, Jose Toya, a Pecos descendant who lived at Jemez Pueblo, requested the chance to speak to the audience. His words revealed how deeply conflict over land can be embedded in people's memories. Toya castigated the local Hispanics for the way their ancestors drove the Pecos away in 1838. "Your people poisoned our water, killed our animals, ruined our crops, and drove us from these lands. But these are our lands and we shall return to take them back," Toya said. During the speech, which Toya repeated in English, Spanish, and the Towa language, all of the Hispanos in the congregation left.[43]

During the 1960s and 1970s, the Civil Rights Movement created a space that allowed Hispanos and Pueblos to forcefully voice their conviction that their claims to land in New Mexico were still valid. Although their attempts at gaining control of their old lands were often unsuccessful, those attempts did bring their stories to the attention of the public and made it more difficult for the history surrounding land ownership in New Mexico to be obscured and ignored. At Pecos locals contested the Fogelson's owernship of the Forked Lightning Ranch, and Pecos Indian descendants spoke bitterly about the past. These events revealed the tension and conflict over the environment in the Pecos valley, conflict that had long been a part of Pecos history. In recent years the Park Service has attempted to renew connections between Pecos descendants and local residents to the land now enclosed in Pecos National Historical Park. Residents of Pecos and members of several pueblos, including Jemez, are identified as stakeholders in park management. In 1994 the Park Service completed an ethnographic overview of Pecos that involved consultation with Pecos descendants and solicited their opinions about the interpretation of the Pecos story. [44] The 1990 Native American Graves Protection and Repatriation Act (NAGPRA; PL 101-601) required cultural consultations that presented new opportunities for Pecos descendents to participate in the construction and preservation of their history. In 1993 the Smithsonian Institution returned 86 sacred objects and religious artifacts to Jemez elders of Pecos descent.[45] Six years later, Harvard University's Robert S. Peabody

Museum repatriated the human remains that Alfred Kidder excavated in the 1920s to the Pueblo of Jemez, to be returned to their original location at Pecos. The Pecos descendents walked from Jemez to Pecos with the remains, a reversal of the route the last Pecos residents used when they moved to Jemez in 1838.[46]

"Here Land Is Not a Product Like an Automobile or a Hamburger"

The large tracts of undeveloped land in New Mexico were an important selling point for the tourism industry. The Davidsons, visiting in the 1970s, probably read many statements such as "the forests are a haven from the summer heat, a remote primitive world, never more than an hour or two from any spot in New Mexico." Beginning in 1964, the government began setting aside wilderness areas in national forests, "where mechanized equipment, logging and commercial development may not intrude." In these areas, tourists could experience "America as it was when men first came here," according to one brochure. After seeing the museums in Santa Fe, the Davidsons drove their car back up the Pecos Canyon, seeking retreat in the wilderness where they could hike and fish.[47]

For many, limiting development in the Pecos area was a high priority, but not everyone felt that way. Predictably, Buddy Fogelson's death led to ownership changes for the valley's largest land tracts. The Fogelsons never considered returning the ranch lands to their old communal status, but there was the chance that the Park Service might acquire them. The Park Service already had studied the cultural and natural resources of the Forked Lightning Ranch in the hopes of eventually adding it to the park. The ranch would offer the Park Service the chance to interpret the history of cattle ranching in New Mexico and protect the archaeological ruins and Santa Fe Trail ruts on the property.[48] The Fogelsons had retained sizeable parcels surrounding the 1967 national monument boundary fence for their Santa Gertrudis operation. In the last decade of the cattle operation, which ceased in 1988, the Forked Lightning Ranch kept an average of 110 mother cows and at least five bulls, as well as frozen embryos from five more sires for artificial insemination.[49] Although ranch managers reported that rotation was practiced to protect the ranch lands from erosion, in 1995 ecologist Craig Allen found evidence of damage on the ranch's steepest grazed land east of the Pecos River and north of Cañon de Los Trigos. He documented erosion, exposure of bare soil, and lack of herbaceous cover, indicating "predominance of physical processes over biological processes which tend to stabilize site conditions."[50] In the year after his death, Buddy Fogelson's heirs sold the remaining Santa Gertrudis cattle, and the pastures on both parcels were empty by December 1988.[51]

The Fogelsons had considered donating the entire ranch to the Park Service when their involvement with the cattle operation declined during Buddy's illness.[52] However, in his will Fogelson conveyed the 5,500-acre northern parcel, which contained the ranch house, to Greer and left the southern, 8,000-acre Los Trigos Ranch to his nephew and adopted son, Gayle David Ferguson.[53] In 1989 controversy erupted when Greer and Gayle began to negotiate the sale of their combined acreage to a Florida-based developer, Jerry Crassas of Capital Developers International. Although Greer and Gayle were unaware of the company's plans in the early negotiations, Crassas envisioned "Santa Fe East 2001," a full-service resort community that would have rapidly urbanized the area. The exhaustive list of resort features included a ninety-two-acre hotel; Olympic-size swimming pool; extended-stay cabins; private airstrip; 160-acre convention center; medical services; a 7,000-acre residential development for 20,000 permanent residents; a 454-acre shopping center; two 18-hole golf courses; a 419-acre shooting range; a hunting preserve stocked with quail, dove, grouse, pheasant, deer, rabbit, and elk; a racetrack for

cars and motorcycles; and a 729-acre recreational center and athletic fields. Crassas, a wealthy Greek citizen and self-described "wheeler-dealer," was the latest in a long line of fortune-seekers who approached the Upper Pecos valley with a limited understanding of the existing community and the ecological limits of the land. "I had never been west of the Mississippi River before," Crassas told a local paper. "But my partner told me I had to come and see this land. When I did, I fell in love with it."[54]

Like the Spanish missionaries and the railroad, mining, and timber companies, Crassas believed growth and development would benefit the local community. When he publicly revealed his intentions for the property, some locals and environmentalists vehemently protested and organized to stop the development. The New Mexico Acequia Association's board members expressed "grave concern" about the plan, which they felt would deplete the water table and pollute the water on which the existing community relied.[55] George Adelo, the Pecos mayor, worried that the village would lose its identity and the already overtaxed water and sewage systems could not support the sizeable new development.[56] Another local, A. Samuel Adelo, described Pecos as a refuge where people could live "under the cloak of its tranquility" and warned that the environment and culture in Pecos were fragile and worthy of protection. "In New Mexico, even today," he wrote, "the land has spiritual and community values. Here land is not a product like an automobile or a hamburger that are simply used to make money."[57] Just like the Pecos Indians and the original Spanish settlers, the late twentieth-century Pecos residents continued to locate their cultural identity within the landscape.

Although Crassas failed to appreciate these long-held local values, he did make one correct assumption: the Pecos community understood that the resort would bring an abundance of wage-earning opportunities to the valley—an increase in jobs comparable to the timber and mining booms of the 1880s and early 1900s. The National Park Service had recognized the importance of providing jobs to the local community when they assumed management of the monument in 1965. A 1962 study completed by the Park Service found that the population of the village of Pecos numbered less than 600, and about 2,700 people lived in the general area. Although some local residents remained active farmers and ranchers, they did so to maintain their cultural heritage and quality of life and required local wage labor opportunities with the Forest Service and other entities to make ends meet. Winter employment was particularly scarce when seasonal jobs in recreation declined. The Park Service, however, could offer only a limited number of positions.[58]

The relative isolation of the village created economic hardship, but it also preserved the sense of cultural continuity that inspired many to resist the resort plans in 1989. As a result, community opinion was split. The *Pecos Post* editors reasoned that change should be welcomed, because the pueblo's first inhabitants had been the valley's first "developers," followed by the Spanish and Anglos. "Life goes on and things change with or without our consent," the editors opined.[59] Cip Gonzales, a local school bus contractor and auto parts store owner, agreed. "What we have here is a lot of pretty country, and you can't get much income from that," he said. "So from the business standpoint, I'm in favor of it."[60] Others pointed out that the new wage-earning opportunities would keep young people from moving away and help those residents forced to commute to Santa Fe or Las Vegas for work. Many, though, felt the development would be a disaster. Pecos resident Bob Hattle believed that the new jobs would not be worth the price of the impact on village culture and the environment. "That's not the kind of job any of us wants to make a living—cleaning out a rich man's sewer," Hattle said. [61] Another local resident, Richard Roybal, agreed that the potential for wages was akin to accepting scraps from "the rich man's

table" and not worth the price of losing their water, increasing air and noise pollution, and transforming the village into a slum section of the new city.[62]

The "pretty country" Gonzales described had captivated the Fogelsons and their social circle since the 1940s. Like the Park Service, their approach to land stewardship fell somewhere between preservation and use. Although the Fogelsons defended their rights as private landholders and often mythologized local cultural traditions, they did value the long history of human activity in the valley and the living community still residing there. They steadfastly supported the national monument and had a strong philanthropic track record throughout the country. The monument staff and some residents feared the Fogelsons' longstanding commitment was about to end abruptly. For a time, it appeared Greer might sell to Crassas. According to Greer's employee, M. S. Disimone, "[Crassas] came up with a proposal and a figure you just have to take a look at. There are some things you can't say no to."[63] Linda Stoll, the superintendent at Pecos, expressed surprise that the monument's main benefactor would consider the sale. She told the Santa Fe paper, "We have been fortunate that we have had a single landowner around us who has left the land alone. If the land is developed, it would put our viewshed at risk." Stoll and her staff also wondered how the cultural resources on the Forked Lightning Ranch property, including Kozlowski's Trading Post, the Santa Fe Trail ruts, the Hispanic homesteads, and additional pueblo remains could be protected in the midst of a large-scale development.[64]

JOURNAL NORTH

Copies Recreate Spirit, Style of Originals

Art Market — Page 6

SANTA FE Thursday, December 28, 1989

Garson Balks at Ranch Resort Plans

Greer Garson
Actress, philanthropist

Graffiti spray-painted on a gate Wednesday at Greer Garson's Forked Lightning Ranch warned "Don't Mess With Pecos."

GREER GARSON PROPERTY

Pecos

PECOS NATIONAL MONUMENT

FORKED LIGHTNING RANCH

LOS TRIGOS RANCH

Santa Fe

Albuquerque

map area

George Adelo
Pecos mayor

Linda Stoll
Pecos Monument superintendent

Figure 42. Local papers provided extensive coverage of the Forked Lightning land sale controversy. This feature includes a photograph of graffiti spray-painted on the ranch's iconic adobe fence posts: "Don't Mess with Pecos." Source: *Albuquerque Journal North*, December 28, 1989.

Greer was eighty-one at the time of the pending land deal. Her own health had declined precipitously after Buddy's death. As news of the potential sale spread in New Mexico, she was recovering from a hospital stay and dealing with another loss: a catastrophic fire had destroyed her Beverly Hills home and much of her Hollywood memorabilia. As a result, she was unaware of the controversy. In their initial negotiations, she and Gayle believed that Crassas planned only to build a single home or a small-scale guest ranch, and if the *Santa Fe Reporter* had not leaked the resort plans, the transaction might have gone through. The village of Pecos passed a resolution opposing the new development and prepared to pressure Greer to change her mind. After she left the hospital she announced that she and Gayle were reconsidering the sale. Gayle told the media, "Down here [in Dallas] the worst thing you can say about a man is that he left a town dry and then moved. I don't know where they would get the water for one golf course, let alone two. I think the whole thing sounds ridiculous."[65] But in the face of public opposition, Crassas agreed to present a scaled-down plan for consideration, and both Gayle and Greer temporarily faltered in their commitment to end the deal.[66]

The Pecos village resolution against the development also included a request to the Secretary of the Interior, Manuel Lujan, Jr., and their congressional delegation to "exercise all options" for the Park Service to take over the ranch and qualify the expanded site for national park status. Lujan, the newly appointment Secretary of the Interior under President George H. W. Bush, was born near the San Ildefonso Pueblo, grew up in Santa Fe as the son of the city's mayor, and graduated from the College of Santa Fe. He had served in Congress since 1968 as a prominent Hispanic Republican representing the concerns of New Mexico's Indian population. Lujan labeled himself a moderate who balanced environmental protection with development, yet he advocated opening federal lands to mining, grazing, logging, and recreation as well as offshore oil drilling.[67] Although his reputation with the environmental community was mixed at best, Lujan had a special interest in the fate of the Pecos area, and he did not want the site developed. After Crassas's development plans leaked, Lujan visited Pecos to assess the site, but he was not forthcoming with funding for purchasing the land because the ranch did not fit into the department's two priority categories: wetlands and parklands in large urban areas. Further complicating the negotiation, the New Mexico Congressional delegation had recently requested purchase of two additional sites in New Mexico, and Lujan felt he could not support all three proposals. However, the Interior Department declared its willingness to accept the donation of the ranch for the national park system through an act of Congress.[68]

In the midst of these negotiations, the *Santa Fe Reporter*, which broke the initial story of Crassas's grandiose plans for the ranch despite his attempts to bribe them to hold it until after the sale, discovered that Crassas was wanted by Florida police on a felony warrant, had forty-eight convictions in his native Greece related to failed business dealings, and had been wanted for fraud in Switzerland. The U.S. government considered him an "undesirable" alien and subject to deportation. The news about Crassas's record ended deal negotiations, and the *Reporter's* editor remarked, "Our local Greek tragedy has run its course." [69]

Although Crassas was no longer a threat, Pecos residents and the monument staff feared new developers would approach the Fogelsons. A few weeks later, Maurice Tripp, a California inventor with a questionable business reputation, contacted the Fogelsons about purchasing the land for a proposed manufacturing plant, but nothing came of it. In a separate deal, Gayle Fogelson sold Los Trigos in two parcels to local residents, the Cowles and the Lyons, who planned to raise Norwegian fjord horses and operate a guest ranch.[70] Hoping a private foundation would purchase Greer's portion of the ranch and donate it to the federal government, New

Mexico's Congressional delegation introduced legislation to create the 5,865-acre Pecos National Historical Park. Prompted by the controversial Crassas deal, historian William deBuys, who was working with the Conservation Fund, arranged a visit to Pecos for the fund's president and the director of the Richard King Mellon Foundation. His prompt response led the foundation to purchase the ranch for $4.5 million and lease it back to Greer Fogelson while Congress considered appropriations for operating funds.[71]

On June 27, 1990 Congress established the new boundaries of the park to include the original 365-acre national monument and the addition of the 5,500-acre ranch.[72] The Mellon Foundation donated the land to the federal government in 1993. Significantly, the transfer of property required new enabling legislation, which called for "the preservation and interpretation of [both] the cultural and natural resources" of the re-designated Pecos National Historical Park.[73] When Pecos was a national monument, the Park Service had emphasized the Spanish-Colonial history of the site but with the new acquisitions came new interpretive possibilities—and more complicated management decisions. Greer retained lifetime rights to the ranch house complex and ten contiguous acres and continued to make seasonal visits until she died on April 6, 1996 in Dallas.[74] Her passing marked the end of luxury ranching on the Pecos grant, but the Los Trigos grant parcels eventually transferred to new owners, Jane Fonda and Val Kilmer, both Hollywood actors like Greer. Fonda and Kilmer continued the tradition of managing the Forked Lightning property as private refuges for both people and wildlife.

The new Pecos National Historical Park also included the two units encompassing part of the Glorieta Battlefield from the Civil War, totaling 682 acres and added via Public Law 101-536. The scope and mission of the park expanded to accommodate the act's purpose to "preserve and interpret the Battle of Glorieta for the benefit and enjoyment of present and future generations." The Pigeon's Ranch subunit included the ranch itself and the surrounding landscape, including Windmill Hill and Artillery Hill, both significant to the outcome of the battle. The development of Interstate 25 in the 1960s prompted the abandonment of sections of Highway 85 southeast of Pigeon's Ranch, creating a greater distance between the highway and the cultural resources on that subunit. Residential development and commuter traffic continued to grow along Highway 50 in the immediate vicinity of Pigeon's Ranch, though, which had not served as a private tourist attraction since the 1950s. The unoccupied site was vulnerable to development pressure. In the late 1970s, a mobile home park developer wanted to purchase the site and bulldoze the historic structures, but the property owner rejected the offer and another concerned local resident, Linda Frye, purchased the ten-acre ranch property. To protect the historic area, Frye granted a twenty-year covenant to the New Mexico Preservation Bureau in 1981. The following year, a severe snowstorm in Glorieta Pass collapsed the adobe building's north wall, which spurred Frye and local historian Marc Simmons to hire contractors for immediate repairs. The Pigeon's Ranch Preservation Committee at the New Mexico Historical Society raised more than $10,000 to support their preservation work.[75]

The ranch was just one component of the Glorieta Battlefield landscape. To interpret the full story, the park also added the Cañoncito subunit, which included the location of the Confederate camp. Four private homes, the AT&SF Railroad, and Interstate 25 provided unavoidable visual and auditory intrusions near the site.[76] In 1964 the remaining structure at Johnson's Ranch was bulldozed to make way for the interstate.[77] Both subunits contained management challenges for the Park Service: impact from feral and domesticated livestock on riparian areas; agricultural, commercial and residential activity within the units and on the borders; watershed quality issues; unprotected wetlands; and threatened buildings and

archaeological resources.[78] Inholdings presented another challenge—private owners held more than half of the land in each unit, which made any planning for interpretation development and access difficult. As a result, the park's 1993 Land Protection Plan suggested purchase of thirty-eight inholdings through fee acquisition.[79]

The National Park Service, local residents, developers such as Jerry Crassas—all envisioned different things for the Pecos environment. By 1993 the Park Service and those who sought to protect the Pecos landscape had triumphed, at least in part. Congress had placed the Forked Lightning Ranch, Pigeon's Ranch, and Cañoncito within Pecos National Historical Park, preserving the land from development. Yet urban encroachment, watershed quality issues, inholdings—all signs of how Pecos had changed over the years—presented challenges for the Park Service. Lack of funding to open the new areas to visitors and interpret the history also hampered the Park Service's vision. Much of the impetus for creating Pecos National Historical Park had come from a desire to protect the fragile ruins from the effects of urbanization and modernization. But by setting aside the land and managing it, the Park Service induced new alterations in the landscape.

"Management Without Knowledge Would Be a Dangerous Policy Indeed"

Park Service historian Richard Sellars described Mission 66 as "the high point of what might be termed the 'landscape architecture' approach to national park management," because the program emphasized site planning and recreational tourism over natural resource concerns.[80] For much of its history, the Park Service had given little thought to scientific management. Landscape architects traditionally held more power and influence than biologists or botanists within the Park Service. This changed in the postwar era as environmentalists pressured the Park Service to conduct scientific studies and monitor the ecological health of resources. The Park Service took over at Pecos as the agency itself struggled to adopt scientific management procedures and determine how to balance ecological concerns with visitor access and expectations.

The influential Leopold Report of 1963 countered the impetus towards recreational development and management that had long been a part of Park Service policy. Interior Secretary Stewart Udall assembled a committee of outside experts known as the Special Advisory Board on Wildlife Management, whose report explicitly urged the Park Service to adopt new management procedures that reflected and supported ecological complexity. The advisory board stated that "management without knowledge would be a dangerous policy indeed," and called for scientific research in all parks that could then be applied to management decisions. The primary goal of the National Park Service, as stated in the report, should be "to preserve, or where necessary to recreate, the ecologic scene as viewed by the first European visitors." The committee acknowledged that park landscapes had gone through tremendous changes but felt that these changes had been mostly negative and that parks should be returned to a "primeval" state. The Leopold Report focused on "natural parks" such as Yellowstone or Glacier. Sites primarily created to preserve history, such as Pecos, were not expected to serve as the "vignettes of primitive America" called for in the report. Still, Udall championed the report and directed Park Service Director Conrad Wirth, and his successor, George B. Hartzog, Jr., to develop new policies and administrative units reflecting restoration strategies that provided equal consideration of park ecosystems and visitor needs. The management culture of the national park system was transforming and would eventually affect park units of every type. [81]

Many recognized that just because parks were categorized as "historic" did not mean they lacked plants or wildlife or rivers. All parks—not just ones encompassing large tracts of undeveloped land—were part of an ecological system. Ultimately, environmentalists pressured Congress to unite the three types of parks—natural, historic, and recreation areas—in the General Authorities Act of 1970.[82] The Park Service would have to manage all of them under the same mandates. Scientific management and research in the Park Service remained hampered by internal dispute, but slowly the agency culture began changing towards a more accepting view of ecology. Yet despite the fact that Pecos—and all parks—possessed landscapes that reflected the overlap and interdependence of "natural" and "cultural" resources, the Park Service continued to separate the resources and parks into distinct management categories. Even if Pecos was managed under the same directives, the agency considered it a historical park, distinct from a place such as Yellowstone, a "natural" park. Both, of course, encompassed landscapes that had been profoundly influenced by humans over thousands of years.

Environmentalists also challenged both the Park Service and the Forest Service in regards to their management of wilderness. Mission 66 had infuriated many who felt the Park Service was recklessly developing national parks. The Park Service protested that many parks included vast areas of undeveloped lands, but wilderness advocates countered that no legal measures existed to stop the Park Service from developing that land in the future. The Forest Service also faced criticism from environmentalists as it tried to defend intensive resource use policies despite growing evidence of ecological damage. Wilderness advocates succeeded in passing the Wilderness Act in 1964, which created protected zones in national parks and national forests. The Wilderness Act reflected environmentalists' distrust of the agencies' stewardship. In 1964 Congress designated nearly 200,000 acres of land in the Santa Fe National Forest at the headwaters of the Pecos River and extending north into the Carson National Forest as the Pecos Wilderness. After the prohibition of domestic sheep grazing in the area, the Forest Service successfully re-introduced Rocky Mountain bighorn sheep, absent since 1903. In 1980 an additional 55,000 acres were added, bringing the total Pecos Wilderness to 223,667 acres. The first twenty miles of the Pecos River were designated as a National Wild and Scenic River in 1990.[83]

Although the establishment of the Pecos Wilderness set aside a portion of the forest for special protection and recreational enjoyment in a "primitive" setting, the demands for public access, recreational use, and timber cutting immediately outside its boundaries continued. In the 1970s officials in the Santa Fe National Forest proposed a "scenic highway" on Elk Mountain from Las Vegas to the Pecos canyon, which would run along the southern boundary of the Pecos Wilderness. The proposal included access to potential ski slopes on Elk Mountain and additional logging of about sixty million board feet of old-growth ponderosa pine and Douglas fir. Environmentalists blocked the proposal using NEPA, which required the Forest Service to assess and manage the watersheds within the national forests and produce environmental impact statements for development projects.[84] When the Forest Service and the State of New Mexico abandoned the project, it was a clear concession to the growing political power of environmentalists, even in the economically depressed region of northern New Mexico. The 1976 National Forest Management Act created more restrictions on timber production and the definition of sustained yield. When the U.S. Fish and Wildlife Service declared the Mexican Spotted Owl an endangered species in 1993, environmental organizations used the 1973 Endangered Species Act's mandate to protect critical habitat as another effective means to force

the Forest Service to consider broader ecological impact in its multiple-use management of New Mexico's forests.[85]

As the Park Service took over management of Pecos National Monument and later Pecos National Historical Park, extensive reforms were sweeping public land agencies. The environmental movement forced the passage of laws that required agencies to consider the ecological impact of their actions. The addition of the Forked Lightning Ranch, Pigeon's Ranch, and Cañoncito units to Pecos in 1990 meant that the Park Service now managed a number of ecosystems within a region undergoing rapid changes. The creation of the Pecos Wilderness introduced more stringent standards of preservation into the headwaters region of the Pecos River. The environment—whether designated as wilderness, a national park, or a person's private property—had always been transforming. Many recent activities, including overgrazing, erosion, and fire suppression, had altered ecological dynamics and threatened the health of the environment. Direct and indirect drivers of ecosystem change continued as the population grew around Pecos and development increased. The Park Service could not manage the monument, and later the historical park, apart from its regional environmental context. As officials at the park strove to incorporate new federal mandates into their decisions, their actions contributed to further change at Pecos and were influenced by events in the wider Pecos valley.

"National Parks Are Not Pictures on the Wall"

The village of Pecos in the 1970s must have seemed like a sleepy backwater to the Davidsons as they drove by the adobe houses and looked down the long, vertical fields to the Pecos River. Even in the late 1990s, brochures still described Pecos as "a charming collection of adobe shops and historic buildings—tied together by narrow, winding roads."[86] Yet when the Park Service took over the national monument 1965, the demographics and infrastructure of the Pecos valley already were shifting dramatically. In addition to the construction of I-25, commuter traffic and construction increased along State Route 50 and US 285. The new road development converted Pecos into a bedroom community for the growing capital city of Santa Fe. By 1988 the population of Pecos had doubled to 1,200, and it grew another 42.4 percent in the 1990s.[87] Although developers could build new homes and highways according to demand, they could not expand the limited capacity of the arid environment at will.

The streams and riparian corridors at Pecos National Monument demanded particular attention due to their sensitivity and ecological importance. In the 1970s growth and development threatened both water quantity and quality, particularly in Glorieta Creek. As development near the creek continued outside of the monument boundaries, the threat of additional diversions on Glorieta Creek loomed. When the Park Service acquired the monument and later the Forked Lightning Ranch unit, these acquisitions did not include water rights to maintain adequate instream flows for habitat protection and the state of New Mexico did not recognize wildlife habitat as a beneficial use of water. The lack of historical flow records and a supportive political climate hampered any potential application for water rights.[88]

Upstream on Glorieta Creek, the Glorieta Baptist Conference Center, constructed in 1952, presented the greatest threat to water quality within the park boundaries. To meet the needs of its growing operation, the conference center expanded its wastewater treatment plant and added six sewage lagoons in 1977. The new lagoons malfunctioned and sewage effluent began to enter the creek, producing an overgrowth of algae and organic sludge deposits. After water quality tests in 1982, the New Mexico Environmental Improvement Division required the

conference center to clean up the effluent problem, which temporarily improved the stream's water quality, although the lagoons remained an ongoing threat to the health of the creek.[89]

The Park Service had managed the 3.2-mile section of Glorieta Creek inside the national monument boundaries since 1965. When the park boundary expanded in 1990 to incorporate the former Forked Lightning Ranch property and the Glorieta Unit, the Park Service assumed management of four additional stretches of surface water: the stretch of Glorieta Creek east of Highway 63, the 2.9-mile stretch of the Pecos River running through the ranch unit; a one-mile section of Glorieta Creek near Pigeon's Ranch, and a half-mile stretch of Galisteo Creek—an ephemeral stream and part of the Rio Grande watershed—in the Cañoncito sub-unit.[90] As the most diverse and sensitive habitat in the region, these riparian areas required significant management attention. In addition to the ongoing threat to wetland and riparian areas from potential highway realignment and associated development, the private agricultural and ranching parcels between the separate park units contained unmanaged exotics such as mullein, alfalfa, switchgrass, Scotch thistle, and sweetclover. The area along the La Joya road also contained many informal dump sites. Low streamflow in Glorieta Creek, essentially stagnant with the exception of the spring runoff period or periods of high precipitation, paired with ongoing effluent from the Glorieta Baptist Conference Center to threaten water quality. By the 1990s, Glorieta Creek contained extreme eutrophication from the wastewater effluent.[91] Because activity at the conference center and elsewhere in the vicinity of the creek continued to grow, the Park Service began a regular water quality monitoring program in the 1990s.

Until the late 1980s, the water quality of the Pecos River was comparatively good. A 1980-81 water quality study indicated low or non-existent levels of heavy metals in the Pecos River, and no other water quality indicators were above stream standards.[92] But after vegetation began to die off inexplicably near campground roads in the Santa Fe National Forest in the late 1980s, a New Mexico Department of the Environment investigation revealed that the area's federal and state campgrounds and roads, as well as the Lisboa Fish Hatchery, contained waste rock tailings from the Terrero mine that had served as fill material from the 1950s until 1975. Samples of surface material, soils, and fish revealed heavy metal contamination, which forced the Forest Service to close the Panchuela, Jacks Creek, and Winsor Creek Campground and their associated roads in 1990. The State Highway Department posted signs along Highway 63 discouraging public use due to high levels of potentially toxic material on the road surface and adjacent soil. The Lisboa Fish Hatchery suffered several fish kills associated with upstream erosion of the toxic material. Heightened public concern temporarily affected tourism in the area. The mine owner, Cyprus American Minerals Corporation (AMAX), formed a coalition with New Mexico highway and game and fish departments to administer the cleanup of the site locally.[93]

Closer to the park, the Pecos River also received effluent from a sewage treatment plant two miles upstream. The village of Pecos built the plant in 1969, and improved it in the 1980s. The facility served most of the village residents except for some still using individual septic systems. On July 7, 1993, state officials responded to another fish kill on the river, and this time they believed that plant effluent containing excessive levels of chlorine or nitrates killed the fish.[94]

In 2001 a more detailed study of the Upper Pecos watershed, including Glorieta Creek, indicated several problems downstream from the park, from Cañon de Manzanita just below the park's southern border to Santa Rosa Reservoir. Standards were exceeded for ammonia, aluminum, copper, mercury, total dissolved solids, conductivity, fecal coliform, temperature and turbidity, although none were significant enough to be classified officially as impairments. Other portions of the Pecos River north of this stretch experienced impairments of temperature and

turbidity. The study revealed that water pollution in Glorieta Creek from the conference center and other upstream users continued to be a problem. Glorieta Creek and Willow Creek were the two most impaired reaches of the Upper Pecos watershed. Effluent released into Glorieta Creek led to high levels of ammonia, nitrate and nitrite, dissolved oxygen, conductivity, temperature, and turbidity. Willow Creek contained stream bottom deposits and high levels of conductivity, zinc, cadmium, and toxic sediment.[95]

Another pressing problem for the Park Service was the proliferation of exotic species. Ongoing disturbances such as grazing and excavations around the ruins on the mesilla invited invasive plants to establish themselves. Although the cessation of grazing allowed native grasses to return, *Kochia scoparia* (Mexican fireweed) and many other invasive herbaceous plants remained a problem. The Park Service attempted to eradicate kochia with burning, herbicides, and reseeding of native plants. Official Park Service policy in the late 1960s declared that nonnative plants and animals should be "eliminated where it is possible to do so by approved methods."[96] Beginning in 1968, park employees conducted spot spraying on calm days with 2,4-D on approximately thirty-five acres. In just a few years the need for herbicide was "much reduced."[97] But like the Forest Service's use of DDT, chemical solutions carried environmental and public health hazards that federal agencies were obligated to address as regulations grew more stringent. In June 1981 the national monument staff stopped using 2,4-D and adopted a more moderate approach. Because potential damage to ruin walls and aesthetics by exotics was the primary concern, the monument staff shifted to cutting and hand pulling weeds, particularly in the convento. They also continued to encourage re-growth of native grasses to crowd out the kochia.[98]

Other areas around the monument prone to heavy growth of invasives included the roadside rights-of-way and the gravel pits associated with highway construction. Scotch thistle, common morning glory, and alyssum flourished along the edges of paved roadways, particularly in areas where rainwater collected.[99] Because of the scarcity of riparian habitat in the Southwest, native flora and fauna in these ecotones received particular attention. Regulation of stream flows in the twentieth century allowed the invasive tamarix, also known as salt cedar, to spread in major drainages and eventually to outlying ephemeral streams. The species was well-established in the western United States by the 1960s.[100] A 1968 plant survey, which established a baseline of native and introduced vegetation to guide future management decisions, noted that the riparian area of Glorieta Creek included a few salt cedar (*Tamarix pentandra*), only one young Fremont Cottonwood (*Populus Fremontii*), and a few Sandbar Willows (*Salix exigua*).[101] By the 1990s, the park staff faced a serious tamarix problem: in 1995 they identified 200 tamarix near the trading post on Glorieta Creek. Cutting and spraying in 1999 eliminated 55 tamarix up to one-foot in diameter, as well as hundreds of shoots. Other than tamarix, the staff continued to monitor and remove Russian olive, Siberian (Chinese) elm, Scotch thistle, and yellow sweet clover.[102]

When grazing stopped on the Forked Lightning Ranch in 1988, the willows along the creek and river began to recover.[103] Geographer Donald Lee Burtchin, in a study of the physical geography of the area, noted that by 1983 willow had become the dominant species on the creek banks, with three varieties present. He also noted "a few" cottonwood trees in the Glorieta Creek riparian area. But Burtchin observed that regular floods in Glorieta Creek easily uprooted shallow-rooted plants growing in the floodplain and predicted this would limit the size of trees.[104] Downcutting from severe erosion also limited riparian vegetation recovery on Glorieta Creek, and the ecological legacy of cattle trampling continued. Although the cottonwood bosque

on the Pecos River contained many mature trees in the 1990s, the previous decades of trampling and browsing limited the vigor of emerging trees. The recovering beaver population probably damaged young stands of trees as well.[105] Despite these factors, vegetation recovery began. The 1996 faunal survey described a recovering riparian zone on both Glorieta Creek and the Pecos River with "a lush growth of streamside vegetation," small mammals, reptiles, and amphibians.[106]

Figure 43. Grazing and wood harvesting left the riparian area along Glorieta Creek near the ruins nearly bare until the area became a protected monument. This 1915 photo looks to the northwest of the ruins. Source: Source: Cowley, Joseph, and Rhodes, *Cultural Landscape Overview*, 61, original at Museum of New Mexico, negative no. 12330e.

Figure 44. This 2009 photograph of Glorieta Creek, also looking to the northwest of the ruins, reveals dense recovery of willows and cottonwoods in the riparian zone as well as piñon-juniper west of the creek. Source: Public Lands History Center, Colorado State University.

Although vegetation in the riparian areas recovered under Park Service management, the stewardship ethic was not always consistent. The first monument superintendent purchased three horses for backcountry patrol and kept them at Kozlowski's Trading Post. Although the horses were rarely used, their pasture northeast of the trading post gave the animals access to the sensitive floodplain and riparian zone along Glorieta Creek, an area already compromised by gravel excavation in the 1980s. Bobbi Simpson, the park's natural resources specialist, argued that the pasture location violated the Park Service's wetlands and floodplains management guidelines. In 1995 the monument staff began a study to relocate the pasture and address negative impact issues such as erosion, cowbirds, and invasives in the vicinity of the pasture.[107] Simpson noted the predominance of exotic vegetation species inside the corral, weakened bank structure where the horses could access the west side of Glorieta Creek, and the recovery of mostly native vegetation outside of the corral. "Overgrazing exacerbates our already profound exotic species and erosion problems," she wrote.[108]

Simpson suggested it might be necessary to sell the horses and keep no livestock at the park. Upon the recommendation of Judy Reed, the park's Cultural Resource Manager, the park also considered alterations to the existing management plan that would allow the park to keep the horses. "We suggest that the horses' contribution to the historic ranching landscape and usefulness to the staff in their performance of certain duties be compared to the animals' cost of maintenance when deliberating the fate of the Pecos horses," Reed argued. Suggested changes included expanding the size of the pasture, keeping the horses in the park only in summer months, and corraling them away from the creek. Former Forked Lightning ranch manager Gilbert Ortiz, who had been hired by the Park Service after the ranch transfer, suggested moving the horses to a more ecologically stable portion of the park bordered by Highway 63 near the old Las Vegas Highway. This would have required installation of a water tank and additional fencing, as well as a survey for cultural resource impact.[109] Because moving the horses to another pasture also presented resource management issues and would require ongoing provision of water and weed-free hay, the park staff ultimately decided to sell the horses.[110]

After the staff removed the horses, the park began a restoration project in 1999 on a 25-acre gravel quarry site along the same stretch of Glorieta Creek. The gravel pits dated to 1988 when the New Mexico Highway Department excavated gravel on the Forked Lightning Ranch.[111] The operation left two craters in the earth, and the workers bulldozed the remaining sand into levees and dams, creating two reservoirs that served as stock tanks for a few years until the ranch became part of the park. The earth moving operation also created a ten-foot-high pile of sand covering more than 15,000 square feet. The levees shed sediment into the creek as they slowly eroded. In August 1993 a severe flood on Glorieta Creek weakened the dike between the reservoirs. Three years later, low streamflow in the spring stranded about 4,000 fish in the western reservoir's rapidly evaporating pool. Although park staff transported half of the fish and a dozen tiger salamanders to the spring-fed eastern reservoir, the remaining fish died.[112]

In an effort to restore a self-regulating natural floodplain on the left bank of Glorieta Creek, the Park Service consulted with wetlands rehabilitation experts and reshaped the 5.6-acre site into ponds, wet meadows, willow thickets, and cottonwood groves. The restoration included upland slope stabilization and extensive seeding and planting of herbaceous wetland plants and trees, such as sedges, rushes, bulrushes, willow, and cottonwood.[113] Although the floodplain and riparian corridor of the creek segment through the park already possessed more abundant and diverse vegetation than during recent historic periods, the restoration further improved conditions

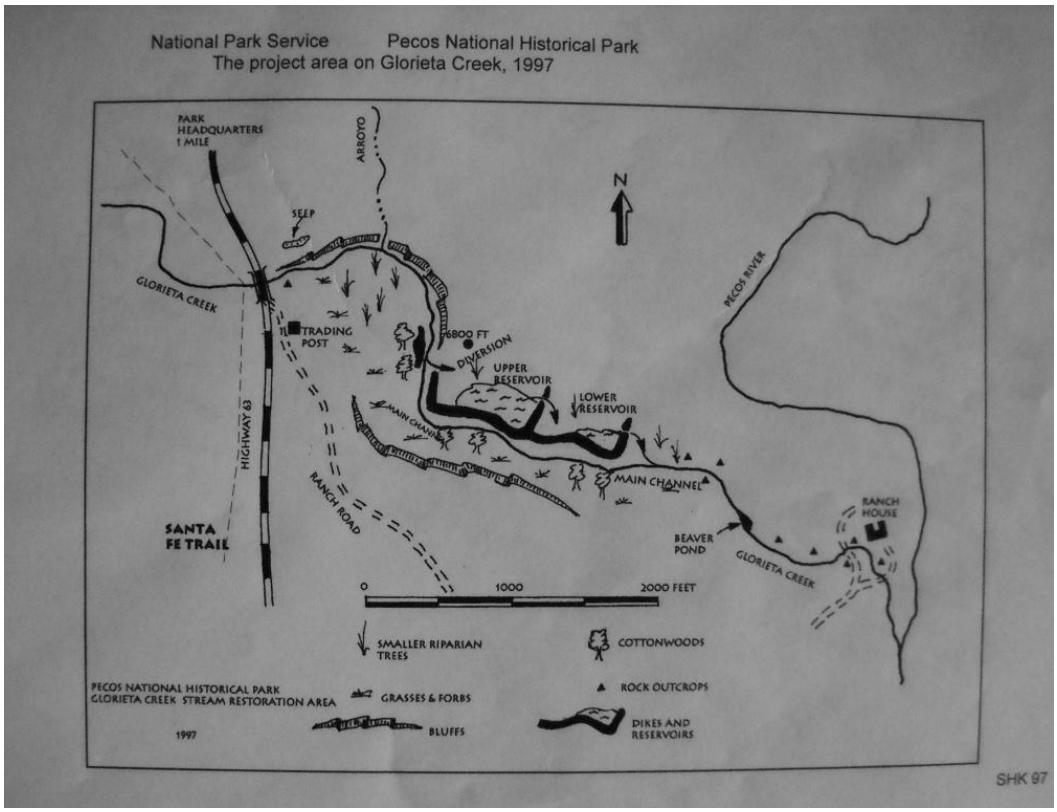

Figure 45.This diagram shows the dikes and reservoirs at the Glorieta Creek site prior to restoration. Source: "Glorieta Creek Restoration Project Planning Compliance Field Notes," Box 1, Folder 4, PECO 175, PNHP.

along the entire corridor. Following the restoration, normal flood cycles stimulated the reproduction of woody riparian species and improved native biodiversity.[114]

The extensive restoration at the gravel pit site demonstrated the increasing use of scientific management techniques in the Park Service, including historical parks such as Pecos. This evolution began in the early 1960s as environmentalists and scientists gained greater influence within the agency. In 1963, the same year that the Leopold Report was issued, , the National Academy of Sciences released a report on scientific research in the national parks. The committee supported many of the goals of the Leopold Report, stating that "national parks are not pictures on the wall; they are not museum exhibits in glass cases; they are dynamic biological complexes with self-generating changes."[115] Thirty years later, , the truth of this statement was evident to Pecos managers as they attempted to restore the park's riparian ecosystems, manage threats to water quality, and remove exotic species. Pecos may have been a "historical" park, but its landscape reflected and was influenced by contemporary changes and management decisions.

"National Parks…Have a Complex Biological History"

National parks were not pictures on a wall, and the National Academy of Sciences committee also recognized in its 1963 report that "national parks as they now exist have a complex biological history ranging from indiscriminate exploitation by logging, burning, [and] livestock grazing. . . through artificial protection from fires. . . .The activities of people within and in the vicinity of a national park have profoundly modified some of them."[116] That complex history had brought exotic species to Pecos and changes in the vegetation community due to grazing and fire suppression. The Park Service chose to add a new chapter to that history when it

began actively managing the environment, undertaking such projects as the restoration of Glorieta Creek. Park officials—and other land management agencies in the Southwest—also turned towards deliberately manipulating the densities of piñon and juniper.

Throughout the Southwest, the spread of piñon-juniper woodland was a central management issue for the Forest Service and the National Park Service in the twentieth century. In addition to the existing facilities and ruins on the mesilla, the several hundred acres of additional land added to Pecos National Monument in 1965 required management of piñon-juniper encroachment. When the employees on the Forked Lightning ranch cleared pastures in 1962, they had eliminated trees from the southern portion of the mesilla now inside the monument boundary. However, aerial photographs reveal that piñon-juniper markedly increased around the monument from 1929 to 1973, particularly around the pueblo. The density of piñon-juniper in the area had always fluctuated over time due to both human and natural causes. Although the term "encroachment" was often used, the trees were not necessarily moving into areas they had never occupied before. Whether moving into new areas or returning to older vegetation patterns, by 1983, piñon andjuniper trees dominated the vegetation within the national monument. Trees were abundant on the eastern and western slopes of the mesilla and on its northern edge, as well as along the eastern boundary fence. Individual trees were beginning to grow in the recently cleared grassland areas, fenced off by the Park Service in 1969 and 1974. [117] Although the Park Service allowed these areas to fill in with trees, staff continued to remove piñon and juniper growing near the ruin walls. In 1978 these trees, along with other piles of slash from former land-clearing operations, provided material for brush-and-fill check dams used to control erosion in gullied ravines.[118]

Both the Park Service and Forest Service tried to balance grassland ecosystems with woodland vegetation. Because the Forest Service had decades of experience with grassland restoration efforts in northern New Mexico, the Santa Fe National Forest Ranger District provided expertise and equipment for restoration projects in the valley, including at the national monument and the Forked Lightning Ranch. In the summer of 1969 the Park Service began a grassland restoration project on the twenty-five acres in the historic trade encampment area east of the mesilla. Forest Service personnel used a drill and hydromulch machine to reseed the area.[119] They tested three methods for establishing native grasses, including wheatgrass, Russian wildrye, blue grama, and spike muhly. In subsequent years, the Park Service treated kochia in the meadow with the same methods used around the ruins. Burtchin, in his study of the physical geography of the area, notes that 1973 aerial photos reveal precise rows of grasses growing where they were seeded, indicating that the new grasses filled in and spread rather slowly. His random sampling in 1983 documented a similar species composition including blue grama, spike muhly, western wheatgrass, and sand dropseed. Burtchin also noted that the full span of aerial photos suggested that "plants other than grasses do not easily become established in [the meadow east of the mesilla] for reasons that are not clear."[120]

The ratio of woodland to grassland remained relatively unchanged on the Forked Lightning Ranch through the 1980s. One former employee remembers that the extensively cleared areas required minimal maintenance. Another source suggests that the Fogelsons later expressed regret about the extensive clearing operation of the 1960s and said they had been influenced by federal programs that encouraged the clearing of native timber and grass re-seeding.[121] The ranch employees did conduct some additional tree removal with bulldozers on the land adjacent to the monument in the 1980s, "within view from the visitor use areas." These activities worried park officials, who were concerned that the pasture clearing operations might

destroy the viewshed and damage archaeological sites. Indeed, mechanical clearing did severely disturb many archaeological sites on the Forked Lightning Ranch.[122]

By the time the Park Service took over the northern half of the Forked Lightning Ranch and the two Glorieta subunits in 1990, many new trees were sprouting on the nearly 1500 acres of formerly cleared pastures.[123] Photographs and satellite imagery revealed the bulldozed windrow areas on the Forked Lightning. Subsequent studies estimated and described the piñon-juniper cover. A 1993 vegetation map estimated that piñon-juniper covered approximately forty percent of the Pecos Unit, including the national monument and the Forked Lightning Ranch, although mature stands covered only sixteen percent of the unit.[124] A botanical inventory conducted just two years later concluded that ninety percent of the Pecos Unit was piñon-juniper grassland.[125] In 1995 Dr. Craig Allen of the National Biological Service conducted a site visit with park staff and recommended immediate implementation of a prescribed fire program. He suggested beginning with the natural meadows east of the Pecos River, on the ridge tops north of Cañon de Los Trigos. He also recommended imitating the Forest Service thinning program in the piñon-juniper to improve the recovery of herbaceous understory, which grazing cattle had eliminated.[126]

The Forest Service had undertaken numerous clearing operations throughout the region, including on the Springs allotments on Glorieta Mesa in the 1960s and 1970s. The meadows gradually became dense stands of piñon-juniper over the subsequent decades, and in most areas were thicker than they were before mechanical removal fifty years before. Although tree thinning and livestock reduction were common Forest Service practices, the agency did not use prescribed burns as a vegetation management tool until the 1990s. The Southwestern Region of the Forest Service officially recognized the value of prescribed fire in its 1967 *Multiple Use Management Guide*, but the Santa Fe National Forest did not conduct controlled burns to reduce fuel load and improve wildlife habitat until 1989. In 1997 the Forest Service joined the Northern New Mexico Stockman's Association, the New Mexico State University Cooperative Extension Service, and the Quivira Coalition to form the Valle Grande Grassbank, an effort to provide a model of cooperative landscape restoration primarily focused on bringing back the grassy component of the ecological mosaic using prescribed burning and mechanical thinning.[127]

The increased use of thinning and prescribed burning to prevent large, uncontrolled fires emerged too late to prevent several large fires in the Pecos area. The year 2000 was the worst wildland fire year since 1910—there were 2,466 fires in New Mexico alone. In nearby Bandelier National Monument, the Park Service lost control of a prescribed burn and the resulting "Cerro Grande Fire" burned 47,650 acres and destroyed hundreds of homes in the Los Alamos area.[128] In the Pecos area, the "Monument Fire," probably started by a burning tire rim that ignited grasses bordering the interstate, burned the southwest portion of the Forked Lightning Ranch and crossed both LaJolla Road and Highway 63, eventually covering 160 acres. East of the Pecos River, the "Viveash Fire" burned 160 acres in the Cow Creek watershed. Both fires contributed to erosion and fish kills in the streams. Cyanide present in subsequent Pecos River water samples was likely due to the retardant used on the fire.[129] On the positive side, locals noticed deer recovery after the Viveash Fire as more desirable forage became available. Deer prefer several species that tend to re-sprout after a fire, including mountain mahogany, Wright silktassel, antelope bitterbrush, desert bitterbrush, serviceberry, blueberry elder, and black chokecherry.[130]

In addition to deer, the Upper Pecos valley experienced a general recovery of wildlife species in the latter decades of the twentieth century, and the protected Park Service lands became a refuge for mammals and birds. On the other hand, fencing around the Pecos Unit,

sandwiched between the Santa Fe National Forest on Glorieta Mesa and the national forest land east of the park, served as a corridor obstruction for larger, wider ranging mammals such as elk, black bear, mountain lion, and mule deer. The state highway running through the unit exacerbated this problem.[131] Although the 1973 Endangered Species Act required the Park Service to protect critical habitat for any identified endangered species within the monument boundaries, early surveys did not document any such species in the area.[132]

In the early years of Park Service management, deer and coyotes would occasionally enter the monument boundaries. Other mammal species documented in those early years included rabbits, skunks, and gophers.[133] Pocket gopher burrows threatened archaeological resources around the ruins, and park employees began using snap traps in the burrows in 1994.[134] A faunal survey that same year documented twenty-four mammal species. Casual surveys in the early site planning phases noted bird species such as piñon jays, juncos, sparrows, towhees, phoebes, blue birds, meadowlarks, a covey of scaled quail, and more rarely, roadrunners.[135] The noted phoebe species was probably Say's phoebe (*Sayornis saya*), a common summer resident in arid, open terrain. The ruins provide welcome habitat for this species that prefers to nest on flat projections of vacant buildings.[136]

In the mid-1990s, the park began summer surveys looking for nesting or migratory activity of the endangered Southwestern willow flycatcher (*Empodinax trailii extimus*) in the recovering willow stands under cottonwood overstory along Glorieta Creek and the Pecos River, but none of the birds were found within the park, perhaps because the willow stands had not yet achieved the desirable height of thirteen to twenty-three feet due to the lingering effects of cattle grazing. In 1992 someone spotted a nesting pair of willow flycatchers three miles upstream on the Pecos River near Monastery Lake. Because the ranch still contained short-grass grazing pastures, surveyors noted the problematic presence of brown-headed cowbirds (*Molothrus ater*), which practice brood parasitism on the flycatchers and other songbirds.[137]

Although they did not find willow flycatchers, bird surveyors did note feral dog packs roaming Park Service land. The packs preyed on the protected wildlife within the park boundaries, and ranchers in the Santa Fe National Forest also reported loss of calves from dog packs.[138] In 1999 Marten Schmitz, the Natural Resource Manager at the park, began a program in cooperation with San Miguel Animal Control to remove dogs from the park. Officials successfully removed 125 dogs in the first five years. As a result of the program, the park noted an immediate improvement in wildlife sightings, including gray foxes, bobcats, porcupine, jackrabbits, desert cottontail, and mule deer. A ranger spotted the first ringtail cat ever seen in the park.[139]

In 1980 the brown trout stocking program ended on the Pecos River, and in the 1990s native Rio Grande cutthroat trout were successfully transplanted to the Upper Pecos. In the mid-1990s, non-native brown trout and rainbow trout continued to flourish in the park's stretches of Glorieta Creek and the Pecos River, but so did many native fish species including the Rio Grande chub, longnose dace, white sucker, and fathead minnow.[140] Beaver activity may have increased in the park in the mid-twentieth century. The population had recovered to 6,000 by 1967 after decades of effort to restore the population after they had been trapped out in the 1800s.[141] The Fogelsons wrapped the base of cottonwoods with chicken wire mesh to prevent beaver herbivory, and in 1994 the park removed approximately one-third of the wire cages on some of the larger trees. A 1991 riparian survey along the Pecos River suggested that the decline in cottonwood forest reproduction was likely the result of both beaver herbivory and impact from livestock grazing and erosion.[142] Although the 1996 faunal survey did not find any beaver, they

were already abundant in stretches of the river north of the park. Park Service employee Eric Valencia reported that one of his neighbors had trapped thirteen beavers on their land north of the fish hatchery in the spring of 2009.[143]

The elk browsing in a meadow, the trout swimming in the Pecos River, the fragrant boughs of piñon pine—these were all important elements of the landscape, both to locals and tourists. The Davidsons, on their visit to Pecos in the 1970s read glowing descriptions of New Mexico's environment in brochures. One described the area around Santa Fe in autumn, when "bright yellow chamisa lines the roadway; in the mountains behind, unbelievable stands of brilliant aspens take the color of the sun, all accentuated by the purplish shadows."[144] Tourists found it easy to imagine a pristine landscape that had seen little change through the centuries. In reality, when the Park Service took over management of the national monument and later the additional units, the environment reflected centuries of human use and impacts. The Park Service staff added a new chapter to that history as they restored Glorieta Creek, cleared piñon and juniper, and built visitor facilities.

Although there is a growing interest in restoring local food production and acequia-centered communities, use of local resources for recreation and cultural preservation has replaced nearly all subsistence activities in the Upper Pecos valley. Traditional economic activities have shifted with the rise of consumerism and tourism in the twentieth century. The landscape reflects the ongoing clashing and blending of cultures meeting at a crossroads.[145] The Pecos descendants' sense of place and their physical relationship to the pueblo ruins remain even though they have not lived at Pecos for over a century. The local Hispanic community members retain their own sense of place based on their cultural heritage and are still invested in the fate of former land grant property.[146] Federal agencies such as the Park Service bring their own perspectives on the environment as they restore riparian corridors and preserve historic structures. Travelers and new arrivals in "The Land of Enchantment" build their own sacred landscapes when they speak of feeling intimately connected to the beauty of the environment. "This vast and beautiful state casts spells on a visitor," a tourism brochure read in the 1970s, and the same holds true for many visitors and residents today.[147] The landscape of the Pecos valley is a site that brings together many stories, values, and beliefs that create a different vision for each person who gazes out from the mission ruins on a sunny day or drives their car past old adobe buildings and tumbled fences.

Conclusion

We stood next to the Pecos River, pondering the old metal bridge stretched over the water. No road led up to the bridge or extended past it on the other side. It was a forgotten remnant of some earlier time, left behind on the river. The three of us—Mark Fiege, Maren Bzdek, and I—had come to Pecos to begin an environmental history for the National Park Service. We were walking the landscape, trying to get a feel for the environment, observing evidence of past land use in the area. At the time we had not encountered Hobe-wagi, Helen Kozlowski, Juan de Dios Peña, Greer Garson, or any of the others who had lived in or traveled through Pecos over the centuries. We did not know that the bridge had been used for transporting railroad ties when the Atchison, Topeka, & Santa Fe railroad built tracks through Pecos in 1880. We did not know that Hispanic homesteads once dotted the slopes above the river or that Greer Garson and her friends had picnicked along its banks.

Figure 46. Remains of the Colonias bridge over the Pecos River. Source: Public Lands History Center, Colorado State University.

As we learned more about the Pecos environment, a picture of a complex landscape emerged, a landscape that had experienced continuous change over time. Some of those changes arose from the environment itself—the effects of drought or fire, the slow erosion of rock and soil. Other changes, though, occurred due to the influence and presence of humans, who arrived at Pecos with distinct cultural systems that governed perceptions of the environment and land use. People created cultural landscapes in the Pecos valley that reflected those perceptions—the Pecos who hollowed out kivas and planted fields of maize, the Spanish who brought sheep and built homesteads, the Americans who constructed a railroad and created forest reserves. Yet the history of Pecos is also about the intersections between these cultural systems. The conflict and

compromises between the different people who met at Pecos transformed the landscape. Pecos was never an environment influenced by only one cultural group. Because of Pecos's geographical position and the resources located in the valley, it always served as a point of trade and contact where cultures met and melded.

Today, the National Park Service manages and interprets three distinct landscapes in the park—the pueblo ruins, the Glorieta Pass battlefield, and the Forked Lightning Ranch. These landscapes, situated in different points in time, offer a unique opportunity for visitors to grasp the many changes that have occurred at Pecos. Although each landscape may feature elements from one period in Pecos history, they are not frozen in time. The Forked Lightning Ranch landscape, for example, which features structures from the twentieth century, also includes segments of the Santa Fe Trail and prehistoric archeological sites. Ultimately, Pecos is a landscape situated in the present. It is actively managed and continues to respond to change. People still place Pecos within their cultural system, whether they are Pecos Indians, tourists, local residents, Park Service officials, or visiting researchers.

Although we can imagine Hobe-wagi or Helen Kozlowski standing by the Pecos River, we can never completely see the Pecos environment through their eyes. Inevitably, present perceptions and our own cultural biases color our interpretations of the past. And although the environment itself still harbors evidence of past change—fire-scarred trees, the ruts of a wagon road, the proliferation of exotic species—such clues are often fragmentary or elusive. In some ways, the Pecos River is the same river for us that it was for people in the past. But in other ways, both environmental and cultural, the river is reborn with each new cultural landscape it flows through.

Chapter Six

[1] Bandelier, *Historical Introduction*, 38.
[2] Ibid., 39-40.
[3] See William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991) for an excellent discussion of the railroad's transformative impacts on Western economies. Robbins, *Colony and Empire* also discusses the economic results of railroads and how they created eastern and global connections in the West.
[4] Cronon, *Nature's Metropolis*, 97-259.
[5] Ibid., 99-147.
[6] John V. Bezy and Joseph P. Sanchez, eds., *Pecos: Gateway to Pueblos and Plains; the Anthology* (Tucson: Southwest Parks and Monuments Association, 1988), 112-114.
[7] John Brinkerhoff Jackson, "Looking at New Mexico," in *Landscape in Sight: Looking at America*, ed. Helen Lefkowitz Horowitz (New Haven: Yale University Press, 1997), 65.
[8] Amy C. Earls, "Historic Land Use in the Rowe Area," 1980, report on file, PNHP, 15-17.
[9] Head and Orcutt, *From Folsom to Fogelson*, 2: 403.
[10] Bandelier, *Historical Introduction*, 40.
[11] U.S. Department of Agriculture Forest Service, "Santa Fe National Forest, Pecos/Jemez Division, Temporary Base Map," 1915, in "Pecos River Forest Reserve Maps," Drawer 10, Folder 49, New Mexico State Archives, Santa Fe, NM (hereafter, NMSA).
[12] Head and Orcutt, *From Folsom to Fogelson*, 2:400-405.
[13] David "A" Gillio, "Santa Fe National Forest Area: An Historical Perspective for Management," Cultural Resources Report No. 30 (Albuquerque: U.S. Department of Agriculture Forest Service Southwestern Region, 1979), 25-26.
[14] Bezy and Sanchez, *Pecos: Gateway to Pueblos and Plains*, 114.
[15] Hall, *Four Leagues of Pecos*, 176, 188-89.
[16] Bandelier, *Historical Introduction*, 100-101.
[17] Hall, *The Four Leagues of Pecos*, 146.
[18] "Economic Features Part of Central New Mexico, Atlas Sheet No. 77 (B); Issued May 7th 1877; Weyss, Herman & Lang Del. Expeditions of 1871 & 1876 Under the Command of 1st. Lieut. Geo. M. Wheeler, Corps of Engineers, U.S. Army. U.S. Geographical Surveys West Of The 100th Meridian," available at **http://www.davidrumsey.com/directory/where/New+Mexico/** (accessed September 16, 2009).
[19] Scurlock, "From the Rio to the Sierra," 128-129.
[20] The remains of the bridge that are visible today do not represent the earliest construction. The current bridge may have been constructed by the Civilian Conservation Corps during the 1930s or it may have been installed earlier, in the period from 1913 to 1929. Highway department employees remembered working on the bridge around 1944. Head and Orcutt, *From Folsom to Fogelson* 2: 417; Authors' interviews with former ranch employees, June 12, 2009; Handwritten notes presumably from the 1960s when E.E. Fogelson's lawyer, John S. Catron, was investigating the possibility of getting the state to close the Colonias road, in Folder 22, Box 1, PECO 380, PNHP. Head and Orcutt include a detailed overview of the remains of historic roads in the Pecos vicinity.
[21] U.S. Forest Service, "Santa Fe National Forest, Pecos/Jemez Division, Temporary Base Map" 1915.
[22] Jill Cowley, Maureen Joseph, and Diane Rhodes, "Cultural Landscape Overview: Pecos National Historical Park, New Mexico," 1998, report on file, PNHP, "Railroad and Tourism" map supplement.
[23] A map from the 1877 Wheeler survey shows that earlier the road went in a more northwesterly direction, splitting off from the Santa Fe Trail at Kozlowski's, continuing up to Pecos, and then heading east to Colonias. The later road, though, went directly north from Rowe to Pecos, bypassing Kozlowski's, to what was now the center of the town of Pecos before following the old route east Wheeler, "Economic Features Part of Central New Mexico, Atlas Sheet No. 77 (B); Issued May 7th 1877."
[24] In the 1920s a formal highway took the place of the trail when U.S. Route 85 was constructed. The route may have been built in 1924—it appears on road maps by 1930. Route 85 generally paralleled the Santa Fe Trail in the Pecos area. Route 66 merged with Route 85 around Bernal, NM and split off from Route 85 again past Santa Fe around Los Lunas, NM. By 1941, Route 85 was known as Route 84/85. "New Mexico State Highway System," 1912; "Sketch Map Showing El Camino Real and State Highways," 1900; "Map Showing Condition of State Roads," 1920, State Highway Commission; "Road Map of New Mexico," 1930, State Highway Commission; "Official Road Map of New Mexico, 1941," State Highway Commission. All available at http://www.nmshtd.state.nm.us/main.asp?secid=16119 (accessed August 20, 2009).
[25] Cronon, *Nature's Metropolis*, 74-81.

[26] Hall, *Four Leagues of Pecos,* 179-91.
[27] Sarah Deutsch, *No Separate Refuge: Culture, Class, and Gender on an Anglo-Hispanic Frontier in the American Southwest, 1880-1940* (New York: Oxford University Press, 1987), 24-26.
[28] Hall, *Four Leagues of Pecos,* 200.
[29] The Gross Kelly Company, after obtaining title to the grant in 1898, constructed a spur railroad line extending northwards from the main AT&SF railroad to reach their sawmills and tie cutting operations in the northern portions of the grant. The spur may have been constructed around 1910 and remained in use until the 1940s. The spur appears on a BLM survey map from 1934. Probably the spur began at Decatur, which would have provided switching and unloading services. Vincent K. Jones, "Report on the Pecos Pueblo Grant, New Mexico, 1913, p. 18, in Folder 21, "Real Estate-Land Grants: Pecos Pueblo Grant, 1913," Francis C. Wilson papers, NMSA; Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," "Railroad and Tourism" map supplement; "Supplemental Plat, Private Claims within the Pecos Pueblo Grant Sections 1,5, and 6," Approved 2/23/1934, Township 15 N, Range 11 and 12 E, available at http://www.glorecords.blm.gov/SurveySearch/Results.asp?QryId=48444.87 (accessed August 20, 2009).
[30] Hall, *Four Leagues of Pecos,* 193-196, 209-213.
[31] Ibid., 202-207.
[32] Ibid., 216-17, 264.
[33] Head and Orcutt, *From Folsom to Fogelson,* 2: 389-397; Jones, "Report on the Pecos Pueblo Grant" 4.
[34] Bandelier, *Historical Introduction,* 113-114.
[35] deBuys, *Enchantment and Exploitation,* 219-222, 247; Burtchin, "The Physical Geography of Pecos National Monument," 66.
[36] Hall, *Four Leagues of Pecos,* 144, 177.
[37] Young, "History of Ranching and Trading," 6-7, 34-37; Peggy A. Gerow, "Cultural Resources Inventory of Pigeon's Ranch Subunit, Pecos National Historical Park, Santa Fe County, New Mexico," 2010, report on file, PNHP, 103.
[38] See for example, "Glorieta Battlefield, Glorieta, NM, June 1880," photo by Ben Wittick, original negative at Museum of New Mexico (hereafter, MNM), negative no. 15788, copy on file at PNHP; also "Pigeon's Ranch, Glorieta, NM, 1880," photo by Ben Wittick, original negative at MNM, negative no. 015781, copy on file at PNHP.
[39] "Field Notes of the Official Survey of Lands Subject to Taxation of Precinct No. 13.---(Glorieta), Santa Fe County, New Mexico, as surveyed by John L. Zimmerman, esq., County Surveyor," 1901, 1973-002, Santa Fe County Records, Series 9—County Surveyor, Subseries 9.1.1 Survey Notes, Box 22, Folder 22/13: Precinct 13, Glorieta, 1901, NMSA.
[40] Simmons and Jackson, *Following the Santa Fe Trail*, 215.
[41]Spude, "Pigeon's Ranch Historic Structure Report," 9-10; "Old Stagecoach Relay Station on the Santa Fe Trail near Santa Fe, NM," original negative at MNM, negative no. 47936, copy on file at PNHP; "Canyoncito, NM, 1914," photo by Waldo Twitchell, original negative at MNM, negative no. 8834, copy on file at PNHP.
[42] National Register of Historic Places Inventory-Nomination, "Nuestra Señora de Luz Church and Cemetery, Cañoncito, NM," 1995, p. 5.
[43] "Canyoncito, NM, 1914," photo by Waldo Twitchell, original negative at MNM, negative no. 8834, copy on file at PNHP.
[44] Young, "History of Ranching and Trading," 8.
[45] Head and Orcutt, *From Folsom to Fogelson* 2:404; Hall, *Four Leagues of Pecos,* 124.
[46] Jones, "Report on the Pecos Pueblo Grant" 14; Vincent K. Jones, "Plat Showing the Cultivated Land of Tomas Koslosky within the Pecos Grant," 1913, in Folder 67, Drawer 12, Maps: Pueblo Land Grants, NMSA; Young, "History of Ranching and Trading," 8; Head and Orcutt, *From Folsom to Fogelson* 2: 402.
[47] Head and Orcutt, *From Folsom to Fogelson* 2:404-406.
[48] "Pecos River Farmers to Place Head Lettuce on Market in Next Week," *Las Vegas Daily Optic*, June 27, 1925; "Pecos River Farmers to market High Grade Crop of Lettuce First Time," *Las Vegas Daily Optic*, July 7, 1925.
[49] Deutsch, *No Separate Refuge,* 13-40, 124.
[50] Carol Raish and Alice M. McSweeney, "Economic, Social, and Cultural Aspects of Livestock Ranching on the Española and Canjilon Ranger Districts of the Santa Fe and Carson National Forests: A Pilot Study," General Technical Report RMRS-GTR-113 (Fort Collins, CO: USDA Forest Service, Rocky Mountain Research Station, 2003); Deutsch, *No Separate Refuge,* 51-52.
[51] Courtney White and Earl Porter, "The Catanach Mill: A Grist Mill in the Upper Pecos Valley," 1996, report on file, PNHP, 2-1 through 2-2.

[52] White and Porter, "The Catanach Mill," 2-3 through 2-4.
[53] Ibid., 1-1 through 1-5.
[54] Quoted in White and Porter, "The Catanach Mill," 2-4.
[55] White and Porter, "The Catanach Mill," 2-4 through 2-6.
[56] Jones, "Report on the Pecos Pueblo Grant," 11.
[57] White and Porter, "The Catanach Mill," 2-4; Jones "Report on the Pecos Pueblo Grant."
[58] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 31, 35.
[59] Bandelier, *Historical Introduction,* 101.
[60] Copy of photo printed in deBuys, *Enchantment and Exploitation,* 90.
[61] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 39.
[62] deBuys, *Enchantment and Exploitation,* 221-222, 233.
[63] E.O. Wooton and Paul C. Standley, *Flora of New Mexico,* vol. 19, *Contributions from the United States National Herbarium* (Washington D.C.: Government Printing Office, 1915), 427, 199-200, 100, 577. See Appendix C for a more thorough overview of non-native and invasive species at Pecos.
[64] Bandelier, *Historical Introduction,* 41.
[65] "Glorieta Creek from Pecos Pueblo, Looking Northwest," 1915, Lothrop photo, original in MNM, negative no. 12330e, copy in Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 61; "Glorieta Creek Floodplain, Looking West Toward Glorieta Mesa," 1915, Lothrop photo, original in MNM, negative no. 12325, copy in Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 61.
[66] Kidder, *Pecos, New Mexico,* 3.
[67] Ibid., 131.
[68] Head and Orcutt, *From Folsom to Fogelson,* 1:13.
[69] Bandelier, *Historical Introduction,* 88-89.
[70] Kidder, *Pecos, New Mexico,* 118.
[71] deBuys, *Enchantment and Exploitation,* 216.
[72] Ibid.
[73] Rose, Dean, and Robinson, *The Past Climate of Arroyo Hondo,* 94.
[74] Ronald U. Cooke and Richard W. Reeves, *Arroyos and Environmental Change in the American South-West* (Oxford: Clarendon Press, 1976), 1.
[75] Cooke and Reeves, *Arroyos and Environmental Change,* 1-20.
[76] Ibid.
[77] Milton W. Callon, *Las Vegas: The Town that Wouldn't Gamble* (Las Vegas, NM: Las Vegas Publishing Co., Inc., 1962), 250; NPS, "Water Resource Management Plan," 8.
[78] deBuys, *Enchantment and Exploitation,* 280.
[79] White, *"It's Your Misfortune and None of My Own,"* 406-409; see Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge: Harvard University Press, 1959) for an overview of the movement; Karl Jacoby, in *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley and Los Angeles: University of California Press, 2001), provides an insightful overview of how the conservation movement often deprived local residents, particularly Native Americans, of their lands and livelihoods—similar to what occurred in New Mexico as communal lands passed to government ownership.
[80] Harold K. Steen, *The U.S. Forest Service: A History,* Centennial Edition (Durham, NC: Forest History Society, 2004), 26.
[81] Gillio, "Santa Fe National Forest Area," 26.
[82] Quoted in Steen, *The U.S. Forest Service,* 36.
[83] Gillio, "Santa Fe National Forest Area," 26-29; Steen, *The U.S. Forest Service,* 71-75; Robert D. Baker et al., *Timeless Heritage: A History of the Forest Service in the Southwest* (N.p.: USDA Forest Service, 1988), 28.
[84] Hays, *Conservation and the Gospel of Efficiency,* 2-4; Steen, *The U.S. Forest Service,* 3-20, 47-68, 78-81.
[85] Jon T. Coleman, in *Vicious: Wolves and Men in America* (New Haven: Yale University Press, 2004), discusses the history of extermination campaigns against wolves. The USDA Biological Survey undertook many of the predator control activities in the twentieth century but Forest Service rangers and local hunters and ranchers followed many of the same practices and held the same beliefs. Stephen Pyne, in *Year of the Fires: The Story of the Great Fires of 1910* (New York: Penguin Books, 2001), argues that the agency's policies of fire suppression originated as a way to justify their existence and thus became an unquestioned tenet of the agency.

[86] deBuys, *Enchantment and Exploitation,* 219-222; Burtchin, "The Physical Geography of Pecos National Monument," 66.
[87] Gillio, "Santa Fe National Forest Area," 29.
[88] deBuys, *Enchantment and Exploitation,* 210.
[89] Elliott S. Barker, *Beatty's Cabin: Adventures in the Pecos High Country* (Santa Fe: W. Gannon, 1977), 45-46.
[90] U.S. Forest Service, "Springs Allotment, Pecos District," in Folder 2210: Range Management Planning, Folder 515: Springs Allotment Pecos District, at USDA Forest Service, Forest Supervisor's Office archives, Santa Fe, NM, hereafter FSO. The majority of the surviving data on these allotments, consisting of planning and analysis reports, begins in the late 1940s, although some references are made to earlier conditions.
[91] William D. Rowley, *U.S. Forest Service Grazing and Rangelands: A History* (College Station: Texas A&M University Press, 1985), 60-75.
[92] Baker, et. al, *Timeless Heritage,* 50.
[93] "Elk Herd Found in Good Shape at Valley Ranch," *Las Vegas Optic,* April 23, 1915.
[94] John W. Johnson, *Reminiscences of a Forest Ranger, 1914-1944* (Dayton: Brown and Kroger Publishing Co., 1976), 43.
[95] deBuys, *Enchantment and Exploitation,* 280.
[96] "More Fish, More Fun," in *New Mexico Wildlife,* New Mexico Department of Fish and Game Newsletter, vol. 54, no. 2, summer 2009, available at: http://www.wildlife.state.nm.us (accessed October 19, 2009).
[97] Barker, *Beatty's Cabin*, 18.
[98] Baisan and Swetnam, "Interactions of Fire Regimes," 14.
[99] Adolf F. Bandelier, *The Delight Makers* (New York: Dodd, Mead and Company, 1890); John Urry, *The Tourist Gaze: Leisure and Travel in Contemporary Societies* (London and Newbury Park: Sage Publications, 1990).
[100] Magoffin, *Down the Santa Fe Trail,* 99-100.
[101] Victoria E. Dye, *All Aboard for Santa Fe: Railway Promotion of the Southwest, 1890s to 1930s* (Albuquerque: University of New Mexico Press, 2005), quote on page 27.
[102] Sylvia Rodriguez, "Tourism, Difference, and Power in the Borderlands," in *The Culture of Tourism, the Tourism of Culture: Selling the Past to the Present in the American Southwest*, ed. Hal K. Rothman (Albuquerque: University of New Mexico Press, 2003), 185-188.
[103] Ibid., 194.
[104] Head and Orcutt, *From Folsom to Fogelson* 1:21-27; Richard B. Woodbury, "From Chaos to Order: A. V. Kidder at Pecos," in *Pecos Ruins: Geology, Archaeology, History, and Prehistory*, ed. David Grant Noble (Santa Fe: Ancient City Press, 1993 and 1981), 15.
[105] Dye, *All Aboard for Santa Fe*, 44-53.

Chapter Seven
[1] "Tex Austin and His Pecos Ranch" photocopy in PNHP; "Annual Chicago Rodeo Expected to Go Over Big," *Las Vegas Daily Optic*, June 2, 1927.
[2] Climax was a tobacco brand and Panatella a cigar brand.
[3] "Clem Yore Writes of Early Life of Austin in Entertaining Way," *Las Vegas Daily Optic*, October 24, 1927; "Good Time Had by All During Austin Dinner," *Las Vegas Daily Optic*, October 22, 1927; "Tex Austin Day to be Asked in Paper Presented Council," *Las Vegas Daily Optic*, September 22, 1927; Victoria Carlyle Weiland, *100 Years of Rodeo Stock Contracting* (Reno, NV: The Professional Rodeo Stock Contractors Association, 1997), 26.
[4] "Clem Yore Writes of Early Life of Austin in Entertaining Way;" Weiland, *100 Years of Rodeo Stock Contracting*, 26. Another reference to Tex Austin riding with Pancho Villa occurs in a biographical sketch written for the program of the rodeo held in London in 1924—again, a context where myth was far more important than fact. "First International Rodeo or Cowboy Championships," 1924, located in Austin, Tex, Rodeo Honoree Vertical Files, Dickinson Research Center, National Cowboy & Western Heritage Museum, Oklahoma City, OK (hereafter, DRC).
[5] Lizabeth Cohen, *A Consumer's Republic: The Politics of Mass Consumption in Postwar America* (New York: Knopf, 2003); Foner, *The Story of American Freedom*, 146-147; Paul S. Sutter, *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002), 19-27.
[6] Sutter, *Driven Wild*, 19-27; Lawrence M. Lipin, in *Workers and the Wild: Conservation, Consumerism, and Labor in Oregon, 1910-30* (Urbana and Chicago: University of Illinois Press, 2007), provides a specific case study of how automobiles altered workers' experience of the environment; Peter J. Schmitt, in *Back to Nature: The Arcadian Myth in Urban America* (New York: Oxford University Press, 1969), discusses the development of the outdoor recreation movement.

[7] Sutter, *Driven Wild*, 27-30.
[8] "Tex Austin's Forked Lightning Ranch," DRC.
[9] Louis S. Warren, *Buffalo Bill's America: William Cody and the Wild West Show* (New York: Alfred A. Knopf, 2005), 425. Warren discusses people's fascination with the frontier, in particular as it related to spectacles like rodeos or the Wild West Show.
[10] Young, "Ranching History," 10-11.
[11] "Austin Buys a 6,000 Acre Tract of Land within Pecos Grant," *Las Vegas Optic*, September 15, 1925.
[12] Head and Orcutt, *From Folsom to Fogelson* 2:389, 393-395.
[13] "Supplemental Plat, Private Claims within the Pecos Pueblo Grant Sections 2-11, 14-17, and 20-23," Approved 2/23/1934, Township 15 N, Range 12 E; "Supplemental Plat, Private Claims within the Pecos Pueblo Grant Sections1-2, 6-8, 11-14, and 17-24," Approved 2/23/1934, Township 15 N, Range 12 E, both available at http://www.glorecords.blm.gov/SurveySearch/Results.asp?QryId=38970.6 (accessed October 2, 2009).
[14] James Ivey, "A History of the Establishment of Pecos National Monument,"1987, report on file, PNHP, 5.
[15] Some historical and archaeological reports state that the site of the ranch house had also accommodated a Hispanic settlement as early as the 1860s. The authors of the Cultural Resources Inventory called this a "rumor." Their investigation only found artifacts associated with the Tex Austin period at the ranch house but noted that they did not do any extensive digging, so it is possible that the site was occupied by Hispanic settlers at some point. Sloan, "Historic Structures Report," 28; Head and Orcutt, *From Folsom to Fogelson 2*: 383.
[16] Sloan, "Historic Structures Report," 11-22
[17] White and Porter, "The Catanach Mill," 1-2 to 1-3.
[18] "It's Always Cool at the Forked Lightning Ranch," Folder 1, Box 39, Real Estate Case Files, Tex Austin's Ranch, The Forked Lightning, 1933-37, Francis C. Wilson papers 1981-017, NMSA.
[19] "Tex Austin and His Pecos Ranch" photocopy in "Tex Austin's Forked Lightning Ranch" folder, PNHP.
[20] "It's Always Cool at the Forked Lightning Ranch."
[21] "Eatments and Libations…at Tex Austin's," photocopy in "Tex Austin's Forked Lightning Ranch" folder, PNHP.
[22] "Tex Austin and His Pecos Ranch."
[23] "It's Always Cool at the Forked Lightning Ranch"; "Tex Austin's Forked Lightning Ranch."
[24] Tex Austin's Forked Lightning Ranch."
[25] Young, "Ranching History," 48; "Tex Austin and His Pecos Ranch."
[26] "Tex Austin and His Pecos Ranch"; "Tex Austin's Forked Lightning Ranch."
[27] Letter, From: The Reconstruction Finance Corporation, To: Mr. Gregson, Examiner, Re: Central Republic Trust Company, Chicago, IL (closed), Tex Austin Ranch, October 1, 1935, p. 3, PECO unprocessed, Francis Wilson papers, PNHP.
[28] "Tex Austin's Forked Lightning Ranch." A letter written in 1935, during the bankruptcy proceedings for Tex Austin's ranch, stated that a flood that summer had destroyed the bridge over Glorieta Creek that went to the ranch house. The letter continued to say that the creek was "dry for practically the entire year," and thus the arroyo was "always passable." Around 1937 a new road to the ranch house was built that struck directly east from the main road as opposed to circling around Kozlowski's Trading Post. Letter, From: The Reconstruction Finance Corporation, To: Mr. Grover Conway, State Highway Engineer, March 16, 1937, PECO unprocessed, Francis Wilson papers, PNHP; Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," Railroad/Tourism map; Letter, From: The Reconstruction Finance Corporation, To: Mr. Grover Conway, State Highway Engineer, March 16, 1937, PECO unprocessed, Francis Wilson papers, PNHP.
[29] Barker, *Beatty's Cabin*, 91-93.
[30] Photos in Kidder, *Pecos, New Mexico*, 11-12, 57, 150, 205, 337.
[31] In 1937 Route 66 was realigned to pass directly from Santa Rosa to Albuquerque and no longer went through Pecos. Young, "History of Ranching," 9, 38-39; Bill Greer, interview by Andrew Young, January 12 and 13, 1998, transcript, Folder 17, Box 2, PECO 380, PNHP; Spude, "Pigeon's Ranch Historic Structures Report," 12-13; Jerry McClanahan, "The Lost Highway," *Route 66 Magazine* (Winter 1994/1995): 25-30; Peter B. Dedek, *Hip to the Trip: A Cultural History of Route 66* (Albuquerque: University of New Mexico Press, 2007).
[32] Another business serving tourists in the Pigeon's Ranch area was the Arrowhead Lodge, built in the 1930s by an unknown entrepreneur. Serving the tourists who came to the valley to hunt, fish, and visit the area attractions, the complex consisted of a main lodge and seven cabins. In the 1960s it became a Methodist camp but by the early 1970s was a private residence. Young, "History of Ranching," 9, 38-39; Bill Greer, interview by Andrew Young; "Pigeon's Ranch, Glorieta, NM, ca. 1925," copy of photo in PNHP, original negative at MNM, negative #51739; "Glorieta, NM, ca. 1935," photo by T. Harmon Parkhurst, copy of photo in PNHP, original negative at MNM,

negative #9690; "Pigeon's Ranch, Glorieta, NM, ca. 1935," photo by T. Harmon Parkhurst, copy of photo in PNHP, original negative at MNM, negative #9689; Gerow, "Cultural Resources Inventory of Pigeon's Ranch Subunit," 103,106.
[33] Hall, *Four Leagues of Pecos*, 256.
[34] See Hall, *Four Leagues of Pecos,* 221-278 for a complete discussion of the 1924 Pueblo Lands Act as it pertained to Pecos; Levine, *Our Prayers Are in this Place,* 124-125.
[35] Hall, *Four Leagues of Pecos*, 221-278.
[36] Ibid., 267.
[37] Ibid., 221-278.
[38] Ibid., 221-278.
[39] Letter from Cotton, Cotton Exchange Building, Oklahoma City to Francis C. Wilson, March 8, 1936, Folder 2, Box 39, Real Estate Case Files, Tex Austin's Ranch—The Forked Lightning, 1933-1937, Francis C. Wilson papers 1981-017, NMSA.
[40] "First International Rodeo or Cowboy Championships."
[41] "Tex Austin and His Pecos Ranch."
[42] Johnson, *Reminiscences of a Forest Ranger,* 29.
[43] "Allotment Analysis: Ortiz Spring Allotment: Reanalysis, 1966," Folder 2210 Range Management Planning, Folder 510, Springs Allotment, Pecos Ranger District, FSO.
[44] "Springs Allotment Management Plan, 1973," Folder 2210 Range Management Planning, Folder 515 Springs Allotment, Pecos Ranger District, Santa Fe National Forest office, Santa Fe, NM; Handwritten notes of range inspection by F.N. Newnkam, 1947, Folder 2210 Range Management Planning, Glorieta and Apache Canyon Allotments, Forest Service Pecos District Office, Pecos, NM (hereafter, FSPD).
[45] "Narrative report of recommendations to close to all grazing the Apache Canyon allotment, Tesuque Ranger District, Santa Fe National Forest," Folder 2210 Range Management Planning, Glorieta and Apache Canyon Allotments, FSPD.
[46] Rowley, *U.S. Forest Service Grazing and Rangelands*, 92.
[47] Johnson, *Reminiscences of a Forest Ranger,* 42-57.
[48] Burtchin, "Physical Geography of Pecos National Monument," 66.
[49] "Men Face Double Counts as Result of Taking Sheep," *Las Vegas Optic*, July 22, 1927.
[50] "In the Matter of the Unlawful Detention of John Condon, 1926," in Folder 177, Box 5, John Noble Papers 1973-044, NMSA.
[51] Johnson, *Reminiscences of a Forest Ranger,* 39-41, 76-77.
[52] Romme, et al., "Historical and Modern Disturbance Regimes, Stand Structures, and Landscape Dynamics in Piñon-Juniper Vegetation of the Western U.S.," 1-2, 19. For a selection of other studies of piñon juniper woodlands and various opinions on the issue of encroachment see Stephen T. Gray, et al., "Role of Multidecadal Climate Variability in a Range Extension of Pinyon Pine," *Ecology* 87, no. 5 (2006):1124-1130; M. R. Schott and R. D. Pieper, "Succession of Pinyon-Juniper Communities after Mechanical Disturbance in Southcentral New Mexico," *Journal of Range Management* 40, no. 1 (Jan. 1987): 88-94; B. F. Jacobs, W. H. Romme, and C. D. Allen, "Mapping 'Old' vs. 'Young' Piñon-Juniper Stands with a Predictive Topo-Climatic Model," *Ecological Applications* 18, no. 7 (2008): 1627-1641; Brian K. Hastings, Freeman M. Smith, and Brian F. Jacobs, "Rapidly Eroding Piñon-Juniper Woodlands in New Mexico: Response to Slash Treatment," *Journal of Environmental Quality* 32 (2003): 1290-1298; A. Thomas Harris, Gregory P. Asner, Mark E. Miller, "Changes in Vegetation Structure after Long-Term Grazing in Pinyon-juniper Ecosystems: Integrating Imaging Spectroscopy and Field Studies," *Ecosystems* 6, no. 4 (June 2003): 368-383; Dale G. Brockway, Richard G. Gatewood, and Randi B. Paris, "Restoring Grassland Savannas from Degraded Pinyon-juniper Woodlands: Effects of Mechanical Overstory Reduction and Slash Treatment alternatives," *Journal of Environmental Management* 64 (2002): 179-197.
[53]"Aerial View Dick's Ruin, NM, 1929," photo by Charles Lindbergh, original on file at MNM, negative no. 130332, copy on file PNHP; "Aerial View Pecos Ruin, Pecos, NM, 1929," photo by Lindbergh, original on file at MNM, negative no. 130352, copy on file PNHP; "Aerial View Pecos Ruin, Pecos, NM, 1929," photo by Lindbergh, original on file at MNM, negative no. 130368, copy on file PNHP; "Aerial View Forked Lightning Ruin near Pecos, NM, 1929," photo by Lindbergh, original on file at MNM, negative no. 130324, copy on file PNHP; "Aerial View Pecos Ruin, Pecos NM, 1929," photo by Lindbergh, original on file at MNM, negative no. 130325, copy on file PNHP.
[54] "Wounds are Fatal to Forest Ranger," *Las Vegas Daily Optic*, March 21, 1927.
[55] Head and Orcutt, *From Folsom to Fogelson* 2:382.

[56] Information on the Tererro Mine is drawn from Virginia T. McLemore, "Pecos Mine and Alamitos Canyon Mill," 1995, p. 1-2, Folder 2, Box 1, PECO 384, PNHP; Wes Darden, "Boom Camp of the Thirties," *New Mexico*, January 1967, photocopy in PNHP; Alice Bullock (?), "A Virtual Depression Goldmine," source unknown, October 17, 1976, photocopy of article in PNHP.
[57] "Much Timber Used by Metal Company Forester Reports," *Las Vegas Optic*, August 31, 1927.
[58] Darden, "Boom Camp of the Thirties," 28.
[59] Ibid.
[60] Bullock, "A Virtual Depression Goldmine," 16.
[61] Darden, "Boom Camp of the Thirties," 28.
[62] Barker, *Beatty's Cabin*, 94-97.
[63] Ibid., 207.
[64] Sloan, "Historic Structures Report," 12.
[65] Deutsch, *No Separate Refuge*, 162-164.
[66] Aspectos Culturales, *Pecos, Mi Pecos*, 62-68.
[67] Deutsch, *No Separate Refuge*, 162-164.
[68] Ibid., 167.
[69] Johnson, *Reminiscences of a Forest Ranger*, 68.
[70] John R. Van Ness, foreword to *The Preservation of the Village: New Mexico's Hispanics and the New Deal*, by Suzanne Forrest (Albuquerque: University of New Mexico, 1989), vii.
[71] Deutsch, *No Separate Refuge*, 174-199.
[72] Johnson, *Reminiscences of a Forest Ranger*, 77, 85. The camp was designated New Mexico F-53-N, Company 2868. We found a reference to an archaeological report completed in 1993 that may contain information about the CCC camp but have not been able to locate a copy of the report. The full reference is: Michael L. Elliott, "Archeological Investigations near Glorieta, New Mexico: The Glorieta Tract Land Exchange," archaeological report 88-7 (Albuquerque: Jemez Mountains Research Center, 1993); Cowley, Joseph, Rhodes, "Cultural Landscape Overview," Railroad/Tourism map, marks the location of the CCC camp, but it is not clear what source the authors are basing their information on.
[73] Letter from D. J. Leahy, Lawyer to Francis C. Wilson, Attorney at Law, May 11, 1933, Folder 44, Box 12, Corporations, Tex Austin's Forked Lightning Ranch, Francis C. Wilson papers 1981-017, NMSA.
[74] Letter from Francis C. Wilson to Messrs. Fisher, Boyden, Bell, Boyd and Marshall, August 1, 1934, Folder 1, Box 39, Real Estate Case Files, Tex Austin's Ranch—The Forked Lightning, 1933-1937, Francis C. Wilson papers 1981-017, NMSA.
[75] Letter from Cotton, Cotton Exchange Building, Oklahoma City to Francis C. Wilson, March 8, 1936, Folder 2, Box 39, Real Estate Case Files, Tex Austin's Ranch—The Forked Lightning, 1933-1937, Francis C. Wilson papers 1981-017, NMSA.
[76] Young, "Ranching History," 48.
[77] Ibid., 49.
[78] Johnson, *Reminiscences of a Forest Ranger*, 41, 66.
[79] Young, "Ranching History," 49.

Chapter Eight

[1] Linkletter is quoted in Michael Troyan, *A Rose for Mrs. Miniver: The Life of Greer Garson* (Lexington: University of Kentucky Press, 1999), 281. Troyan also provides a description of how the Fogelsons entertained at the ranch, which is summarized and embellished here.
[2] Ibid., 209-212.
[3] Jerry Dorbin "History and Archaeology of the Forked Lightning Ranch," 1991, report on file, Folder 22, Box 1, PECO 380, PNHP.
[4] Young, "History of Ranching and Trading," 12-14.
[5] National Resources Planning Board, "The Pecos River Joint Investigation: Reports of the Participating Agencies" (Washington, D.C.: U.S. GPO, 1942), 248-249.
[6] National Resources Planning Board, "Pecos River Joint Investigation," 248-249; Troyan, *A Rose for Mrs. Miniver*, 213.
[7] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 71.
[8] National Resources Planning Board, "Pecos River Joint Investigation," 248-249.

[9] Kenneth Ray Weber, "A New Mexico Village and the Metropolis: A Study of the Economy and Social Organization of a Rural Satellite" (Ph.D. diss., University of Oregon, 1972), 32-35.
[10] Robert Kern, *Labor in New Mexico: Unions, Strikes, and Social History since 1881* (Albuquerque: University of New Mexico Press, 1983), 298-299; 1960 Census Preliminary Reports: Population Count for States, August 1960, available at http://www.census.gov/prod/www/abs/decennial/1960.html (accessed April 20, 2010).
[11] Troyan, *A Rose for Mrs. Miniver,* 13; Authors' interviews with former ranch employees, June 12, 2009.
[12] Troyan, *A Rose for Mrs. Miniver,* 226.
[13] Ibid., 236, 243; Young, "History of Ranching and Trading," 16.
[14] Troyan, *A Rose for Mrs. Miniver,* 225.
[15] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 71; Forked Lightning Ranch notes, Folder 10, Box 1, PECO 313, PNHP.
[16] Dorbin, "History and Archaeology of the Forked Lightning Ranch," n.p.; Authors' interviews with former ranch employees, June 12, 2009; Sloan, "Historic Structures Report," 24.
[17] NPS, "Water Resources Management Plan, "1995, 24; Sloan, "Historic Structures Report," 38-39.
[18] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 71.
[19] Head and Orcutt, *From Folsom to Fogelson,* 1:12.
[20] Authors' interviews with former ranch employees, June 12, 2009.
[21] Meszaros, "Vegetation and Land Use," 14-15, 55; 1954 Land Use Map, Folder 22, Box 1, PECO 380, PNHP; Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," Austin Period map; Head and Orcutt, *From Folsom to Fogelson,* 2:389 and figure 10.6.
[22] Troyan, *A Rose for Mrs. Miniver,* 259-260; Young, "History of Ranching and Trading," 16; "Purebred Santa Gertrudis Herd Established on Forked Lightning Ranch at Pecos, N.M." in *The New Mexico Stockman,* September 1959, 40.
[23] "The History of Cherokee Ranch and Castle," http://www.cherokeeranch.org/history.htm (accessed February 7, 2010); Authors' interviews with former ranch employees, June 12, 2009.
[24] Scurlock, "From the Rio to the Sierra," 77-80; Boaz Long, "Pecos Monument . . . Well Water," August 21, 1950, Folder 1950, Box 2, PECO 464, PNHP.
[25] Scurlock, "From the Rio to the Sierra," 265.
[26] Thomas W. Swetnam and Julio L. Betancourt, "Mesoscale Disturbance and Ecological Response to Decadal Climatic Variability in the American Southwest," *Journal of Climate,* 11, no. 21 (Dec. 1998), 3128-3147.
[27] Aldo Leopold, "Review of H.M. Bell and E.J. Duksterhuis, 'Fighting the Mesquite and Cedar Invasion on Texas Ranges,'" *Journal of Forestry* 42, no. 1 (January 1946):63.
[28] Robert E. Williams, "Modern Methods of Getting Uniform Use of Ranges," *Journal of Rangeland Management,* 1954, 77-81.
[29]Head and Orcutt, *From Folsom to Fogelson,*1:101; National Park Service, "Final Environmental Statement: Proposed Master Plan and Development Concept Plan, Pecos National Monument," 1975, report on file, PNHP, 17.
[30] Authors' interviews with former ranch employees, June 12, 2009; "Range Management Before and After Brush Control (Part V)," Range Technical Note No. 21, USDA Soil Conservation Service New Mexico, February 28, 1967, available on www.nm.nrcs.usda.gov, (accessed April 15, 2010); Richard S. Aro, "Evaluation of Pinyon-Juniper Conversion to Grassland," *Journal of Range Management,* 1971, 188-197.
[31] Head and Orcutt, *From Folsom to Fogelson,* 1:103-104, figure 5.3.
[32] Burtchin, "The Physical Geography of Pecos National Monument," 80, 94-96.
[33] Scurlock, "From the Rio to the Sierra," 273; Authors' interviews with former ranch employees, June 12, 2009; Aro, "Evaluation of Pinyon-Juniper Conversion," 193.
[34] Cowley, Joseph, and Rhodes, "Cultural Landscape Overview," 71; M.R. Schott and R.D. Pieper, "Succession of Pinyon-Juniper Communities after Mechanical Disturbance in Southcentral New Mexico," *Journal of Range Management,* 40, no. 1 (January 1987): 88-94.
[35] Aro, "Evaluation of Pinyon-Juniper Conversion," 193.
[36] Troyan, *A Rose for Mrs. Miniver,* 237.
[37] Authors' interviews with former ranch employees, June 12, 2009; Young, "History of Ranching and Trading," 16; Troyan, *A Rose for Mrs. Miniver,* 280; "Purebred Santa Gertrudis Herd Established on Forked Lightning Ranch at Pecos, N.M." in *The New Mexico Stockman,* September 1959, 40.
[38] For more information about AI, see R. H. Foote, "The History of Artificial Insemination: Selected Notes and Notables," *Journal of Animal Science* 2002. 80:1-10.

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[43] J. Kirkpatrick to Catron, January 19, 1960, in Folder 6, Box 2, PECO 380, PNHP.
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[58] Ibid., 282.
[59] National Park Service, "Pecos State Monument: An Area Investigation Report," (Santa Fe: National Park Service, Region Three, March 1962), report on file, PNHP, 11-12. Although the original church deed described the monument property as 80 acres, in 1964 the NPS discovered in survey research that the actual size was 62.6 acres. See Norman Herkenham, Southwest Region to John Catron, September 9, 1964, File L58-d-2, Pecos, NM 1961-64, SW Regional Office General Admin Files 1965-67, Box 64, 8NS-079-93-002, Record Group 79, National Archives and Records Administration-Rocky Mountain Region, Denver, CO (hereafter, NARA-RM).
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Chapter Nine
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