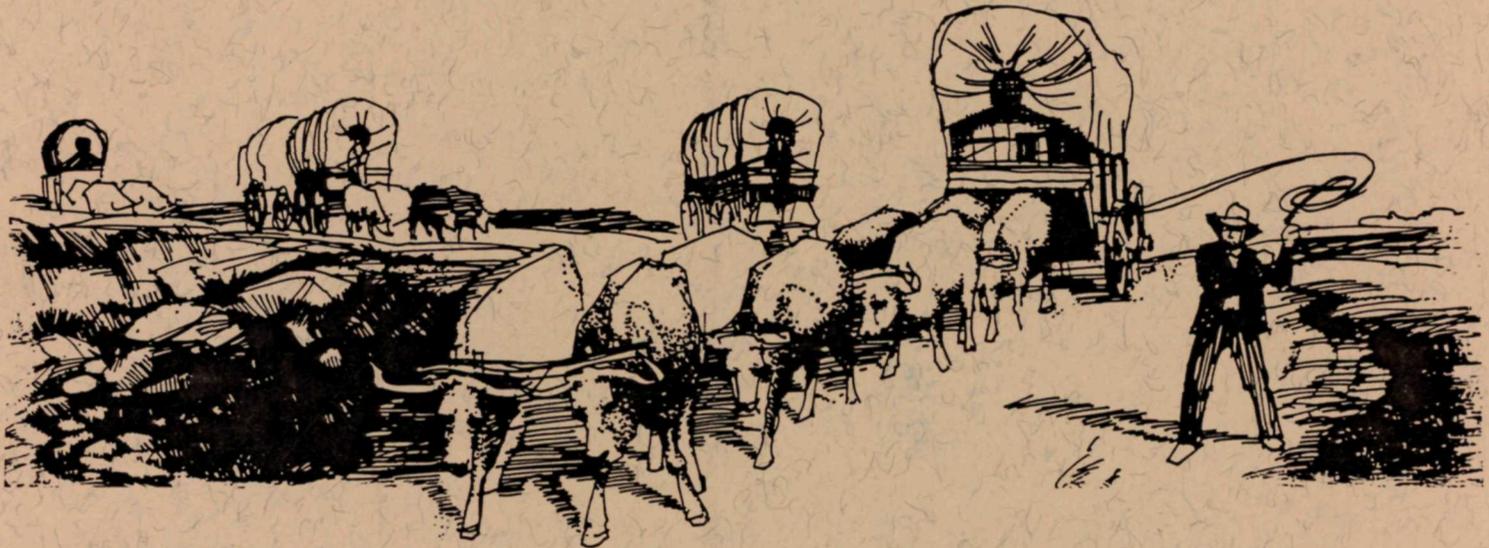


October 1994

**Lower Cimarron Spring  
(Wagon Bed Springs) Camp Site  
National Historic Landmark (NHL) Boundary Study**



**National Park Service • Rocky Mountain Regional Office • Division of Partnerships and Outreach**

October 1994

**LOWER CIMARRON SPRING  
(WAGON BED SPRINGS) CAMP SITE**

**NATIONAL HISTORIC LANDMARK (NHL) BOUNDARY STUDY**

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## Introduction

In 1993, the Southwest Regional Office of the National Park Service requested the Rocky Mountain Regional Office to undertake a boundary study of the Wagon Bed Springs National Historic Landmark (NHL), which is located in southwestern Kansas. The Secretary of the Interior designated Wagon Bed Springs as an NHL in 1960 because of the site's association with the Santa Fe Trail.<sup>1</sup> In recent years, however, the boundaries of the Wagon Bed Springs NHL have become a source of considerable controversy, as the local chapter of the Santa Fe Trail Association disagreed with the designated landmark boundaries. In 1989, the Santa Fe Trail Association relocated the NHL plaque to a new location approximately 1/4 mile north of the NPS-designated site. The Southwest Regional Office, which is responsible for managing the Santa Fe Trail National Historic Trail, funded the NHL study in an effort to ascertain the actual location of the spring and resolve the boundary controversy. Congress designated the Santa Fe Trail, including both the Mountain and Cimarron Routes, as a National Historic Trail in 1987 (see Figure 1).

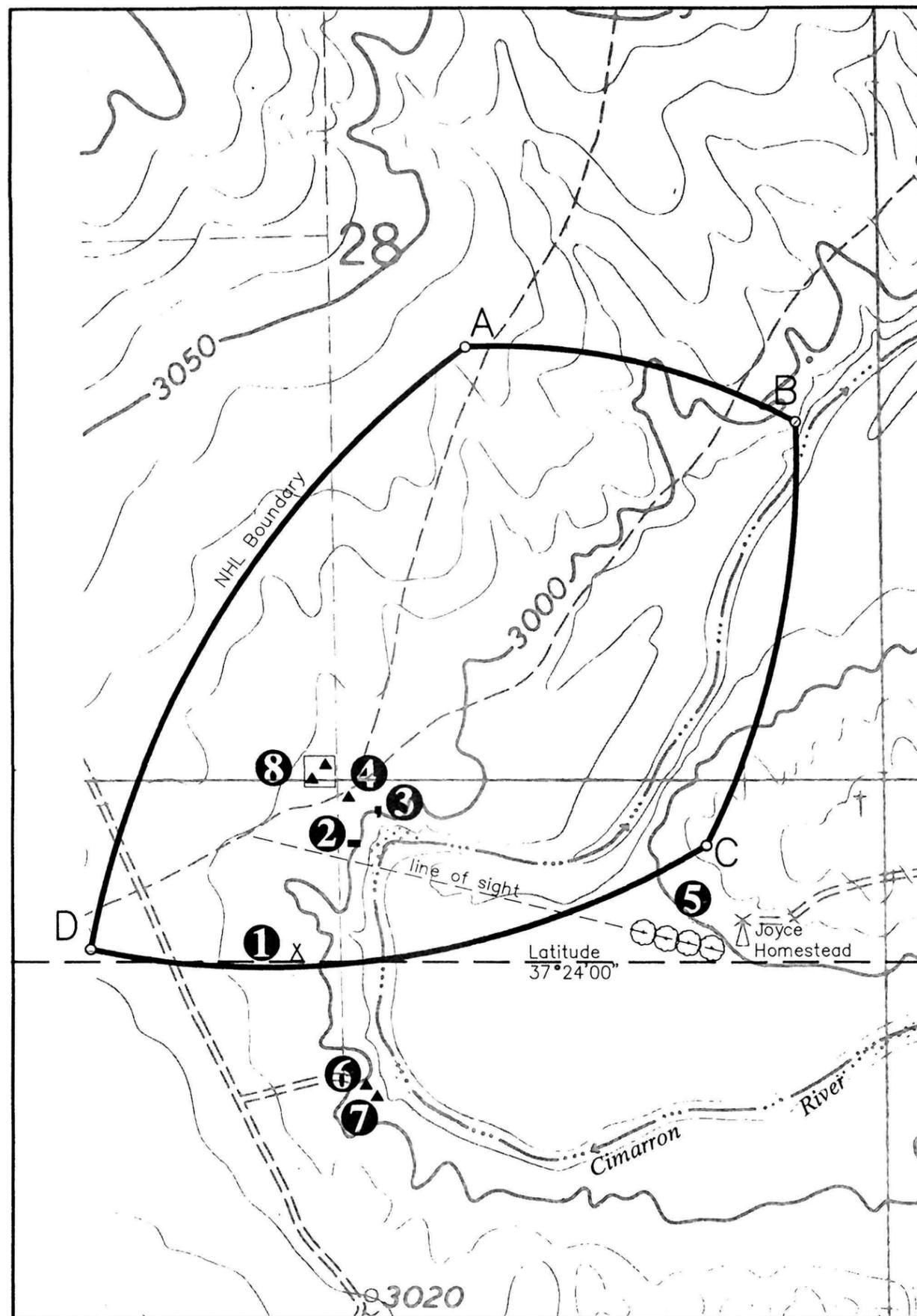
The locations of historic trails and trail-related sites often prove elusive to modern researchers. Trails that may have once been well-defined paths become obliterated through erosion, highway and building construction, and crop cultivation. Rivers change course, flooding alters the landscape, and natural and cultural landmarks that once marked the trails disappear. Also, trail travelers never followed just one path. Depending on weather and soil conditions, the formation of the wagon caravans, the need to find water and forage, and the ever-present desire to find a better or shorter path, Santa Fe Trail travelers created numerous trail routes and variations, which could be several yards or even miles apart. In addition, the journals and diaries of Santa Fe Trail travelers often provide only sketchy or contradictory information regarding the locations of trails and camping sites.

In the case of Wagon Bed Springs, which was historically known as Lower Cimarron Spring, the task of finding the historic location is made all the more difficult because it is no longer a running spring. In 1914, a flood destroyed the spring site and greatly altered the Cimarron River channel bed in the vicinity of the spring. Extensive deepwell pump irrigation in the area dramatically lowered the water table, and has eliminated all possibility of the spring running again. Since the spring is no longer extant, the study team members had to draw upon a variety of sources for information relating to the spring's historic location. These sources include the numerous published histories of the trail, the accounts of Santa Fe Trail travelers and early Grant County residents, historic maps, aerial photographs, archeological evidence, the archives of the Grant County Museum, interviews with long-time residents, early newspaper accounts, and an analysis of the geological and hydrological characteristics of the area.

The study team included archeologists William Butler and Steven De Vore and historian Christine Whitacre of the National Park Service, Rocky Mountain Regional Office, who conducted field work at the site in September 1993. Edwin Gutentag, a former U.S. Geological Survey water hydrologist who had worked in this region of Kansas, conducted an on-site investigation. James Walker of Brigham Young University took low-altitude, large-scale aerial photographs of the spring site. Edward Dowell, a local resident and amateur archeologist who collected Santa Fe Trail-related artifacts in the area, participated in the study. Also consulted were John Conoboy of the Southwest Regional Office of the National Park Service, several Santa Fe Trail Association members, and numerous local residents, including Harry Joyce, whose grandfather homesteaded the land on which the spring was located, and Lucille Towler Lewis, who lived near the spring and could recall the days when it was still running.

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<sup>1</sup>Joseph S. Mendinghall, "Wagon Bed Springs National Historic Landmark Nomination," 1960, in the files of the National Park Service, Rocky Mountain Regional Office, Lakewood, Colorado.



## LEGEND

**1** **September 28, 1825:** SIBLEY-BROWN SURVEY OF LOWER CIMARRON SPRING. The U.S. government-sponsored survey of the Santa Fe Trail, led by George C. Sibley and Joseph C. Brown, arrives at the "famous Semerone [Cimarron] Spring," which they describe as being north of the Cimarron River and on the west edge of a marsh. The surveyors note that the spring is at latitude 37° 24'00".

**2** **January 1886:** DAPPERT FINDS WAGON BED. J.W. Dappert, one of the earliest homesteaders in Grant County, digs out an old wagon box in the spring so that he can water his livestock. By this time, the site is commonly referred to as "Wagon Bed Springs." Dappert, who served as the county surveyor, later draws a map of the area, showing the approximate location of the spring.

**3** **Winter 1887:** DAPPERT-JOYCE ICE HOUSE. J.W. Dappert and Richard H. Joyce build an ice house near the spring. Joyce, the first homesteader in Grant County, owns the land on which the spring and ice house are located. Dappert's diary notes that the ice house was "on the north bank of the Cimarron river, just alongside a deep hole in the river below [presumably downstream] Wagon Bed Springs. . ." (The Dappert-Joyce ice house remains were located by the National Park Service in October 1993.)

**4** **1907:** DAUGHTERS OF THE AMERICAN REVOLUTION PLACE MARKER AT SITE. The Daughters of the American Revolution (DAR) mark the Wagon Bed Springs site with an historical marker. The marker is placed in the NE quarter of Section 33, Township 30 S, Range 37 W, approximately 50 yards north of the spring site.

**not keyed** **1914:** FLOOD DESTROYS SPRING SITE. In 1914, a major flood destroys the spring site and adjacent marsh, although spring water continues to surface in various locations in the immediate vicinity.

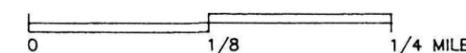
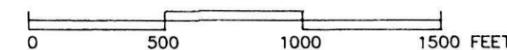
**5** **HEDGE ROW OF TREES.** Harry Joyce, grandson of Richard H. Joyce, was born in 1918 and spent his early childhood on the Joyce homestead. In a 1993 interview, Joyce recalled that the spring was located in the NE quarter of Section 33, Township 30 S, Range 37 W, and that it approximately lined up with the hedge row of trees on the Joyce homestead. The hedge row, which still stands, points to the site marked by the 1907 DAR marker.

**6** **1937:** 4-H CLUB MOVES HISTORICAL MARKER. By this time the original marker site has become severely eroded. In cooperation with the Joyce family, the 4-H Club moves the DAR marker to a new site approximately 200 yards to the south. The 4-H Club builds a brick cistern at the new marker site; the cistern fills with below-surface water and serves as a representation of the spring. Although the historical marker was moved here for practical reasons, this site eventually becomes accepted as the "historic" spring site.

**not keyed** **1940s - 1960s:** ENVIRONMENTAL IMPACTS. Floods in 1941, 1942 and 1951 further destroy the spring site. Deepwell pump irrigation in the vicinity, which begins in the 1960s, eliminates the possibility of the spring running again.

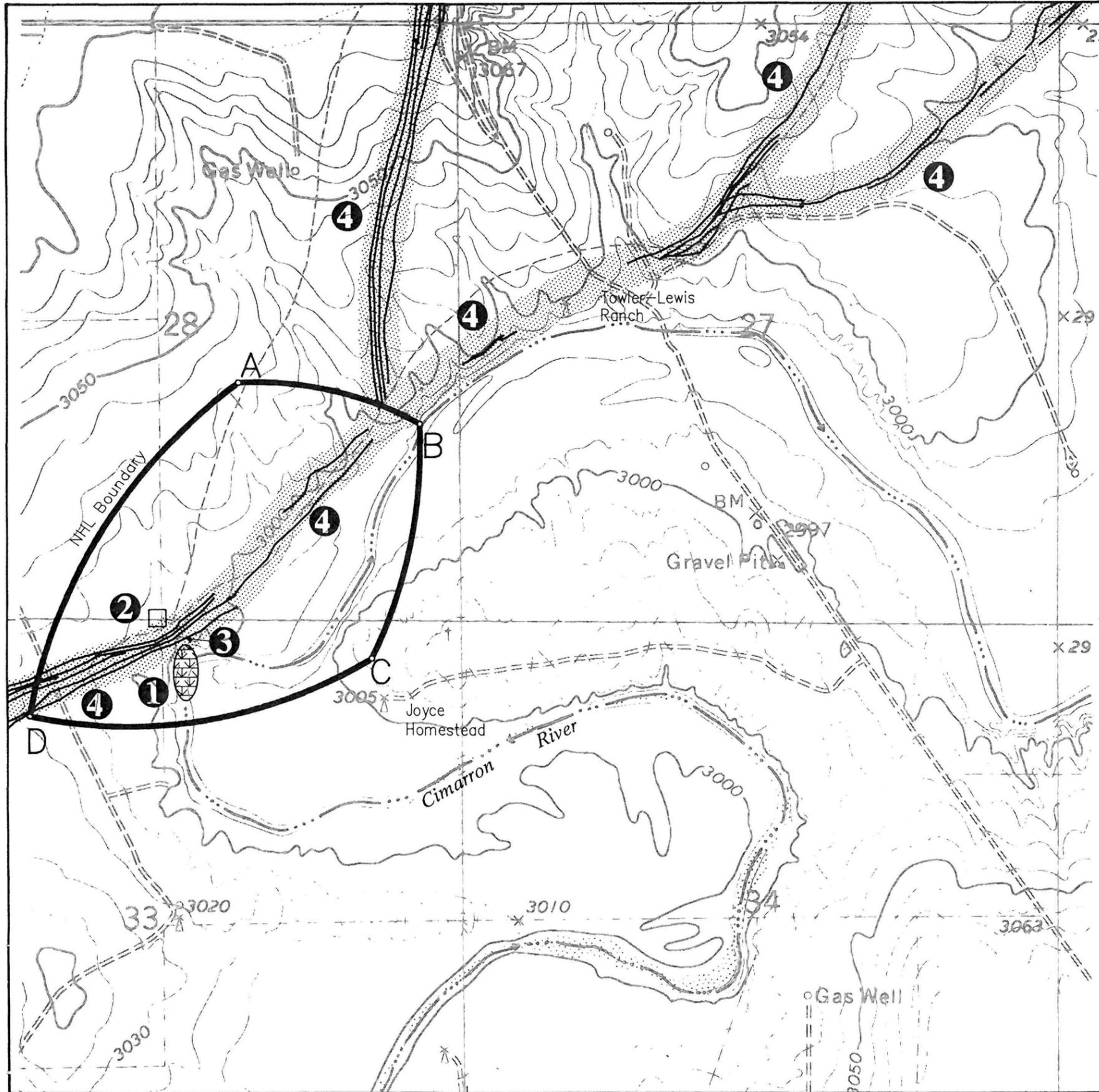
**7** **1962:** NATIONAL HISTORIC LANDMARK PLAQUE. In 1960, the National Park Service designates Wagon Bed Springs as a National Historic Landmark. In 1962, the National Park Service places the NHL plaque near the site of the 1937 marker.

**8** **1989:** SANTA FE TRAIL ASSOCIATION RELOCATES MARKERS. In the 1980s, archaeological investigations reveal a high concentration of Santa Fe Trail-associated artifacts in the general area surrounding the 1907 marker site. By this time, the historic location of the spring has become a controversial issue as local residents, historians, and Santa Fe Trail Association (SFTA) members debate where the historical markers should be located. In this year, the local chapter of the SFTA constructs an interpretive display of Wagon Bed Springs in the SW quarter of Section 28 and NW quarter of Section 33, Township 30 S, Range 37 W. The display includes a wagon bed filled with water supplied by a solar pump. The SFTA moves the DAR and NHL markers to the new site.



## MAP A - CHRONOLOGY OF EVENTS

Lower Cimarron Spring (Wagon Bed Springs) Camp Site National Historic Landmark Boundary Study



### LEGEND

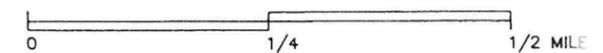
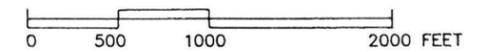
Map Key

- 1** Spring Area
- 2** Santa Fe Trail Association (SFTA) Display
- 3** Ice House
- 4** Santa Fe Trail Remnants

### UTM KEY

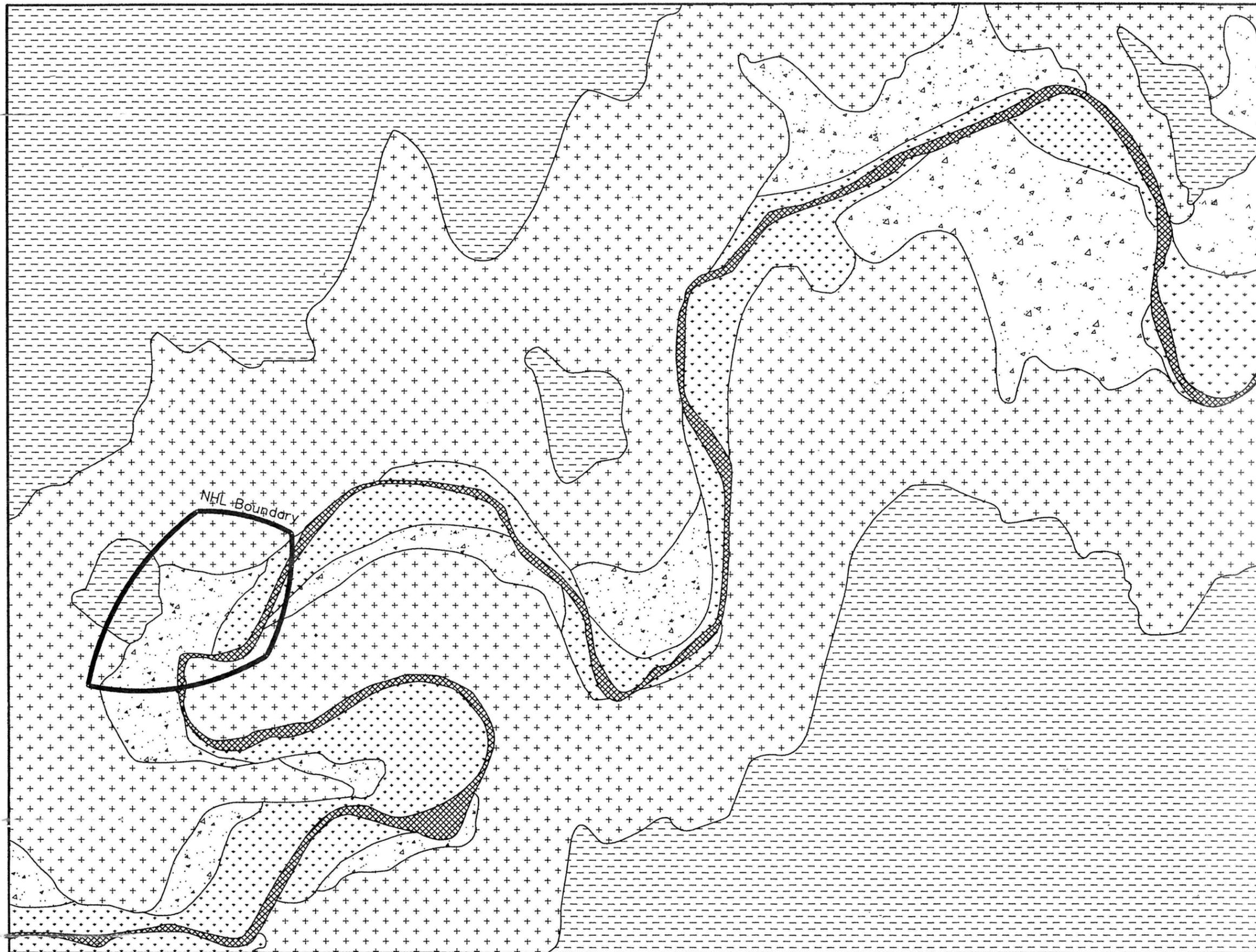
Zone 14:

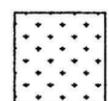
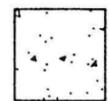
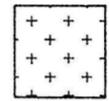
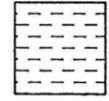
- Point A E/290,374  
N/4,142,601
- Point B E/290,859  
N/4,142,467
- Point C E/290,711  
N/4,141,842
- Point D E/289,790  
N/4,141,720

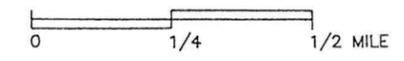
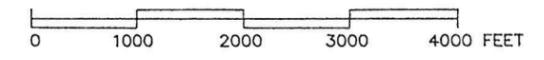


### MAP B – NATIONAL HISTORIC LANDMARK BOUNDARY

Lower Cimarron Spring (Wagon Bed Springs) Camp Site National Historic Landmark Boundary Study



- KEY**
-  CIMARRON RIVER
  -  FLOOD PLAIN
  -  ALLUVIAL FANS AND TERRACES
  -  SLOPING UPLAND AND SIDE SLOPES
  -  LEVEL UPLAND



**MAP C - NATIONAL HISTORIC LANDMARK VICINITY - SOIL PATTERN AND TOPOGRAPHY**

Lower Cimarron Spring (Wagon Bed Springs) Camp Site National Historic Landmark Boundary Study

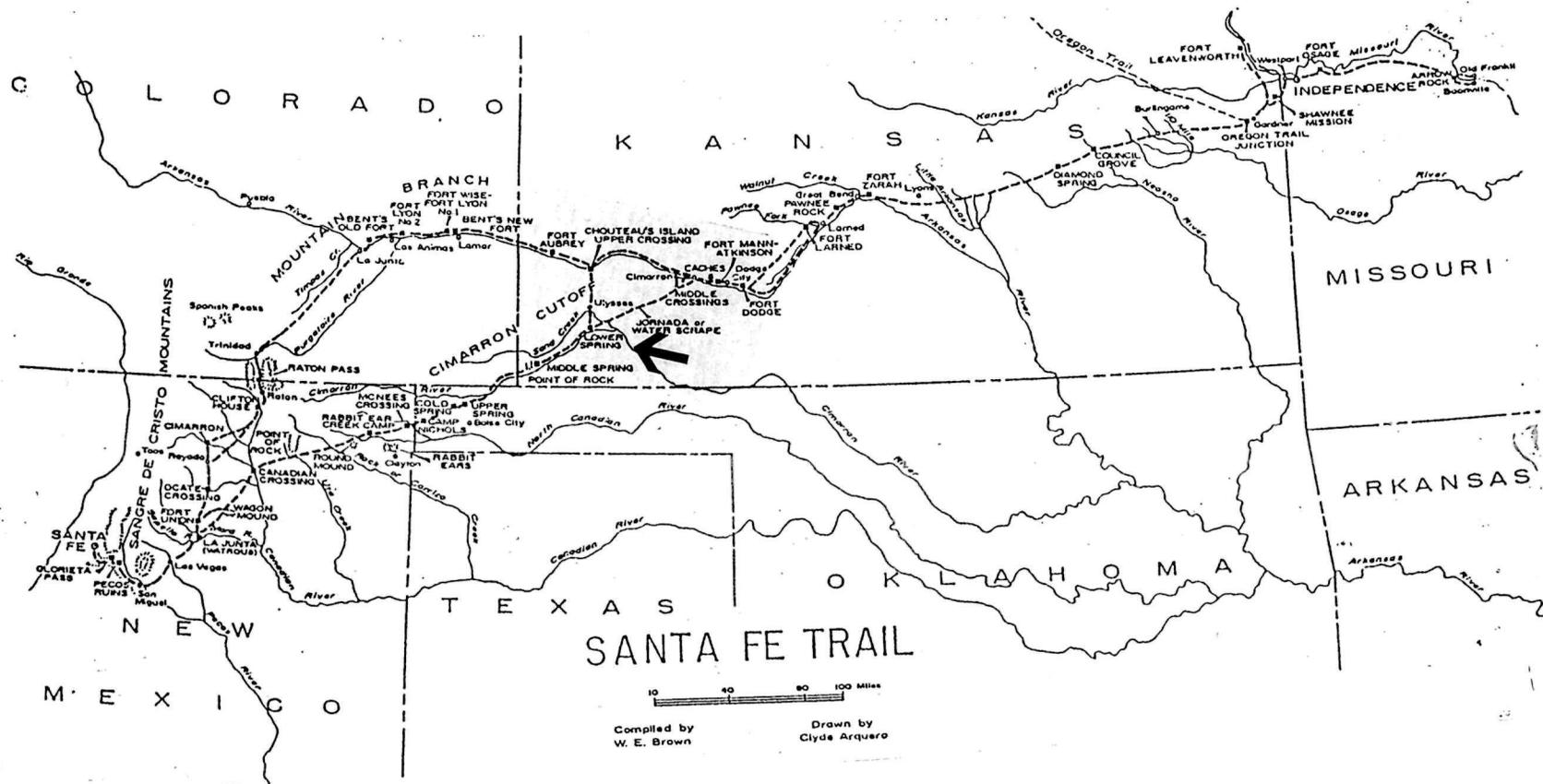


Figure 1: Santa Fe Trail. From "The National Survey of Historic Sites and Buildings: The Santa Fe Trail" (U.S. Department of the Interior, National Park Service, 1963).

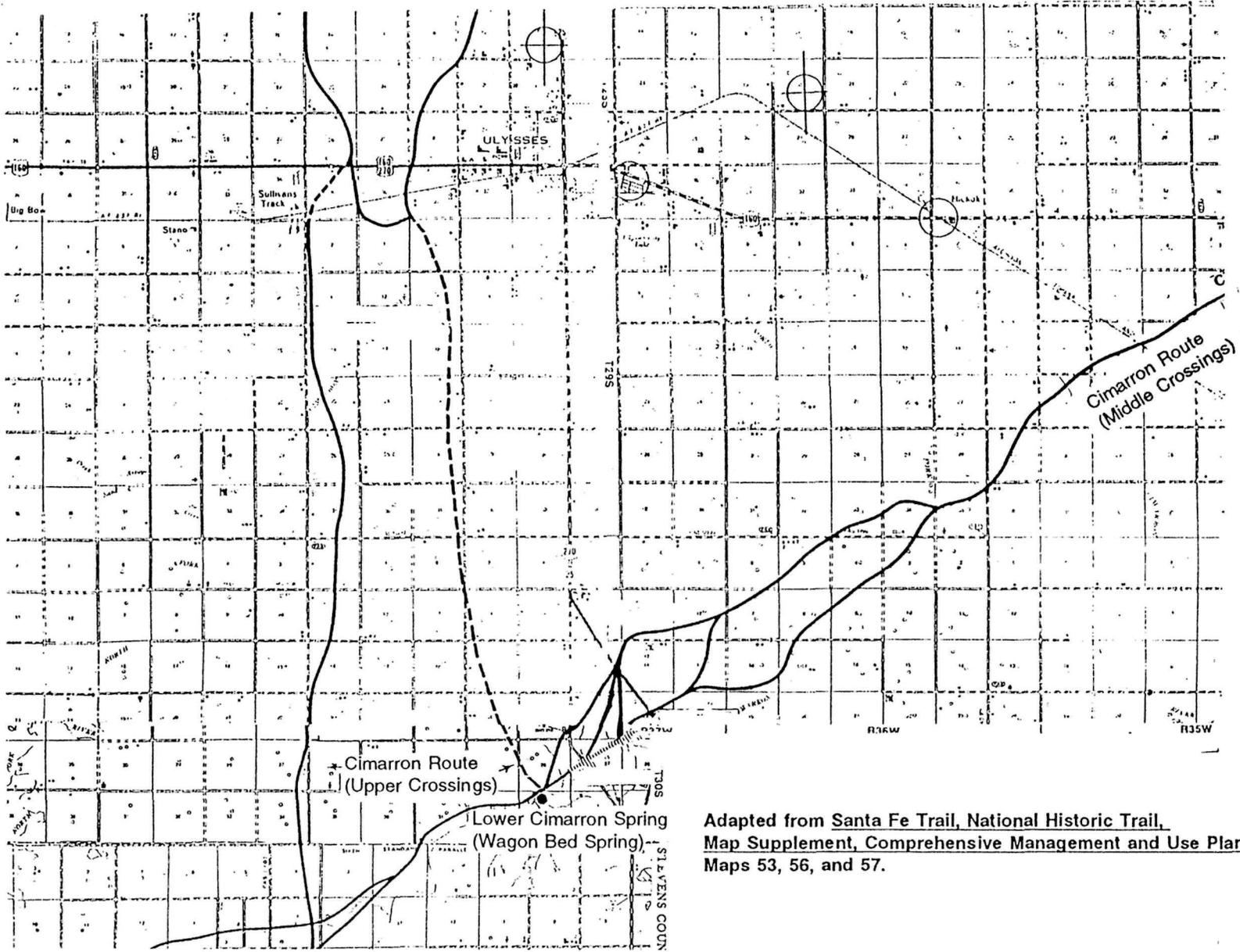


Figure 2: Santa Fe Trail, Vicinity of Lower Cimarron Spring (Wagon Bed Springs).

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## Historical Significance of Lower Cimarron Spring

As a dependable source of water on a dangerously dry crossing, Lower Cimarron Spring was a major landmark for trade caravans as they crossed the open plains of the Santa Fe Trail in what is now southwestern Kansas. Lower Cimarron Spring was located on the trail's Cimarron Route (often referred to as the Cimarron Cut-Off), which was the most direct path between Santa Fe, New Mexico, and Independence, Missouri. The Cimarron Route was approximately forty miles shorter than the Santa Fe Trail's northern Mountain Route, and could reduce the amount of travel time by as much as three days. By taking the Cimarron Route, travelers could also avoid the dangerous crossing of Raton Pass. But the Cimarron Route had its own dangers as travelers had to cross the infamous *jornada*, the arid desert plain between the Arkansas and Cimarron Rivers that was considered the most dangerous and difficult stretch of the journey to Santa Fe. Since Lower Cimarron Spring offered west-bound travelers the first reliable source of water during the *jornada* crossing, it became a major resting point and camp site on the Cimarron Route. Numerous travelers recounted their immense relief, after a perilous *jornada* crossing, of finding the cool, sweet, running water of Lower Cimarron Spring. The site's reliable source of good water also made it an important camp ground for American Indians, including the Kiowa, Comanche, Pawnee, Apache, and Arapahoe.<sup>2</sup>

## Environmental Setting

Walter Prescott Webb in his classic history of western settlement, *The Great Plains*, writes that practically every institution that was carried across the Great Plains "was either broken and remade or else greatly altered. The ways of travel, the weapons, the method of tilling the soil . . . and even the laws themselves were modified."<sup>3</sup> It was the arid environment of the western plains that forced these changes. Indeed, west-bound travelers following the Cimarron Route of the Santa Fe Trail were physically as well as psychologically affected once they crossed the 98th meridian and entered the Great Plains. Here, travelers encountered a completely different landscape from that which they had departed in Missouri. The landscape flattened, became treeless, and the air became dry. To many Santa Fe traders, the windswept plains of southwestern Kansas were more an obstacle to progress than any imagined or real Indian threat.

In 1848, a Santa Fe Trail traveler described the Cimarron Route between the Arkansas and Cimarron Rivers as "the most desolate part of the whole Santa Fe Road." Traveler Adolphus Wislizenus also observed that, "The soil is generally dry and hard: the vegetation poor, scarcely anything grows there but short and parched buffalo grass and some cacti. Though the horizon is very distant, there is no shrub or tree to fix your eye upon . . ." <sup>4</sup> Today, although a few more cottonwood trees line the banks of the Cimarron River, the area surrounding the Lower Cimarron Spring site still generally matches Wislizenus's description.

The Lower Cimarron Spring site is in an agricultural area approximately 12 miles south of the farming community of Ulysses, Kansas (population 5,474). Most of the land surrounding the spring site is used for cattle grazing; the

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<sup>2</sup>At the time of the 1960 NHL designation, Wagon Bed Springs was also believed to have been the location where mountain man and explorer Jedidiah Smith was killed by Comanche Indians in 1831. However, recent scholarship indicates that Smith may have been killed at another location along the Cimarron River in Seward County. Louise Barry, ed., *The Beginning of the West: Annals of the Kansas Gateway to the American West, 1840-1854* (Topeka: Kansas State Historical Society, 1972), 201-203.

<sup>3</sup>Walter Prescott Webb, *The Great Plains* (New York: Ginn and Company, 1931), 8-9.

<sup>4</sup>Adolphus Wislizenus, *Memoir of a Tour to Northern Mexico, connected with Col. Doniphan's Expedition in 1846 and 1847* (Washington, D.C.: 30th Congress, 1st session, Senate Miscellaneous Document, 1848), 11.

land west of the site is under pump irrigation. Historically, Lower Cimarron Spring and its associated marsh were located adjacent to the Cimarron River, which formed a natural boundary for the camping area associated with the spring. Today, both the spring and the marsh are dry, but the Cimarron River remains the predominant landscape feature.

The Cimarron River originates in New Mexico in the vicinity of the city of Raton. From the New Mexico tablelands, the river flows east into Oklahoma, north into Colorado and Kansas, then back into Oklahoma where it discharges into the Arkansas River and, finally, the Mississippi River. In the vicinity of Lower Cimarron Spring, the Cimarron River is an intermittent stream, historically prone to flooding. In the vicinity of the spring, the river valley has sloping walls and the gently undulating river bed is nearly level. Elevation of the valley ranges from approximately 2080 feet above mean sea level (amsl) along the river to 3100 feet amsl on the uplands.

The Lower Cimarron Spring site lies in the High Plains section of the Great Plains physiographic province in southwestern Kansas.<sup>5</sup> With the exception of the major drainages of the Arkansas and the Cimarron Rivers, the region has poorly developed surface drainage. The uplands surrounding Lower Cimarron Spring are fairly smooth, large expanses of land with broad gentle swales and shallow depressions. These depressions may hold water for days or weeks after heavy rains which, under the right conditions, offered thirsty Santa Fe Trail travelers welcome relief.<sup>6</sup> The area lies within the Colby-Otero-Bayard soil association, which consists of "deep, gently sloping to sloping, calcareous, loamy soils on fans and in the uplands."<sup>7</sup> These soils are susceptible to water and wind erosion (see Table 1 and Map C).

The geology of the area represents the evolutionary history of the Rocky Mountains. During the uplifting of the mountain system in the Tertiary period, large volumes of rock were eroded and transported onto the plains by the rivers. By the end of the period, the eroded materials covered an area from the Rocky Mountains to the Flint Hills in central Kansas.<sup>8</sup> Western Kansas is part of the non-eroded remnants of this vast sand and gravel plain. These deposits are part of the Ogallala Formation, one of the major aquifers in the central Great Plains. Late Pleistocene loess mantles the upland regions. Eolian sand deposits also occur over earlier Pleistocene deposits and the Ogallala Formation in localized areas. In addition, erosional and depositional episodes in the Pleistocene created terraces along the major rivers, including the Cimarron River.

During the Nebraskan and Kansan glacial stages, terrace deposits were laid down along the Cimarron River. Erosion during the Late Pleistocene resulted in the exposure of sand and gravel sediments on these terraces. This activity formed flanking pediments along the Cimarron River Valley. In areas where the river and its tributaries

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<sup>5</sup>Nevin M. Fenneman, *Physiography of Western United States* (New York: McGraw-Hill, 1931); and Vernon L. Hamilton, Quinten L. Markley, William R. Swafford, and Harold P. Dickey, *Soil Survey of Grant County, Kansas* (Washington, D.C.: U.S. Department of Agriculture, Soil Conservation Service, 1969), 1.

<sup>6</sup>Hamilton et al., 45; and Patricia J. O'Brien, *Archeology of Kansas*, Public Education Series No. 9 (Lawrence: University of Kansas, Museum of Natural History, 1984), 21.

<sup>7</sup>Hamilton et al., 5-6. The soils in the immediate project area consist of Bayard fine sandy loam, 1 to 3 percent slopes (Ba); Bridgeport silty clay loam, 0 to 2 percent slopes (Br); Colby loam, 5 to 12 percent slopes (Co); Colby-Ulysses loams, 3 to 5 percent slopes, eroded (Cu); Glenberg soils, 0 to 1 percent slopes (Gb); Lincoln soils, 0 to 1 percent slopes (Ln); Otero fine sandy loam, 4 to 12 percent slopes (Of); Otero gravelly complex, 5 to 20 percent slopes (Og); Otero-Manter fine sandy loams, 1 to 4 percent slopes (Om); and Ulysses loam, 1 to 3 percent slopes (Ud). See Table 1.

<sup>8</sup>F. Wilson, "Landscapes: A Geological Diary," in *Kansas Geology: An Introduction to Landscapes, Rocks, Minerals, and Fossils*, ed. by Rex Buchanan (Lawrence: University Press of Kansas, 1984), 33.

have cut through the unconsolidated sediments into the underlying rock formations, seeps and permanent springs occurred, such as Lower Cimarron Spring.<sup>9</sup>

Located within the rain-shadow of the Rocky Mountains, the climate is semi-arid.<sup>10</sup> The region has little precipitation, abundant sunshine, moderate winds, and low humidity. The summers tend to be hot; the winters are cold. Both daily and annual temperatures exhibit wide variation. The majority of the precipitation generally falls as rain between April and October. Average annual precipitation is 16.95 inches; May, June, July, and August average over two inches of rainfall per month. Thunderstorms during these four months produce much of the annual precipitation. Heavy downpours with hail and high winds occasionally occur, as do tornadoes. Extended periods of drought are common, with the longest and most damaging one occurring in the 1930s.

Lower Cimarron Spring lies within the Kansan biotic province, which consists of the short-grass region that covers the southern part of the Great Plains. Native vegetation in the spring area consists of blue grama, buffalo grass, perennial three-awn, broom snakeweed, sand paspalum, sand sagebrush, small soapweed, sand dropseed, western ragweed, side-oats grama, western wheatgrass, switchgrass, and little bluestem.<sup>11</sup> The short grass association is highly resistant to drought and grazing. In addition, these grasses, especially the grama grasses and the buffalo grass, produce nutritious and palatable forage for domestic livestock and native herbivores. Prickly pear cactus and yucca also occur, especially along the rougher valley margins. Although trees are rare, cottonwoods occur along the banks of the Cimarron River.<sup>12</sup>

Just as the landscape changed, so has the wildlife. Bison was the dominant herbivore prior to Euro-American settlement. Early explorers and travelers reported herds of one million or more animals. The pronghorn antelope and wapiti (elk) also occurred in large numbers. Both white-tail and mule deer may still be found along the major streams. Carnivores included the plains grizzly bear and buffalo wolf. Small mammals included coyote, black-footed ferret, swift fox, badger, prairie dog, white-tailed and black-tailed jackrabbit, western cottontail rabbit, skunks, raccoon, beaver, and numerous species of small rodents. Birds included several small ground-nesting species as well as the larger bald eagle, raven, crow, several hawks and owls, sharp-tailed grouse, and prairie chicken. Migratory fowl includes golden eagles, mourning doves, ducks, and geese. The plains garter snake, the western rattlesnake, and the bullsnake as well as several species of lizards constitute the reptilian species common to the region. Numerous invertebrate species are also common.<sup>13</sup>

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<sup>9</sup>J.C. Frye, A.B. Leonard, and A. Swineford, *Stratigraphy of the Ogallala Formation (Neogene) of Northern Kansas*, Bulletin No. 118 (Lawrence: Kansas Geological Survey, University of Kansas, 1959); Hamilton et al., 44.; and J.C. Frye and T.H.U. Smith, "Preliminary Observations on Pediment-Like Slopes in the Central High Plains," *Journal of Geomorphology* 5(3) (1942): 215-221.

<sup>10</sup>Merle J. Brown, "Climate" in Hamilton et al., 47; Hamilton et al., 44-45; Andrew D. Robb, "Climate of Kansas" in *Climate and Man: Yearbook of Agriculture 1941*, House Document No. 27, 77th Congress, 1st Session (Washington, D.C.: U.S. Government Printing Office, United States Department of Agriculture, 1941), 873-883; and Glenn T. Trewarth and Lyle H. Horn, *An Introduction to Climate*, Fifth Edition (New York: McGraw-Hill Book Company, 1980; originally published 1937), 360-364.

<sup>11</sup>Lee R. Dice, *The Biotic Provinces of North America* (Ann Arbor: University of Michigan Press, 1943), 26-27; and Hamilton et al., 27-28.

<sup>12</sup>O'Brien, 22.

<sup>13</sup>Victor E. Shelford, *The Ecology of North America* (Urbana: University of Illinois, 1963) 344-347, Brown 62-63; O'Brien, 22; and Jack W. Walstrom, "Wildlife," in Hamilton et al., 30.

TABLE 1. Soils in the Vicinity of Lower Cimarron Spring<sup>14</sup>

| Symbol | Unit                                       | Parent Material  | Native Vegetation  | Landscape Position   | Drainage                   |
|--------|--|--|--|--|----------------------------|
| Ba     | Bayard fine sandy loam, 1-3% slopes        | colluvial-alluvial sediments washed from nearby slopes   | tall and mid grasses, yucca, and sand sagebrush              | alluvial fans in the valleys of the Cimarron River and the North Fork Cimarron River | good                       |
| Bp     | Bridgeport fine sandy loam, 0-2% slopes    | colluvial-alluvial sediments washed from nearby slopes   | short and mid grasses with some tall grasses                 | alluvial fans and terraces of the Cimarron River and the North Fork Cimarron River   | good                       |
| Br     | Bridgeport silty clay loam, 0-2% slopes    | colluvial-alluvial sediments washed from nearby slopes   | short and mid grasses with some tall grasses                 | alluvial fans of the Cimarron River, Bear Creek, and Sand Arroyo                     | good                       |
| Co     | Colby loam, 5-12% slopes                   | loess or deep, loamy sediments   | short grasses, buffalo grass, and blue grama with some yucca | along large upland drainageways  | good                       |
| Cu     | Colby-Ulysses loams, 3-5% slopes           | loess or deep, loamy sediments   | short grasses, buffalo grass, and blue grama with some yucca | along large upland drainageways  | good                       |
| Gb     | Glenberg soils, 0-1% slopes                | moderately sandy alluvium  | tall and mid grasses   | high floodplain of the Cimarron River  | good to somewhat excessive |
| Ln     | Lincoln soils, 0-1% slopes                 | very sandy and gravelly alluvium that has been only slightly altered                           | sparse stands of mid and tall grasses                        | low floodplain of the Cimarron River   | excessive                  |
| Lo     | Lofton silty clay loam, 0-1% slopes        | loess  | mid and short grasses  | floor of depressions on tablelands   | moderately good            |
| Ma     | Manter fine sandy loam, 0-1% slopes        | sandy outwash sediments  | mid and short grasses  | between sandhills and silty uplands  | good                       |
| Of     | Otero fine sandy loam, 4-12% slopes        | strongly calcareous, moderately sandy material that has been reworked, to some extent, by wind | mid and short grasses with some sagebrush and yucca          | along upland drainageways  | good                       |
| Og     | Otero gravelly complex, 5-20% slopes       | gravelly soils comprised of sand, gravel, or cobblestones over loamy sand to gravel            | mid and short grasses with some sagebrush and yucca          | along Cimarron River   | good                       |
| Om     | Otero-Manter fine sandy loams, 1-4% slopes | strongly calcareous, moderately sandy material that has been reworked, to some extent, by wind | mid and short grasses with some sagebrush and yucca          | undulating areas made up of hills, small ridges, and concave areas                   | good                       |
| Ra     | Richfield silt loam, 0-1% slopes           | loess  | short and mid grasses with some cactus                       | tablelands   | good                       |
| Sb     | Satanta fine sandy loam, 1-3% slopes       | loamy and sandy sediments  | mid and tall grasses with some short grasses                 | uplands  | good                       |
| St     | Satanta loam, 0-1% slopes                  | loamy and sandy sediments  | mid and tall grasses with some short grasses                 | uplands  | good                       |
| Ua     | Ulysses silt loam, 0-1% slopes             | loess  | short grasses with some mid grasses and cactus               | uplands  | good                       |

<sup>14</sup>Hamilton et al., 7-23, Soil Sheet Number 45.

|    |   |  |  |  |      |
|----|---|--|--|--|------|
| Ub | Ulysses silt loam, 1-3% slopes                | loess  | short grasses with some mid grasses and cactus | along upland drainageways  | good |
| Ud | Ulysses loam, 1-3% slopes                     | loess  | short grasses with some mid grasses and cactus | slightly concave uplands   | good |
| Ue | Ulysses-Colby silt loams, 1-3% slopes, eroded | loess  | short grasses with some mid grasses and cactus | uplands  | good |
| Vo | Vona loamy fine sand, 0-5% slopes             | moderately sandy outwash deposits that have been partly reworked by wind | mid and tall grasses, sand sage, and yucca     | gently sloping to gently undulating positions between sandhills and tablelands | good |

## Santa Fe Trail, 1821-1880

The Santa Fe Trail, which extends from Independence, Missouri, to Santa Fe, New Mexico, was one of the most important overland trails in the history of the United States and played a critical role in the nation's westward expansion. The trail linked various routes that were first followed by American Indians, then by Spanish, Mexican, and American frontiersmen. Between 1821 and 1848, the Santa Fe Trail served as an international trade route, transporting goods between Mexico and the United States. After the United States acquired Mexico's northern provinces in 1848, the Santa Fe Trail continued as a major commercial link between regions, fostering an exchange among Spanish, Indian, and American cultures.

Prior to the Mexican Revolution of 1821, Spain had forbidden foreign trade in Mexico's northern provinces. Although Santa Fe residents wanted America's manufactured goods and textiles, and Americans had long desired the furs and silver available in Santa Fe, such commercial exchange was prohibited. Northern Mexico's authorized trade routes were to the south, along the road between Santa Fe and Chihuahua. Still, Santa Fe residents had become increasingly familiar with the numerous trails on the eastern slopes of the Rocky Mountains and the western Great Plains. Euro-American explorers, traders, and trappers had traveled on portions of what was to become the Santa Fe Trail at least two centuries before the Mexican Revolution; native Indian peoples had traveled these roads many centuries before that. Indian trade fairs at Pecos and Taos among the Pueblo and Plains Indians had also introduced northern Mexico's residents to native products, and the possibility of a broader range of trade goods.<sup>15</sup>

The Mexican Revolution of 1821, led by Augustin de Iturbide, finally eliminated Spanish opposition to foreign trade with Mexico's northern provinces. Missouri trader William Becknell was the first American trader to benefit from Santa Fe's new-found independence. On November 16, 1821, Becknell and his trading party arrived in Santa Fe, where they learned that the revolution had opened the way for trade. While earlier French and American traders who had ventured into Santa Fe were jailed and had their trade goods confiscated, Becknell and his party found an eager and ready market. When Becknell returned to Missouri, he brought a message from New Mexican Governor Facundo Melgares that American traders were now welcome in Santa Fe. Although Becknell was the first American trader into an independent Santa Fe, others soon followed. On December 1,

<sup>15</sup>Ray Allen Billington, *Westward Expansion: A History of the American Frontier*, 4th Edition (New York: MacMillan Publishing Company, 1974), 388; *Santa Fe National Historic Trail Comprehensive Management and Use Plan* (U.S. Department of the Interior, National Park Service, May 1990), 8; and William Brandon, *Quivira, Europeans in the region of the Santa Fe Trail, 1540-1820* (Athens: Ohio University Press, 1990), 2-17.

1821 (only two weeks after Becknell's arrival), Thomas James brought a cargo of textiles into Santa Fe. Another trading expedition, led by Hugh Glenn and Jacob Fowler, arrived on December 29, 1821.<sup>16</sup>

During the decade of the 1820s, both Mexican and American officials actively promoted trade between their nations. In 1823, New Mexican Governor Bartolome Baca sent a delegation of merchants to Washington, D.C., to negotiate commercial trade agreements. In May 1824, America's first commercially-organized trade caravan to Santa Fe departed from Franklin, Missouri. Led by Augustus Storrs, the caravan was comprised of 81 men, 156 horses and mules, 23 wagons, and one cannon. The Storrs' expedition set the pattern for future caravans by electing officers and formally adopting a set of rules at the beginning of the journey, including regulations regarding "the conduct of the members towards each other, and their intercourse with the Indians."<sup>17</sup> The Storrs' caravan carried approximately \$30,000 worth of goods to Santa Fe. On September 24, 1824, the caravan returned to Missouri with almost \$190,000 in silver and furs.<sup>18</sup>

The success of the Storrs' expedition, the results of which were reported to a U.S. Senate committee, only furthered American interest in trade with Santa Fe. On March 3, 1825, President James Monroe signed a bill that established a commission to negotiate treaties with the Indians along the Santa Fe Trail. The bill also authorized a U.S. government-sponsored survey to mark the trail route. Commissioners Benjamin H. Reeves, George C. Sibley, and Thomas Mather headed the survey; Joseph C. Brown was appointed chief surveyor. (The survey, which was conducted between 1825-1827, marked the Cimarron Route of the Santa Fe Trail.) The Santa Fe Trail quickly became established as a lucrative trade route, adding to a broader network of international trails — and the wealth of both Mexico and the United States.<sup>19</sup>

Trade caravans along the Santa Fe Trail soon became an annual event. Around the first of May, American traders would gather in Missouri to make preparations for the journey, which included procuring wagons, buying food and supplies, and organizing into teams. The wagons began rolling towards Santa Fe in mid to late May, as soon as the spring grass was high enough to support the draft animals. (According to Missouri trader Josiah Gregg — whose 1834 caravan had 160 men, 80 wagons, and \$150,000 worth of goods — about half of the wagons were pulled by mules, the other half by oxen.) Depending on the route chosen, as well as weather and trail conditions, most Santa Fe-bound travelers reached their destination at the end of July or first part of August, and returned to Missouri before the onset of winter. For Mexican merchants traveling eastward, the area near La Junta (later Watrous), New Mexico, where the trail divided into the Cimarron and Mountain Routes, was the major point of rendezvous to organize for the trip to Missouri.<sup>20</sup>

By 1844, Josiah Gregg observed that the "Pittsburg wagon," a variation of the Conestoga that was usually pulled by eight mules or oxen, was the most used wagon on the Santa Fe Trail.<sup>21</sup> The lucrative Santa Fe Trail trade soon

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<sup>16</sup>Josiah Gregg, *Commerce of the Prairies*, edited by Max L. Moorhead (Norman: University of Oklahoma Press, 1954), 13, originally published in 1844; Larry M. Beachum, *William Becknell: Father of the Santa Fe Trade* (El Paso: The University of Texas at El Paso, Texas Western Press, Southwestern Studies, Monograph No. 68, 1982), 21 and 29; and Leo E. Oliva, *Soldiers on the Santa Fe Trail* (Norman: University of Oklahoma Press, 1967), 7-8.

<sup>17</sup>Archer Butler Hulbert, *Southwest on the Turquoise Trail* (Denver: Stewart Commission of Colorado College and the Denver Public Library, 1933), 78-79.

<sup>18</sup>Billington, 390; Oliva, 10; and Hulbert, 78.

<sup>19</sup>Hulbert, 107; and *Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 9.

<sup>20</sup>Josiah Gregg, 23-25 and 213 (According to Gregg, horses were only used during the earliest stages of the trail's commercial use, when mules were not readily available); and *Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 9.

<sup>21</sup>Josiah Gregg, 24n.

induced wagonmakers to build even bigger wagons specifically for Santa Fe Trail use, often pulled by ten or twelve draft animals. In 1861, Santa Fe Trail freighter D.M. Draper noted that:

*Our wagons were the huge, old-fashioned kind, nicknamed 'Santa Fe Schooners.' Of miscellaneous freight they held about 6,000 pounds, a fair load for those days. I am about five feet six high, and when standing on the wagon tongue could just reach the top of the front endgate. The wagon covers were made of heavy twilled cotton and doubled.*<sup>22</sup>

America's major trade good to Mexico was cloth, much of it imported from England and Europe. Cotton cloth was the most popular, followed by silks and linens. Mexican residents were also eager for American dry goods items such as hardware, cutlery, jewelry, and notions. The major items returned to the United States through trade were gold and silver Mexican dollars, silver bullion, and gold dust, as well as mules and donkeys, furs, buffalo rugs, wool, and Mexican blankets.<sup>23</sup>

In 1846, when America entered into war with Mexico, the Santa Fe Trail also became a major route for soldiers and government supply trains. In that year alone, an estimated one million dollars worth of merchandise and army supplies went over the trail. During the war, Brig. Gen. Stephen W. Kearny followed the Mountain Route of the Santa Fe Trail as he led the Army of the West from Fort Leavenworth, Kansas, to Las Vegas, New Mexico. The Mormon Battalion and other elements of the army followed the Cimarron Route. At the conclusion of the war, New Mexico belonged to the United States and Santa Fe trade was no longer foreign commerce. Still, although the days of the "old" Santa Fe Trail were over, the trade route continued to thrive.

The volume of traffic on the Santa Fe Trail rose considerably after the war. The California Gold Rush of 1849, as well as the Colorado Gold Rush a decade later, only increased the use and importance of the route. In 1850, mail and stage service began over the trail. Although emigrants traveled the Santa Fe Trail into America's new Southwest, the trail remained primarily a commercial trade route. The U.S. Army, which was responsible for protecting the region, established several military posts along the trail, including Fort Mann (1847), Fort Atkinson (1850), Fort Union (1851), Fort Larned (1859), and Fort Lyon (1860). During the U.S. Civil War, additional posts were established at strategic points.<sup>24</sup>

After 1860, the Mountain Route became the more heavily used trail. During the Civil War years, Union authorities in New Mexico became fearful that Confederate soldiers from Texas might cut the supply and communication lines along the trail's Cimarron Route. Although that threat never materialized, traders began avoiding the Cimarron Route, also because of escalating confrontations with American Indians. In 1861, the commanding officer at Fort Larned directed all wagon trains to use the Mountain Route of the trail. By 1866, one traveler noted that "the usual Route is by the Raton Pass and the Arkansas River."<sup>25</sup>

Eventually, it was the railroad that ended the use of both the Mountain and Cimarron Routes of the Santa Fe Trail. In 1863, the Union Pacific Eastern Division (which later became the Kansas Pacific Railroad) began laying tracks westward from Kansas City. As the railroad moved westward, so did the point of origin for the Santa Fe Trail. Beginning at Topeka in 1868, the Atchison, Topeka & Santa Fe Railroad reached Dodge City in

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<sup>22</sup>D.M. Dappert, "Freight Trip to Ft. Wise, Colo.," Ms., dated 1861, M72-161, 2, Western History Department, Denver Public Library.

<sup>23</sup>Oliva, 19.

<sup>24</sup>Ibid., 22; *Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 10; and Morris F. Taylor, *First Mail West: Stagecoach Lines on the Santa Fe Trail* (Albuquerque: University of New Mexico Press, 1971), 1.

<sup>25</sup>"The National Survey of Historic Sites and Buildings: The Santa Fe Trail" (Washington, D.C.: U.S. Department of the Interior, National Park Service, 1963), 63-I; and James F. Meline, *Two Thousand Miles on Horseback, Santa Fe and Back* (New York, 1867), 261.

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southwestern Kansas in 1872. One year later, the Atchison, Topeka & Santa Fe arrived in Granada, Colorado, and the Santa Fe Trail's Cimarron Route was virtually abandoned. On February 9, 1880, the first train steamed into Lamy, New Mexico, near Santa Fe, and brought an end to nearly 60 years of overland traffic on the Santa Fe Trail.<sup>26</sup>

## The Cimarron Route of the Santa Fe Trail

For American travelers, the Santa Fe Trail originated at various locations in Missouri. During the earliest years of trail trade, the caravans usually departed from Arrow Rock or Old Franklin, Missouri. Fort Osage, where the 1825 government survey began, also served as a point of debarkation, as did Blue Mills. By the late 1820s, the primary point of departure had moved westward to the town of Independence, Missouri. Westport (located near present-day Kansas City) and Fort Leavenworth, Kansas, also served as points of origins.<sup>27</sup>

Santa Fe-bound wagoners made the first part of the journey independently, as they followed the well-marked trail west of Independence. At Council Grove, about 150 miles west of Independence, the traders made final equipment adjustments and structured themselves into caravans. It was also at this point that the travelers elected one of their group, usually the most experienced trader, as the head of the caravan, and the wagons divided into groups. A lieutenant, also an experienced trader, headed each group.<sup>28</sup>

Near Great Bend, Kansas, which was approximately 270 miles west of Independence, the caravans reached the Arkansas River. At Pawnee Rock, a trail landmark that was located near present-day Larned, the Santa Fe Trail temporarily split into two branches. Depending on weather and trail conditions, the caravans took either the more northern "Dry Route" or the southern "Wet Route." A short distance west of Dodge City, these two routes converged. It was at this point that the Santa Fe trade caravans could choose to make the first of the three major crossings of the Arkansas River that led to the Cimarron River and the Cimarron Route of the Santa Fe Trail. Prior to the Mexican War, the Arkansas River in this area also marked the boundaries between U.S. and foreign soil.<sup>29</sup>

The Lower Arkansas Crossing, also known as the Mulberry Creek Crossing, began at that point where Mulberry Creek enters the Arkansas River. The Middle Arkansas Crossing, also known as the Cimarron Crossing, was located approximately forty miles upriver (west) from the Lower Arkansas Crossing, near the present town of Cimarron, Kansas. The Upper Arkansas Crossing, located at Chouteau's Island on the Arkansas River near the present town of Lakin, Kansas, was the most direct southern route and was the one taken by the 1825 government survey. Of these three crossings, the Middle Arkansas (Cimarron) Crossing was the most popular.<sup>30</sup> Both the Upper and Middle Arkansas Crossings led to Lower Cimarron Spring (see Figure 2).

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<sup>26</sup>Oliva, 23; and Rittenhouse, 27.

<sup>27</sup>Oliva, 13-14; and *Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 14.

<sup>28</sup>Billington, 390.

<sup>29</sup>*Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 14. Travelers followed different routes of the Santa Fe Trail depending on the season and whether the year had been wet or dry. These variations resulted in routes that could be several yards or several miles apart. Well-traveled routes also often became "braided" because of mud holes, excessive rutting, insufficient forage for draft animals, or difficult stream crossings. In addition, more adventurous travelers tried alternative routes to either find water, avoid encounters with Indians, or shorten travel time.

<sup>30</sup>Oliva, 17. According to Hobart Stocking, the trip from Chouteau's Island to Lower Cimarron Spring was approximately twenty-five hours by ox-cart. See Hobart E. Stocking, *The Road to Santa Fe* (New York: Hastings House, 1971), 160.

For travelers who used the Cimarron Route, it was approximately 753 miles from Independence to Santa Fe. The Mountain Route, which followed the northern bank of the Arkansas River to Bent's Old Fort into Colorado and then headed south over Raton Pass to Santa Fe, measured 797 miles. With Santa Fe Trail caravans averaging ten to fifteen miles a day, the Cimarron Route could eliminate at many as three days of travel time. The Cimarron Route also avoided the arduous trek over Raton Pass. As a result, the Cimarron Route was the primary route during most of the commercial years of the Santa Fe Trail.<sup>31</sup>

Although the Cimarron Route was at least forty miles shorter than the Mountain Route, it was considered to be a more dangerous journey as it necessitated crossing the infamous *jornada*, the desert land between the Arkansas and Cimarron Rivers. According to Santa Fe Trail historian Hobart E. Stocking, *jornada* is idiomatic for a "journey" that is hopefully completed in one day.<sup>32</sup> (The *jornada* on the Cimarron Route is distinct from the *jornada del muerto*, another dangerously dry stretch of road on the Santa Fe Trail.) On the Cimarron Route's *jornada*, water was scarce, and travelers often reported seeing mirages of water pools during the scorching heat of the day. Despite the daytime heat, night temperatures dropped drastically, and firewood was almost as hard to find as water. One traveler recalled that: "Tons of iron strewed the road, remnants of scenes when for temporary relief freezing men burned the woodwork of their wagons."<sup>33</sup>

Trade caravans were also wary of encountering the many American Indians who also traveled the Santa Fe Trail's Cimarron Route. Mexicans and Americans had long traded with Indians in this region, but tensions had increased as the vast influx of caravan traffic on the Santa Fe Trail disrupted tribal life and encroached on traditional Indian lands. Despite their apprehensions, Santa Fe Trail travelers frequently relied upon the Indians to guide them through the Cimarron Route. In 1831, when Josiah Gregg's caravan got lost on the "inhospitable desert" of the *jornada*, the traders encountered a group of Indians who led them to Lower Cimarron Spring.<sup>34</sup>

Before leaving the Arkansas River to cross the *jornada*, travelers would often spend a day or so of rest on the Arkansas River, where they would fill water barrels and prepare for the journey. Lower Cimarron Spring was located approximately 58 miles south of the Middle Crossing, and travelers tried to cross this stretch of trail as quickly as possible. Santa Fe-bound travelers often began their *jornada* crossing in the afternoon and travelled through the night, stopping for only a few hours rest. With perseverance and luck, they reached Lower Cimarron Spring the next day. The routes of both the Upper and Middle Crossings of the Cimarron Route, portions of which are visible on aerial photographs of the region, led to Lower Cimarron Spring, underscoring the importance of that site as a destination stopping point for travelers of the Cimarron Route.<sup>35</sup>

Many travelers had difficulty finding the trail to Lower Cimarron Spring. In Josiah Gregg's classic 1844 account of the Santa Fe Trail trade, *Commerce of the Prairies*, the trader observed that the arid plains between the Arkansas and Cimarron Rivers were furrowed with buffalo paths, which made the route "exceedingly perplexing to the bewildered prairie traveler." The buffalo paths, wrote Gregg, "have all the appearance of immense highways, over which entire armies would seem to have frequently passed. They generally lead from one watering place to another; but as these reservoirs very often turn out to be dry, the thirsty traveller who follows them in search of water, is liable to constant disappointment."<sup>36</sup>

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<sup>31</sup>Rittenhouse, 15; and *Santa Fe National Historic Trail Comprehensive Management and Use Plan*, 14.

<sup>32</sup>Stocking, 149 and 160.

<sup>33</sup>Hezekiah Brake, *On Two Continents: A Long Life's Experiences* (Topeka, Crane Publishing Company, 1896), 130.

<sup>34</sup>Josiah Gregg, 55-57.

<sup>35</sup>*Ibid.*

<sup>36</sup>*Ibid.*, 64-65.

The first recorded journey across the *jornada* was made in May 1822 by William Becknell on his second expedition to Santa Fe. Becknell's expedition consisted of twenty-one men and three wagons, which reportedly also marked the first use of wagons for commercial trade on the trail.<sup>37</sup> On his first journey to Santa Fe, Becknell had taken the Mountain Route of the Santa Fe Trail. On his second trip, however, Becknell ventured across the plains between the Arkansas and Cimarron Rivers. Although Becknell did not detail his crossing of the Cimarron desert in his journal of the expedition, Josiah Gregg described the hardships endured by the Becknell party:

*. . . the [Becknell] party embarked upon the arid plains which extended far and wide before them to the Cimarron River. The adventurous band pursued their forward course without being able to procure any water, except from the scanty supply they carried in their canteens. As this source of relief was completely exhausted after two days' march, the sufferings of both men and beasts had driven them almost to distraction. The forlorn band were at last reduced to the cruel necessity of killing their dogs, and cutting off the ears of their mules, in the vain hope of assuaging their burning thirst with the hot blood. This only served to irritate the parched palates, and madden the senses of the sufferers.*<sup>38</sup>

Finally, according to Gregg, "just as the last rays of hope were receding from their vision," the traders came upon a buffalo "fresh from the river's side, and with a stomach distended with water . . . The hapless intruder was immediately dispatched, and an invigorating draught procured from its stomach . . ." After this "refreshment," the Becknell party was able to reach Taos and, eventually, Santa Fe.<sup>39</sup>

Two years later, in 1824, Augustus Storrs also chose to cross the *jornada*. M.M. Marmaduke, a member of that expedition who later became governor of Missouri, described the suffering endured by the traders and their animals on the Cimarron Route. "I have never in my life experienced a time when such general alarm and consternation pervaded every person on account of the want of water," Marmaduke wrote in his trip diary.<sup>40</sup> Marmaduke's diary held another vital piece of information about the Cimarron Route. The Cimarron River was usually dry, noted Marmaduke, and the water it did occasionally hold was "remarkably bad." But Marmaduke, like future travelers on the trail, quickly discovered that good water could be found by digging holes into the river bed.<sup>41</sup> There is no evidence that the Storrs' expedition encountered Lower Cimarron Spring.

Josiah Gregg, who made four trips between Santa Fe and Missouri, also noted the characteristics of the Santa Fe Trail's many "dry streams" which, like the Cimarron River, had "remarkably shallow channels, which, during droughts, sometimes go dry in their transit through the sandy plains." In these rivers, noted Gregg, "travelers procure water by excavating basins in the channel, a few feet deep, into which the water is filtrated from the saturated sand."<sup>42</sup> As a result, Santa Fe Trail travelers who did not find Lower Cimarron Spring could still obtain water by digging in the Cimarron River channel, which may account for the many conflicting early descriptions of the spring site.

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<sup>37</sup>Beachum, 34.

<sup>38</sup>Josiah Gregg, 14.

<sup>39</sup>Ibid., 15.

<sup>40</sup>Hulbert, 73.

<sup>41</sup>Ibid.

<sup>42</sup>Josiah Gregg, 358 and 359n.

## Early Descriptions of Lower Cimarron Spring

Journals and diaries of travel on the Cimarron Route offer various and often contradictory descriptions of Lower Cimarron Spring. James A. Little, who traveled the Cimarron Route in 1854, remembered that "The first [good] water that we reached was the Cimirone [sic] Spring on a stream by that name. . . . We were almost perishing for water. With our tin cups in hands we surrounded the springs where the cold, sparkling water was gushing from under the bank." Julius Froebel, in his 1852 crossing, also found the spring on the bank of the river and that the spring water was sweet, while the river water was stagnant and brackish. By contrast, other travelers such as John McCoy, who traveled the route in 1848, recalled "Approaching the Lower Cimarron Spring we hoped to obtain an abundant supply [of water], but it was only by digging in the bed of the stream water enough for drinking, much less in sufficient quantities for the stock was to be had."<sup>43</sup>

It is likely that travelers such as McCoy thought they had reached Lower Cimarron Spring when they had only encountered the Cimarron River. As noted above, travelers could always obtain water in the often-dry Cimarron River bed by digging down a few feet. Yearly variations in weather and rainfall would also have changed the characteristics of the spring and the river. In addition, the fact that the underground spring water probably surfaced in more than one location over the years — which is supported by a hydrological study of the area, as well as by the accounts of long-time residents in the area — may also account for the variety of descriptions regarding Lower Cimarron Spring.

The records of the U.S. government-sponsored survey of the Santa Fe Trail offer one of the earliest descriptions of Lower Cimarron Spring. The spring was described in survey commissioner George C. Sibley's journal of the expedition, as well as in the "Field Notes of Joseph C. Brown, United States Surveying Expedition, 1825-1827." Sibley's journal reports that the survey party began its expedition across the Cimarron desert at 8:35 a.m., September 27, 1825. The survey party crossed the Arkansas River at the Upper Crossing at Chouteau's Island, and headed almost directly south towards the Cimarron River. While other travelers were humbled by the *jornada* crossing, Sibley seemed unfazed. "So much for *this* Bugbear," he commented in his journal.<sup>44</sup>

On the evening of September 28, the expedition reached the "famous Semerone [Cimarron] Spring," which Sibley noted had a north latitude of 37° 24' 00," which was "well ascertained by observations of the [constellation] Aquilae." At noon the next day, surveyor Joseph C. Brown confirmed the accuracy of that latitude.<sup>45</sup> Although Brown's survey notes do not include the longitude at the Lower Cimarron Spring site, his maps of the Santa Fe Trail show it as being immediately west of the 101° longitude mark.<sup>46</sup> In addition, Brown's maps show Lower Cimarron Spring as being almost directly south of Chouteau's Island on the Arkansas River (see Figure 3). Josiah Gregg's 1844 map of the Santa Fe Trail also shows the Lower Cimarron Spring site as being at approximately the same latitude and longitude as given by the Sibley-Brown party (see Figure 4).

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<sup>43</sup>James A. Little, *What I saw on the Old Santa Fe Trail* (Plainfield, Indiana: The Friends Press, 1904), 41; Julius Froebel, *Seven Years Travel in Central America, Northern Mexico, and the Far West of the United States* (London, 1859), 280; and John McCoy, *Pioneering on the Plains: Journey to Mexico in 1848; the Overland Trip to California* (Kaukauna, Wisconsin: John McCoy, 1924), 22-23.

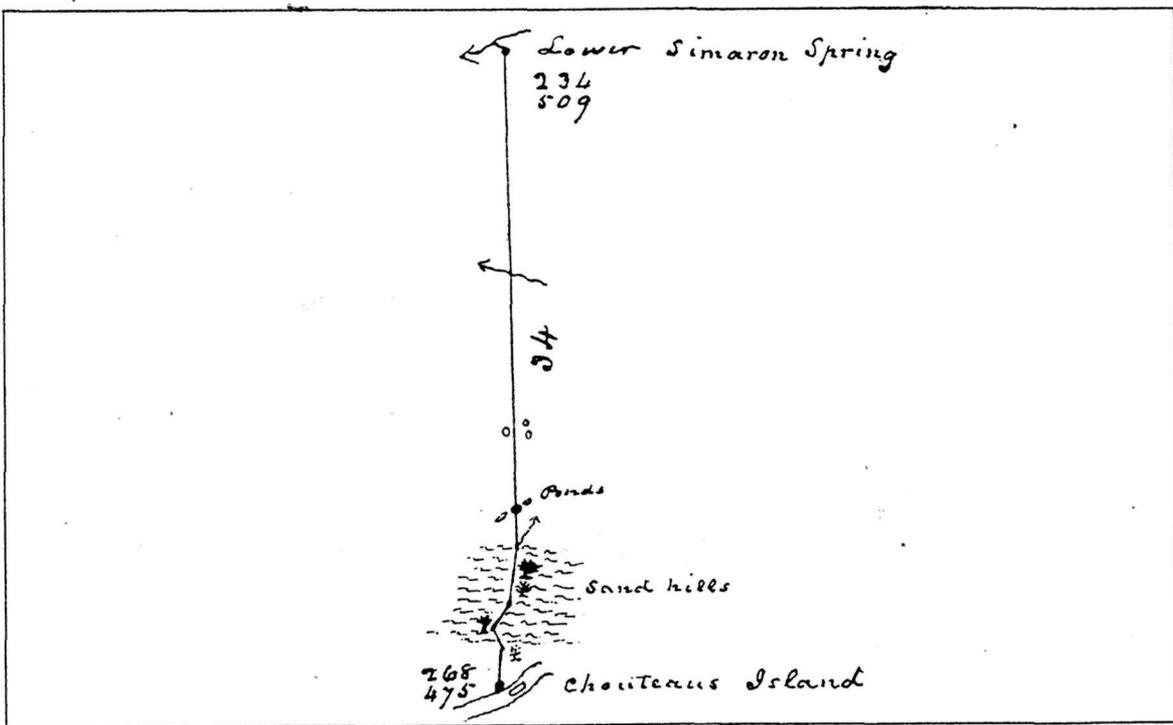
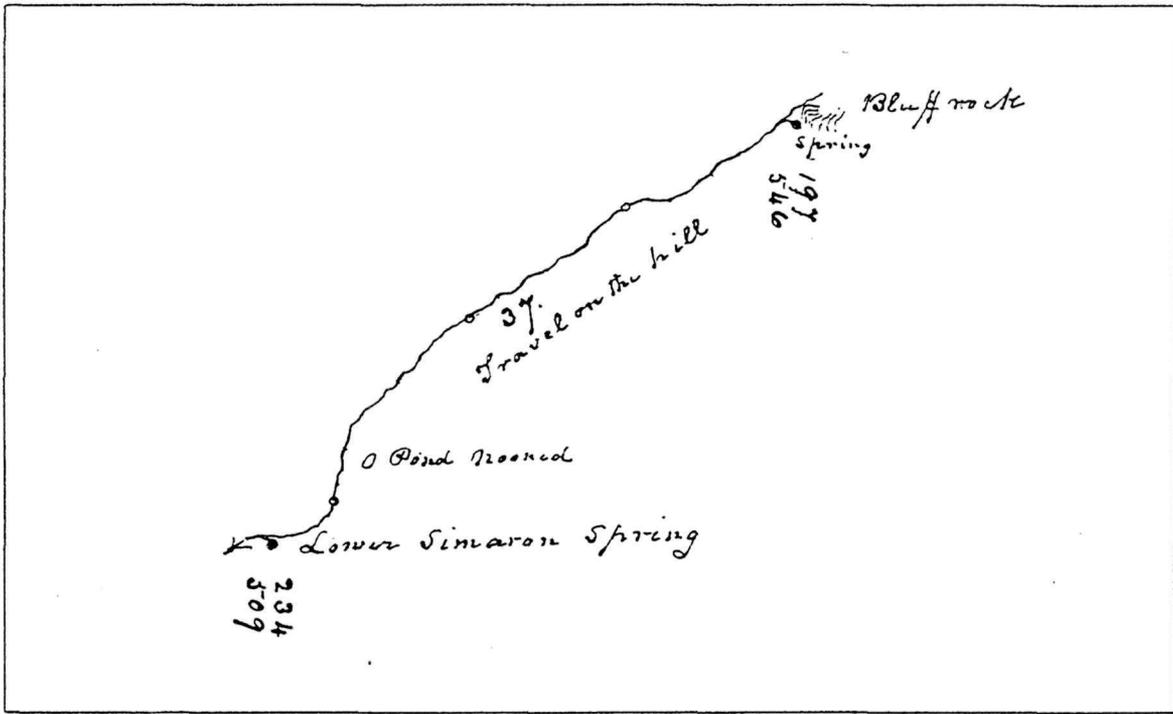
<sup>44</sup>Kate Gregg, *The Road to Santa Fe: The Journal and Diaries of George Champlin Sibley and Others Pertaining to the Surveying and Marking of a Road from the Missouri Frontier to the Settlements of New Mexico, 1825-1827* (Albuquerque: University of New Mexico Press, 1952), 87-88.

<sup>45</sup>*Ibid.*, 88. At this location, each second of latitude equals approximately one hundred feet; each second of longitude equals approximately eighty feet.

<sup>46</sup>Brown's map was reproduced in the *Kansas City Star*, August 4, 1925; a portion of it is also in Robert W. Baughman, *Kansas in Maps* (Topeka: Kansas State Historical Society, 1961), 30.

**Figure 3:** Joseph's C. Brown's 1825 map of the Cimarron Route of the Santa Fe Trail indicated that Lower Cimarron Spring was directly south of Chouteau's Island on the Arkansas River. After reaching the spring, the trail veered to the west.

From *An Atlas of Early Maps of the Midwest*, compiled by W. Raymond Wood, Illinois State Museum, Scientific Papers, Vol. XVIII (Springfield, Illinois: Illinois State Museum, 1983), Plate 17, Sheets 8 and 9, Joseph C. Brown, November 13, 1825, pen-and-ink manuscript map of the route from Fort Osage, Missouri, to Taos, New Mexico. Original in the State Historical Society of Missouri, Columbia.



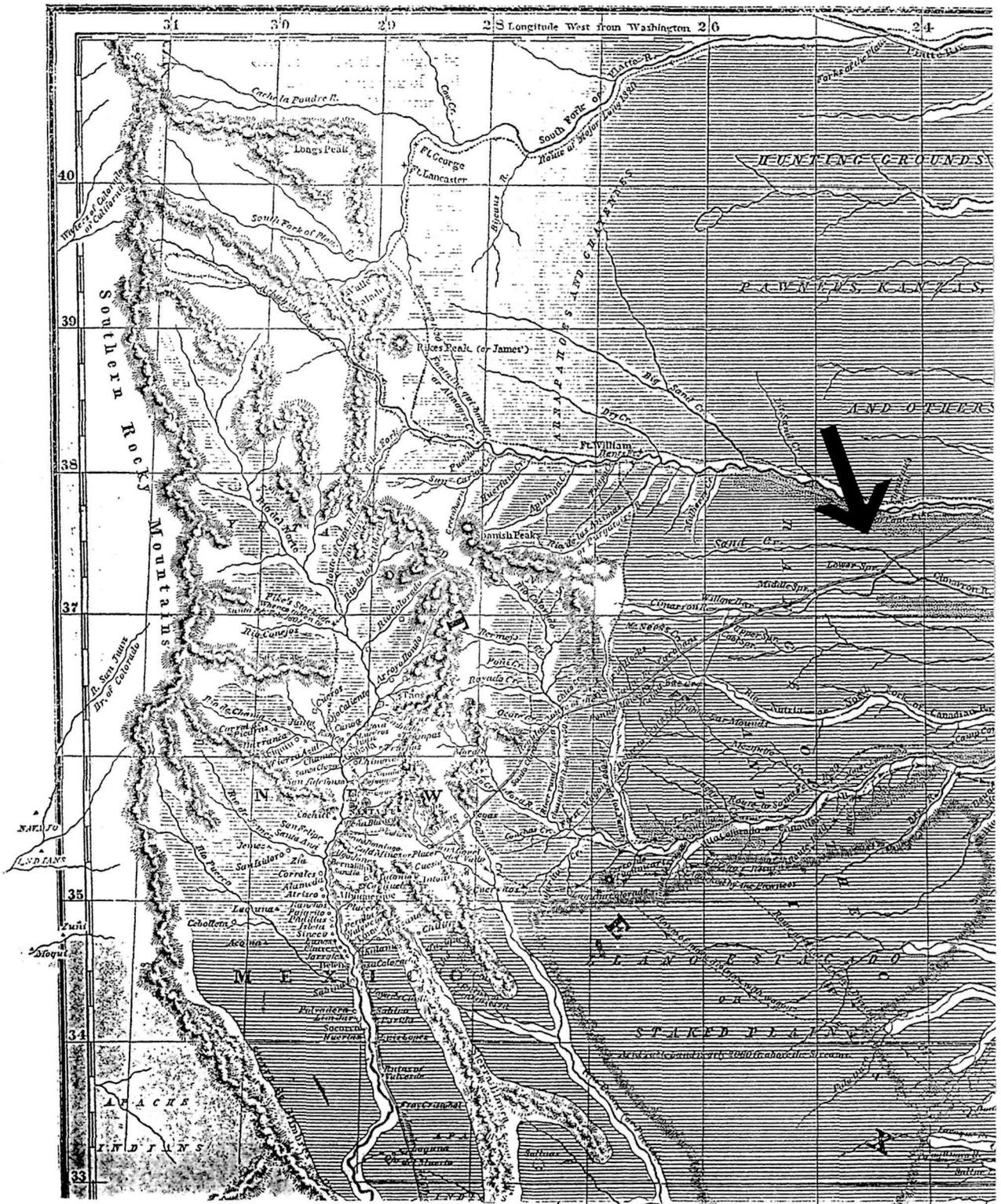


Figure 4: Josiah Gregg's 1844 Map of the Santa Fe Trail, which appeared in *Commerce of the Prairies*, shows Lower Cimarron Spring as "Lower Spr."



In his journal, George Sibley also noted that Lower Cimarron Spring:

*issues from a Hollow near the So[uth] E[ast] Extremity of the large Valley that it waters. The Valley is in area probably 300 acres, & is for the most part well set with good grass. . . . The Springs, as I saw it, appeared small, probably because an immense herd of Buffalo had just been treading about it. It no doubt afford an abundant supply of Water when properly opened, as it always is when the Indians camp near it. Its water is cool, sweet and good.*<sup>47</sup>

Joseph Brown's field notes of the journey also describe the spring site. Brown recorded that 480 miles from Ft. Osage, the expedition reached "Lower Semaron [sic] Spring," which he described as being at "the west edge of marsh green with bullrushes. The marsh is north of the creek and near it. The spring is constant, but the creek is sometimes dry . . ." <sup>48</sup> Brown's description of the spring site as a marshy area coincides with other descriptions of the site. One member of the Doniphan Expedition of 1846 described the spring as an "oasis in the desert," with rushes growing on the banks. James C. Hall, who took the Cimarron Route in 1863, described Lower Cimarron Spring as a "wide marshy plat." <sup>49</sup>

The Doniphan Expedition encountered a large group of Cheyenne camped near Lower Cimarron Spring, reflecting the historic use and importance of the spring site for American Indians. As trail traffic increased and military forts were established along the trail, Lower Cimarron Spring also became the site of several violent encounters between caravan travelers and Indians. In 1863, General Carleton recommended placing a cavalry regiment at Lower Cimarron Spring as protection against Indian raids but his recommendation went unheeded. On August 13, 1864, the Comanche killed five traders near Lower Cimarron Spring and stampeded the caravan's cattle. Six days later, another battle left ten men dead.<sup>50</sup>

## Homesteading and Agricultural Settlement in Grant County

Agricultural settlement of Grant County began in the late 1870s. In 1879, Richard H. Joyce filed the county's first homestead claim, and his land included the Lower Cimarron Spring site. By this time, the spring site was popularly known as Wagon Bed Springs, as a result of a wagon bed having been placed in the spring as a water collector. Although, as noted above, the spring may have surfaced in different locations year to year, the placement of the wagon bed provided a permanent collection spot for the water. Early journal accounts by Cimarron Route travelers make no mention of the wagon bed, and the stories regarding the placement of the wagon bed are largely anecdotal. Local resident E.F. Towler, who lived in the vicinity of the spring, reportedly said that he was told by William Boyd of Missouri that an 1849 caravan placed a bottomless wagon bed into the spring as a casing to collect water. Another popular story is that an 1871 cattle drive placed an abandoned government wagon in the spring to serve as a water collector.<sup>51</sup>

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<sup>47</sup>Kate Gregg, 88-89.

<sup>48</sup>Hulbert, 122.

<sup>49</sup>Wislizenus, 49-55; and James C. Hall, "Personal Recollections of the Santa Fe Trail," *Kansas Magazine*, January 1911.

<sup>50</sup>Oliva, 146 and 154-155.

<sup>51</sup>*Ulysses (Kansas) News*, October 28, 1992, 16.

J.W. Dappert, who served as Grant County surveyor, gave the earliest recorded account of finding a wagon bed in the spring. In a 1944 letter to the *Ulysses News*, Dappert recounted how he and Azel Cook, another local resident, "dug out the old Wagon Box in Wagon Bed Spring in January 1886" so that they could water their livestock. Dappert, who homesteaded in the area and was living approximately 2400 feet northwest of the spring, recalled "that one or two of the [wagon bed] boards were of a yellowish-red color and I thought POPLAR [sic] wood and still had strips of flat iron 'Straps' nailed upon top edge of plank" (see Figure 6).<sup>52</sup>

In November and December 1887, J.W. Dappert and Richard Joyce built an ice house on the north bank of the Cimarron River near the site of Lower Cimarron Spring. National Park Service archeologists William Butler and Steven De Vore located the remains of this ice house in 1993 (see Figure 7). According to J.W. Dappert's diary, the ice house was located:

*on the north bank of the Cimarron river, just alongside a deep hole in the river below [presumably downstream from] Wagon Bed Springs. . . . We made the ice house of sod two feet thick, made a door at the north end, placed sills on top of the walls, and a frame and plank roof, covered with tar paper, cut a ton of slough grass for use instead of sawdust to place under and around the ice to keep out the heat and thus preserve the ice.*<sup>53</sup>

The following January, when the ice in the Cimarron River froze to a thickness of eight to ten inches thick, Dappert and Joyce began putting up the ice. As Dappert described it:

*I cut the ice into blocks about 18 inches square and Mr. Joyce used a rope with a noose to lasso the chunks out of the water and skidded them up to the ice house door . . . The dimensions inside being 16 by 18 by 6 feet, which as I figured it would contain 48 tons of ice . . .*<sup>54</sup>

Another source of information on the characteristics and location of Lower Cimarron Spring — at least how it appeared in the early twentieth century — was provided by local resident Lucille Towler Lewis, who was born in Ulysses in 1901. In 1902, her family moved to a ranch located north of the Cimarron River in the vicinity of Lower Cimarron Spring. Lewis lived at the site until 1941, at which time the ranch was destroyed by a flood. Lewis recalled that Lower Cimarron Spring was located north of the Cimarron River, and was a large marshy area approximately forty feet across that was filled with cat tails and rushes. Because of changes to the river channel, that site is today located in the river bed. Lewis also recalled that the spring water ran through the winter, providing a continuing source of ice.<sup>55</sup>

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<sup>52</sup>J.W. Dappert, letter to the *Ulysses News*, January 1, 1944; a copy of this letter is in the files of the Grant County Museum, Ulysses, Kansas.

<sup>53</sup>R.R. Wilson and Ethel M. Sears, *History of Grant County, Kansas* (Wichita: Wichita Eagle Press, 1950), 242. The north door described in this account is the access door. The south end of the building, which faced the river, had a loading door that was determined through the archeological investigation of the site.

<sup>54</sup>*Ibid.*

<sup>55</sup>Lucille Towler Lewis, interview with Christine Whitacre and Steven De Vore of the National Park Service, September 18, 1993, Ulysses, Kansas; and *Ulysses News*, September 25, 1941. Lewis and her husband only lived away from the ranch for one year: 1919-1920. Years later, Lewis painted a picture of the spring site, which is now located in the Grant County Museum in Ulysses. The painting depicts the Towler-Lewis Ranch, the Towler Crossing of the Cimarron River, Wagon Bed Springs, and the DAR marker at the site.

## Historical Designation of Lower Cimarron Spring

In 1907, E.F. Towler (Lucille Towler Lewis's father) petitioned the Daughters of the American Revolution (DAR) to place a Santa Fe Trail marker at Lower Cimarron Spring. The DAR, in conjunction with the Kansas State Historical Society, agreed to the request, and Towler's correspondence indicates that the marker was located in the northeast quarter of Section 33, Township 30 S, Range 37 W, "about the center of the section in the NW corner of the quarter," noting that the stone "is also about 50 yards of the wagonbed" (see Map A). Per Towler's recommendation, the stone was engraved with the words "Wagonbed Springs." The granite stone marker was placed by Towler and his brother-in-law, Richard H. Joyce.<sup>56</sup> Lucille Towler Lewis stated that the spring was almost directly south and slightly east of the marker. According to Lewis, it would have been impossible to have placed the marker much closer to the spring without getting into the swampy marsh land.<sup>57</sup>

In 1914, the first of a series of devastating floods struck the area and dramatically altered the spring site. J.W. Dappert, who returned to the area in 1916 after an absence of several years, was shocked by the way in which the 1914 flood had changed the Cimarron River. He wrote:

*. . . right at Wagon Bed Springs, the river had receded some hundreds of feet farther to east, thus shortening the quite abrupt bend . . . much of the area formerly growing 'Cat-tails' (Flags) was now covered with sand; but the most noted change was that of the width and size of the bed of the Cimarron River from a brook which I could easily jump across — to a Sandy River 400 to 600 Feet from bank to bank.*<sup>58</sup>

Dappert later drew a map of the site showing how the river channel had changed, which included the location of Lower Cimarron Spring as he had found it in 1886. (See Figure 6) The 1914 flood effectively destroyed the spring site and its associated marsh, although spring water continued to surface in the general area.<sup>59</sup>

In 1937, the local 4-H Club, in cooperation with the Joyce family, moved the DAR marker to a site approximately 200 yards to the south. According to Harry Joyce, the present owner of the property and the grandson of homesteader Richard H. Joyce, the marker was moved because the 1907 marker location had eroded away. The new marker site was also closer to a road (no longer extant) and was more accessible for visitation. The new location, which was located in a shaded bend of the river, also offered better picnic facilities. The 4-H Club built

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<sup>56</sup>Although the marker is engraved with the year 1906, Towler's correspondence with the DAR and the State of Kansas indicates that it was placed at the site in 1907. E.F. Towler, letter to the Sec. of the Daughters of the Revolution, Washington D.C., January 15, 1907; E.F. Towler, letter to Geo. M. Martin, Topeka, Kansas, June 4, 1907; E.F. Tower, letter to Geo. M. Martin, Topeka, Kansas, November 23, 1907 [this letter includes a map showing the location of the marker]; and Ed Lewis [grandson of E.F. Towler] to Lysa Wegman-French, National Park Service, Rocky Mountain Region, October 26, 1992. E.F. Towler served, variously, as the Grant County attorney and surveyor.

<sup>57</sup>Lucille Towler Lewis interview.

<sup>58</sup>Dappert letter.

<sup>59</sup>Dappert's letter includes this map. The map shows the spring site as being in the northwest quadrant of Section 33, but includes a notation stating that the spring is "shown somewhat too far west." This agrees with Dappert's statement that the spring was located on the Joyce homestead, which was in the northeast quadrant. The northwest quadrant of Section 33 was owned by Flora Bowman.

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a brick cistern at the new location; the cistern filled with below-surface water and served as a representation of Lower Cimarron Spring (see Map A).<sup>60</sup>

Harry Joyce, who was interviewed by the National Park Service in 1993, refuted a popular misperception that the historical marker was moved because the Joyce family believed the more southern (1937) marker site was the spring's historic location. Joyce, who was born in 1918, confirmed that the 1907 marker site was historically correct. Joyce also stated that the historic spring site generally lined up with a row of trees located on the Joyce property.<sup>61</sup> The row of trees, which still stands, lines up with the 1907 DAR-designated site (see Map A).

Although the DAR marker was moved for practical reasons — to avoid erosion and provide better picnic facilities — the 1937 marker site was eventually accepted as the "historic" location of Lower Cimarron Spring. In 1960, the Secretary of the Interior designated "Wagonbed Springs" as a National Historical Landmark (NHL). During this time, the National Park Service was completing the Santa Fe Trail component of the National Survey of Historic Sites and Buildings, and Wagon Bed Springs was identified as a trail site of exceptional significance.<sup>62</sup> In 1962, the National Park Service participated in a ceremony at which the NHL plaque was placed at the 1937 marker site.

In addition to the devastating flood of 1914, a series of natural and man-made events continued to erode the site of Lower Cimarron Spring. The spring site was also impacted by floods in 1941, 1942, and 1951. For the Towler-Lewis family, who lived approximately one-half mile east of Lower Cimarron Spring on the north bank of the Cimarron River, the 1941 flood was more devastating than the 1914 flood, and caused them to permanently abandon their home. As a result of the flooding, the Cimarron River channel in the vicinity of Lower Cimarron Spring shifted back and forth (east and west) over an area nearly half a mile wide, which is evident by the numerous rows of fallen trees in the channel bed, as well as by the several lines of sand bars demarking the edges of the previous channels. Agricultural development and well-drilling in the area also affected the water table, diminishing the flow and frequency of the upwelling spring water. The most significant development occurred in the 1960s with the advent of deepwell irrigation in the area, which caused a drop in the water table and brought an end to the flow of spring water.

In the 1980s, Edward Dowell, an amateur archaeologist and member of the Wagonbed Springs Chapter of the Santa Fe Trail Association, began investigating the area surrounding the Lower Cimarron Spring site. Through the use of a metal detector, Dowell uncovered a large amount of Santa Fe Trail-related artifacts. The artifacts were concentrated in the southern portion of Section 28 and the northern portion of Section 33, Township 30 S, Range 37 W, generally in the area surrounding the historic location of Lower Cimarron Spring as marked by the 1907 DAR marker. The area investigated by Dowell also included several remnants of Santa Fe Trail ruts. By contrast, no ruts have been located near the 1937 marker; nor have any trail-related artifacts been found in that area.

Partly as a result of Dowell's investigations, and also based on historical accounts of Lower Cimarron Spring, the Wagonbed Springs Chapter of the Santa Fe Trail Association (SFTA) challenged the NPS-designated site. By this time, the historic location of the spring had become a controversial issue as local residents, historians, and SFTA members debated where the historical markers should be located. In 1989, the SFTA relocated both the DAR and NHL markers to a site closer to the original 1907 location of the DAR marker. The new site straddles the section line between the southwestern quarter of Section 28 and the northwestern quarter of Section 33, Township 30 S,

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<sup>60</sup>Harry Joyce, interview with Christine Whitacre at Lower Cimarron Spring, near Ulysses, Kansas, September 17, 1993. The 1974 U.S. Geological Survey map shows Wagon Bed Spring at the location of the 1937 marker. Although the spring water was no longer surfacing at the time of the map survey, the U.S. Geological Survey identified it as such because of the presence of the historical marker.

<sup>61</sup>Joyce interview.

<sup>62</sup>"The National Survey of Historic Sites and Buildings: The Santa Fe Trail," 23-II.

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Range 37 W. Here, the SFTA constructed an interpretive exhibit that included a wagon bed placed in the ground and watered by a solar-powered pump. During the next few years, the "real" location of Lower Cimarron Spring continued to be a matter of considerable local interest.

## Hydrological Characteristics of the Lower Cimarron Spring Site

In 1993, in an effort to determine the historic location of Lower Cimarron Spring, the National Park Service contracted with Edwin D. Gutentag, a water hydrologist formerly associated with the U.S. Geological Survey (USGS), and asked him to evaluate the Lower Cimarron Spring area in terms of its hydrological characteristics. Gutentag, whose work involved an on-site field inspection and an investigation of the geographic and hydrological conditions of the area, believes that the most likely historic location of the now-dry spring is at latitude 37° 24' 07" and longitude 101° 22' 10". This places the spring in what is now the bottom of the river bed at the bend of the Cimarron River in the northwest quarter of the northeast quarter of Section 33, Township 30 S, Range 37 W.

As part of his study, Gutentag found that the water table at the Lower Cimarron Spring site had historically been very close to the land surface. In 1941, which was the first year that the water table in that area was measured, the water level at the site was located at approximately 2,985 feet above sea level. The 1974 USGS map indicates that the land surface in the same area was around 2,987 feet above sea level. Thus, despite the prolonged 1930-1940 drought, the water level appears to have been very close (approximately two feet) to the land surface in 1941. Gutentag therefore determined that during extended periods of normal precipitation and normal recharge (unlike the 1930s drought), the water table of the High Plains Aquifer would have regularly risen above the land surface in the area of Lower Cimarron Spring.

According to Gutentag, the historic marsh and shallow pools associated with the spring resulted from ground water discharge. Gutentag noted, however, that during different seasons and different years, the upwelling ground water could have risen to the surface in more than one place, which would account for the varying descriptions of the spring site. By 1975, as a result of deepwell pump irrigation in the area, the water level in the vicinity of Lower Cimarron Spring was approximately thirty feet below the land surface. As a result, Gutentag believes that there is no possibility of Lower Cimarron Spring flowing again.<sup>63</sup>

A great amount of historical evidence supports Gutentag's conclusion that Lower Cimarron Spring was located in the vicinity of the river bend in Section 33. The accounts given by long-time residents Harry Joyce, Lucille Towler Lewis, E.F. Towler, and J.W. Dappert indicate that this was the historic location of the spring. This location also agrees, generally, with information found in historic journals, survey notes and maps, particularly the Sibley-Brown survey of 1825 (see Map A).

The archeological remains of the Joyce-Dappert ice house also provide strong evidence regarding the location of Lower Cimarron Spring, at least where it was surfacing in the 1880s. The ice house remains (which match the dimensions given by J.W. Dappert in his diary) are located at latitude 37° 24' 08" and longitude 101° 22' 11" — a site that agrees with Dappert's description that the ice house was located just below (downstream) from Lower Cimarron Spring.

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<sup>63</sup>Edwin D. Gutentag, "Location and hydrological characterization of Wagon Bed Spring, Grant County, Kansas," 1993, Ms. on file at the National Park Service, Rocky Mountain Regional Office, Lakewood, Colorado.

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## Previous Archeological Investigations

The first systematic archeological investigations of the Lower Cimarron Spring area did not occur until the late 1980s. Although collections of artifacts were made by amateurs prior to the late 1980s, no systematic inventory of the artifact provinces were kept. In 1987, Edward Dowell of Ulysses, Kansas, began collecting artifacts along the Cimarron Route of the Santa Fe Trail in the vicinity of Lower Cimarron Springs. Using a metal detector, Dowell collected numerous artifacts related to the historic trail period and the later homesteading era. Dowell documented the general site location of artifacts recovered from his metal detector surveys. This documentation consists of photocopies of aerial photographs of the area where he has recorded his finds along with a short description of the objects. The recovered artifacts have been stored in individual containers or ziplock bags with the provenience written on the containers with permanent ink.

In 1990, personnel from the Kansas State Historical Society conducted an archeological investigation of the interpretive display erected by the local chapter of the Santa Fe Trail Association.<sup>64</sup> Their investigations revealed no significant artifact concentrations or features, although artifacts had been recovered from the area surrounding the interpretive display. An 1856 dime had been recovered by Dowell within the enclosure prior to the archeological investigations; however, Dowell indicated that he found very few artifacts within the enclosure. During the archeological investigations, the Kansas State Historical Society archeologists concluded that the area within the enclosed display area had been seriously eroded by runoff from the pivot irrigation system to the northwest of the enclosure. A temporary holding pond had been constructed in a 200-meter-square area immediately west of the enclosure. The archeologists also examined this area. They identified a few bone scraps.

## Present Archeological Investigations

During September 1993, National Park Service personnel from the Rocky Mountain Regional Office conducted additional archeological and historical investigation of the Lower Cimarron Spring site in order to reassess the NHL boundaries. The Dappert-Joyce ice house depression was located adjacent to the northern bank of the Cimarron River. The area surrounding the Cimarron River was mapped, and the ice house depression, edge of the Cimarron River, section and half section fence lines, Santa Fe Trail ruts, isolated walnut trees, the row of trees on the Joyce homestead, and the artifact locations/concentrations identified by Dowell were demarcated and recorded during the mapping of the site vicinity. Based on Dowell's metal detecting, an area of 171 acres was identified as containing artifacts related to the Santa Fe Trail traffic, the Lower Cimarron Spring camp site, and local homesteading. This 171-acre area is encompassed within the proposed NHL boundaries, shown on Map B.

National Park Service archeologists conducted an analysis of the artifacts in the possession of Dowell. Also analyzed were artifacts on exhibit at the Grant County Museum, including one display belonging to Dowell and one display collected by another local amateur, William Purnell. Approximately 3,000 artifacts in seven functional categories have been collected by Dowell at the Lower Cimarron Spring campground location (see Table 2).<sup>65</sup> The major functional categories include personal items (n=70 artifacts), domestic items (n=40), architecture (n=1183), personal and domestic transportation (n=43), commerce and industry (n=1,459), miscellaneous items (n=117), and aboriginal lithics (n=27).

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<sup>64</sup>Martin Stein, "Archeological Survey of Wagon Bed Springs," Memorandum dated August 1, 1990, in the files of the Center for Historical Research, Kansas State Historical Society, Topeka.

<sup>65</sup>Roderick Sprague, "A Functional Classification for Artifacts from 19th and 20th Century Historical Sites," in *North American Archaeologist* 2(3) (1980-81): 251-261.

surveys, Plans and Estimates Made for Sewerage, Drainage and Levee Systems. Municipal Improvements, Bridges, Paving, Pumping Plants, Etc. Line and Topographical Surveys. Reports and Investigations. Drafting and Blueprinting. Specializing in Drainage and Flood control.

OFFICE OF  
**J. W. DAPPERT & SONS**  
 CONSULTING ENGINEERS  
 SEWERAGE AND DRAINAGE

BOYD H. DAPPERT  
 County Surveyor

ANSELMO F. DAPPERT  
 Municipal Engineer

J. W. DAPPERT, C. E.  
 Forty years experience in General Engineering. Licensed Structural Engineer. Member American Water Works Association, American Association of Engineers. Member Illinois Society of Engineers and American Society of Engineers.

JOHN V. DAPPERT  
 Electric Engineer  
 Springfield, Ill.

TAYLORVILLE, ILLINOIS

MERLIN L. DAPPERT  
 Drainage Engineer

Jan. 1st, 1944.

PLAT OF A PORTION OF SOUTH GRANT COUNTY, KANSAS,  
 SHOWING THE DAPPERT LANDS AND VICINITY.

By J. F. Dappert, County Surveyor of Grant County, 1897-1898.

The location of Gas Wells and Gas Pipe Lines are Approximate, only. Wagon Bed Springs shown somewhat too far west. J. F. D.

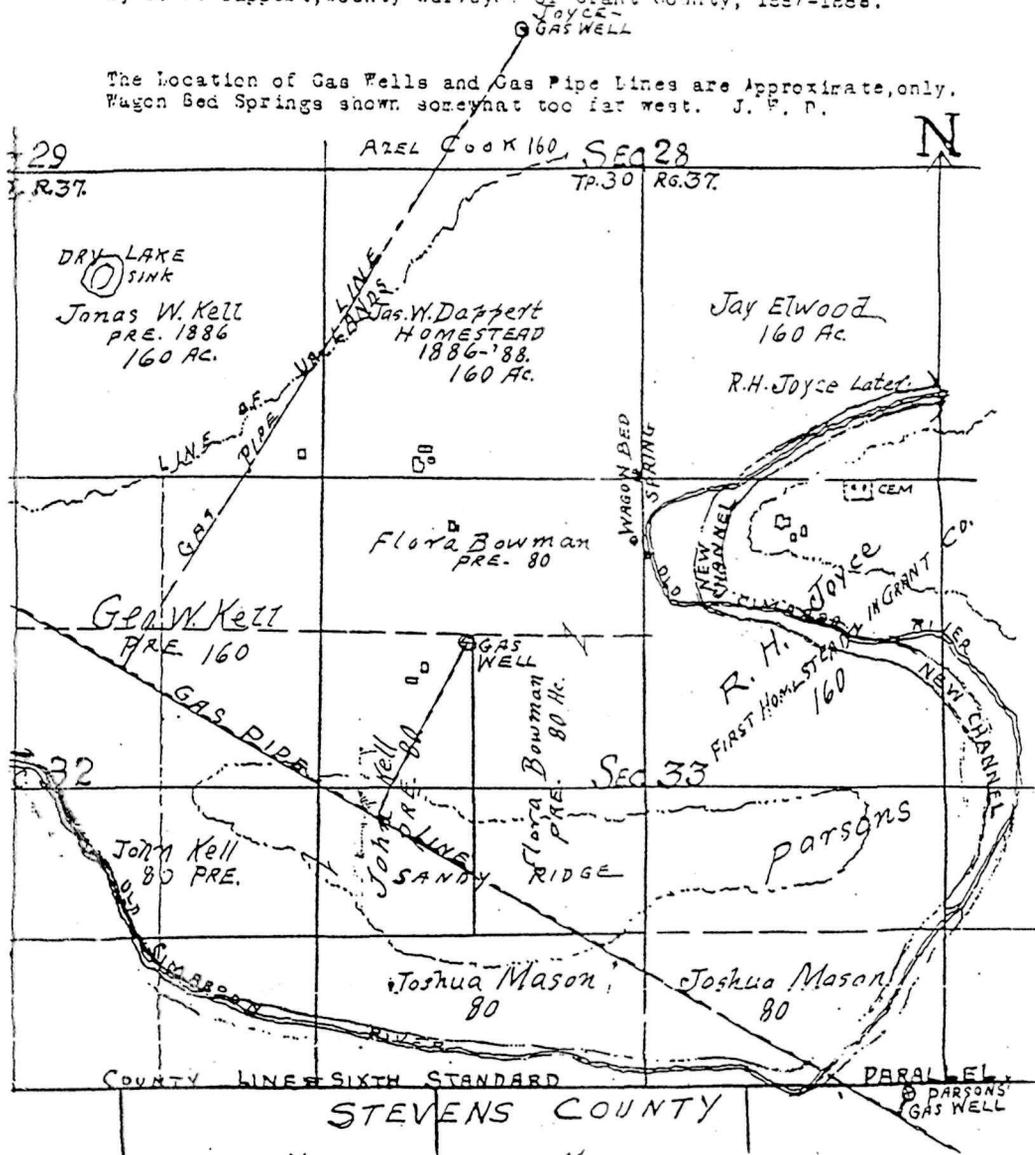


Figure 6: J.W. Dappert's Map of the Lower Cimarron Spring (Wagon Bed Springs) Site, which shows how the Cimarron River channel shifted after the 1914 flood.



**Figure 7:** Aerial Photograph of the Lower Cimarron Spring (Wagon Bed Springs) Site, showing the location of the Joyce-Dappert ice house depression. The ice house depression is just north of the historic spring site, which is now located in the bend of the river. Photo by James Walker, 1993.

Although there are several items that are directly associated with the homesteading and ranching activities of the late nineteenth and early twentieth centuries, most of the artifacts in the Dowell collection are directly associated with commerce and military activities on the Santa Fe Trail and at Lower Cimarron Spring. Personal items include artifacts from the following categories: clothing, footwear, adornment, indulgences, ritual, pocket tools and accessories, and luggage items. Domestic items include furnishings, housewares and appliances, and cleaning and maintenance items. Architectural items consist of construction related items. It is probable that several of these items (e.g., machine cut nails and tacks, handwrought nails and tacks, and wood screws) are from wagons; however, without addition analysis, it would be extremely difficult to distinguish their actual function. Personal and domestic transportation items consist of vehicle related artifacts from wagons. The commerce and industry category includes agriculture and husbandry items, hunting related artifacts, construction tools, commercial services artifacts in the form of coins, and manufacturing items. With the exception of the .22 cal. bullets and casings and the modern shotgun shells, the hunting artifacts are related to activities along the Santa Fe Trail during the 1800s. Miscellaneous metal artifacts consist of scraps, rod segments, rivets, grommets, hooks, and other items that have not been identified. The final category of artifacts in the Dowell collection consists of lithic artifacts of an aboriginal origin, which probably pre-date Euro-American exploration of the region.

**TABLE 2. ARTIFACTS FROM THE EDWARD DOWELL COLLECTION**

**PERSONAL ITEMS**

|                              |                     |    |
|------------------------------|---------------------|----|
| Clothing                     |                     |    |
|                              | Military Button     | 6  |
|                              | 4-hole Glass Button | 23 |
|                              | Other Button        | 6  |
|                              | Suspender Clasp     | 5  |
| Footwear                     |                     |    |
|                              | Leather Boot Heel   | 2  |
| Adornment                    |                     |    |
|                              | Jewelry             | 4  |
|                              | Metal Bead          | 1  |
|                              | Bobby Pin           | 3  |
|                              | Hair Beret          | 1  |
|                              | Tinkler             | 6  |
|                              | Carbine Belt Tip    | 1  |
| Indulgences                  |                     |    |
|                              | Clay Tobacco Pipe   | 1  |
| Ritual                       |                     |    |
|                              | Crucifix            | 1  |
|                              | Boy Scout Items     | 4  |
| Pocket Tools and Accessories |                     |    |
|                              | Pocket Knife        | 3  |
|                              | Watch Part          | 3  |
| Luggage                      |                     |    |
|                              | Trunk Part          | 1  |

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**DOMESTIC ITEMS**

## Furnishings

|                 |   |
|-----------------|---|
| Furnishings     |   |
| Upholstery Tack | 1 |
| Decorative      |   |
| Picture Frame   | 1 |

## Housewares and Appliances

|                      |   |
|----------------------|---|
| Culinary             |   |
| Cooking Knife        | 2 |
| Cook Stove Part      | 2 |
| Cooking Pot          | 5 |
| Gastatory            |   |
| Table Utensil Handle | 1 |
| Hole-in-Top Can      | 8 |
| Spice Can Lid        | 1 |
| Faunal Remains       | 2 |
| Mussel Shell         | 4 |
| Bottle Glass         | 4 |
| Home Education       |   |
| Paper Clip           | 1 |
| Box Staple           | 1 |

## Cleaning and Maintenance

|               |   |
|---------------|---|
| Sewing        |   |
| Straight Pin  | 2 |
| Sewing Needle | 3 |
| Awl           | 2 |

**ARCHITECTURE**

## Construction

|                      |     |
|----------------------|-----|
| Hardware             |     |
| Wall Hook            | 1   |
| Machine Cut Nail     | 846 |
| Handwrought Nail     | 134 |
| Wire Nail            | 37  |
| Handwrought Tack     | 33  |
| Machine Cut Tack     | 89  |
| Pointless Wood Screw | 1   |
| Wood Screw           | 3   |
| Padlock              | 4   |
| Door Rimlock         | 9   |
| Door Latch           | 1   |
| Key                  | 2   |
| Door Bolt            | 17  |
| Door Hinge           | 1   |
| Sash Fastener        | 1   |
| Lead Sheet Fragment  | 4   |

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**PERSONAL AND DOMESTIC TRANSPORTATION**

## Vehicles

|                          |    |
|--------------------------|----|
| Chain Lock               | 1  |
| Carriage Bolt            | 16 |
| Wagon Strap              | 1  |
| Felloe Plate             | 1  |
| Wagon Hub                | 1  |
| Wagon Button Hook        | 1  |
| Wagon Box Staple         | 15 |
| Miscellaneous Wagon Part | 4  |
| Whiffletree Plate        | 1  |
| Whiffletree Hook         | 2  |

**COMMERCE AND INDUSTRY**

## Agriculture and Husbandry

|                         |    |
|-------------------------|----|
| Mexican Bridle Chain    | 5  |
| Sleigh Bell             | 1  |
| Mule Shoe               | 7  |
| Oxen Shoe               | 1  |
| Shoe Nail               | 88 |
| Spur                    | 4  |
| Chain Link              | 5  |
| S-chain                 | 1  |
| Harness Buckle          | 1  |
| Harness Ring            | 6  |
| D-buckle                | 3  |
| Rectangular Buckle      | 6  |
| Roller Buckle           | 15 |
| Round Bridle            | 1  |
| Snap Hook               | 1  |
| Harness Hook            | 1  |
| Tractor Gas Filter      | 1  |
| Tractor Air Filter Band | 1  |
| Barbed Wire             | 6  |
| Fence Staple            | 2  |

## Hunting

|                          |     |
|--------------------------|-----|
| Lead Balls/Splatter/Shot | 723 |
| Lead Bullet              | 160 |
| Center Fire Casing       | 12  |
| Rim Fire Casing          | 8   |
| Pin Fire Casing          | 1   |
| Percussion Cap Container | 1   |
| Percussion Cap, Lined    | 9   |
| Percussion Cap, Hat      | 9   |
| Ramrod Ferrule           | 2   |
| Lead Bar                 | 1   |

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|                               |                       |     |
|-------------------------------|-----------------------|-----|
|                               | Brass Tack            | 2   |
|                               | Trigger Plate         | 1   |
|                               | Trigger Guard         | 1   |
|                               | NW Gun Side Plate     | 2   |
|                               | Gun Tool              | 1   |
|                               | Shotgun Shell         | 9   |
|                               | .22 Cal Bullets       | 322 |
|                               | .22 Cal Casing        | 19  |
|                               | Metal Arrow Head      | 8   |
| Construction                  |                       |     |
|                               | Architecture          |     |
|                               | Saw                   | 1   |
|                               | Utilities             |     |
|                               | Punch                 | 1   |
|                               | Chisel                | 1   |
|                               | Auger Bit             | 1   |
| Commercial Services           |                       |     |
|                               | Monetary              |     |
|                               | Coins                 | 6   |
| Manufacturing                 |                       |     |
|                               | Retail Merchandising  | 2   |
| <b>MISCELLANEOUS MATERIAL</b> |                       |     |
| Metal                         |                       |     |
|                               | Rod                   | 5   |
|                               | Sheet Metal           | 4   |
|                               | Aluminum Foil         | 1   |
|                               | Aluminum Object       | 1   |
|                               | Strap Metal           | 16  |
|                               | Brass Sheet           | 1   |
|                               | Roller                | 1   |
|                               | Clip                  | 1   |
|                               | Square Rod            | 1   |
|                               | Fine Rectangular Wire | 4   |
|                               | Hook                  | 1   |
|                               | Eye Strap and Rod     | 1   |
|                               | Ferrule               | 2   |
|                               | Wire                  | 2   |
|                               | Riveted Metal         | 4   |
|                               | Rivet                 | 15  |
|                               | Grommet               | 3   |
|                               | S-hook                | 1   |
|                               | Clamp                 | 4   |
|                               | Miscellaneous Metal   | 49  |

## ABORIGINAL LITHICS

|                                 |    |
|---------------------------------|----|
| Chipped Stone Tools             |    |
| Side Scraper                    | 1  |
| Corner notched Projectile Point | 1  |
| Lithic Debitage                 |    |
| Debitage                        | 25 |

## Archeological Potential

The Lower Cimarron Spring site has an extremely high archeological potential to yield information concerning the activities of the various groups of travelers, both military and commercial ventures, along the Cimarron Route of the Santa Fe Trail. Data based on the aerial photographs from 1939, 1953, 1960, 1967, 1973, 1981, and 1991, indicates that the site integrity is extremely high. Until the late 1970s, the entire site was utilized for pasture to graze cattle. In the late 1970s, the western quarter of the site was impacted by two forty-acre pivot irrigation plots; however, the amount of impact to the site has been minimal. Based on the metal detector surveys, the archeological resources buried on the alluvial fans, terraces, and side slopes range in depth from surface to approximately four inches below the surface while the materials recovered from the floodplain may be buried to a depth of fourteen inches.

Recovered artifacts indicate a vast array of activities associated with the spring and associated campground. Due to the specific and random nature of the metal detector surveys of the site, features associated with camping activities (e.g., hearths) have yet to be identified. The probability of their presence is extremely high since the site was used as a major camp site for over forty years. Overall, the site has a high potential to yield information on the camp site activities associated with the Santa Fe commercial trade ventures and with the military encampments during the Mexican War.

## Proposed Boundaries for the Lower Cimarron Spring (Wagon Bed Springs) Camp Site National Historic Landmark

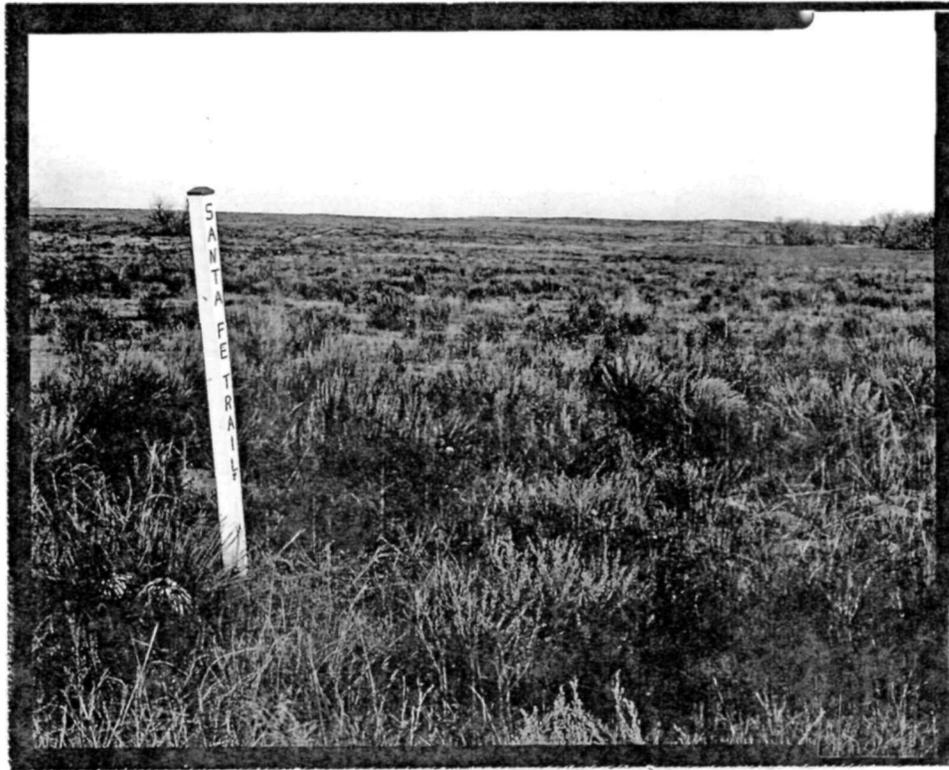
As a result of the boundary study, the Rocky Mountain Regional Office of the National Park Service recommends that new boundaries be adopted for what is now called the Wagon Bed Springs National Historic Landmark. The proposed boundaries, which are shown on Map B, include the historic location of Lower Cimarron Spring, which is in the northwest quarter of the northeast quarter of Section 33, Township 30 S, Range 37 W. These boundaries also encompass the lands surrounding the spring site that were found to have a high concentration of trail-related artifacts, and which represent the area's historic use as a major camp site along the Santa Fe Trail. The proposed boundaries, which encompass 171 acres, also include numerous Santa Fe Trail ruts, including a segment that is located just north of the identified Lower Cimarron Spring site.

In addition, it is recommended that the name of the National Historic Landmark be changed to "Lower Cimarron Spring (Wagon Bed Springs) Camp Site." Lower Cimarron Spring represents the spring's historic name, and was the name commonly used during the days of the Santa Fe Trail. It is also recommended that "Wagon Bed Springs" be retained as a secondary name, since the site is popularly known and referred to as Wagon Bed Springs.

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Lower Cimarron Spring (Wagon Bed Springs) National Historic Landmark is nationally significant under Criteria 1 and 6. Lower Cimarron Spring is eligible under Criterion 1 because it is associated with events that have made a significant contribution to, are identified with, and which represent the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained. From an archeological perspective, the Lower Cimarron Spring (Wagon Bed Springs) Camp Site is nationally significant under Criterion 6 in that the site has yielded or may be likely to yield information concerning the activities along the nationally significant Santa Fe Trail during the nineteenth century. The Lower Cimarron Spring (Wagon Bed Springs) Camp Site falls under National Historic Landmark Theme No. X: "Westward Expansion of the British Colonies and the United States, 1763-1898," and Subtheme: D.2: "Western Trails and Travelers, Santa Fe Trail."

The period of significance for the Lower Cimarron Spring (Wagon Bed Springs) Camp Site NHL is 1822-1880. The year 1822 marks the first recorded journey by traders across the Cimarron Route of the Santa Fe Trail. William Becknell's 1822 expedition included a stop at Lower Cimarron Spring. The year 1880 marks the end of the Santa Fe Trail's use as a major commercial route.



**Photo 1:** The general area around the Lower Cimarron Spring Site includes several segments of the Santa Fe Trail. View to the northeast.



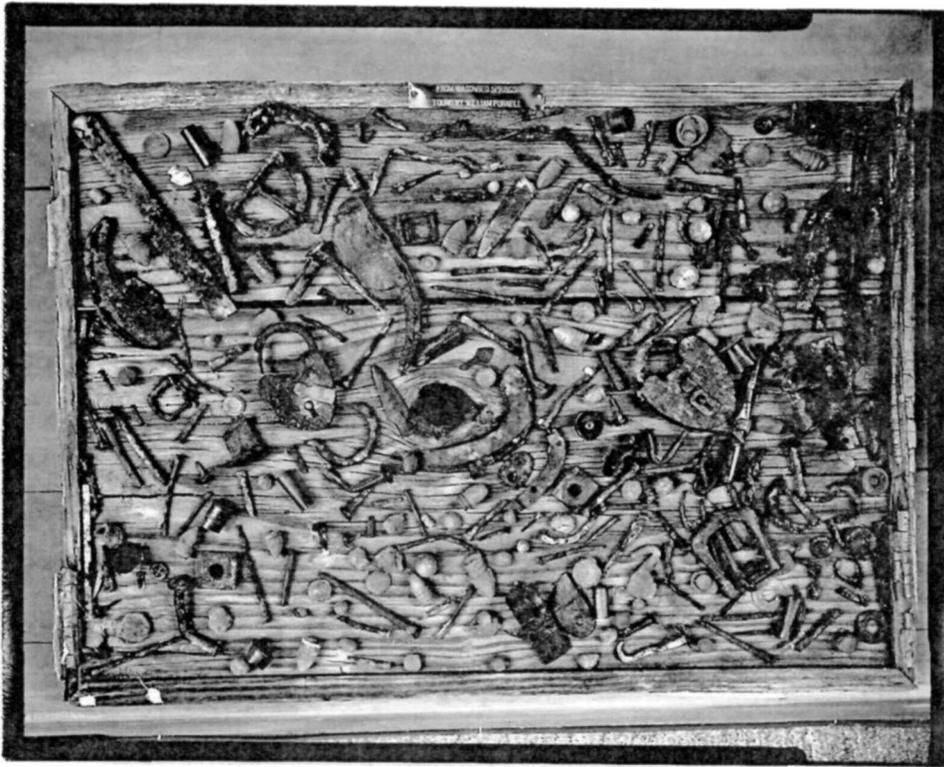
**Photo 2:** Santa Fe Trail ruts, looking southwest. The ruts, which are located in the area with higher grass, pass between the Santa Fe Trail Association's display in the background on the right, and the historic location of Lower Cimarron Spring located near the bend of the Cimarron River on the left.



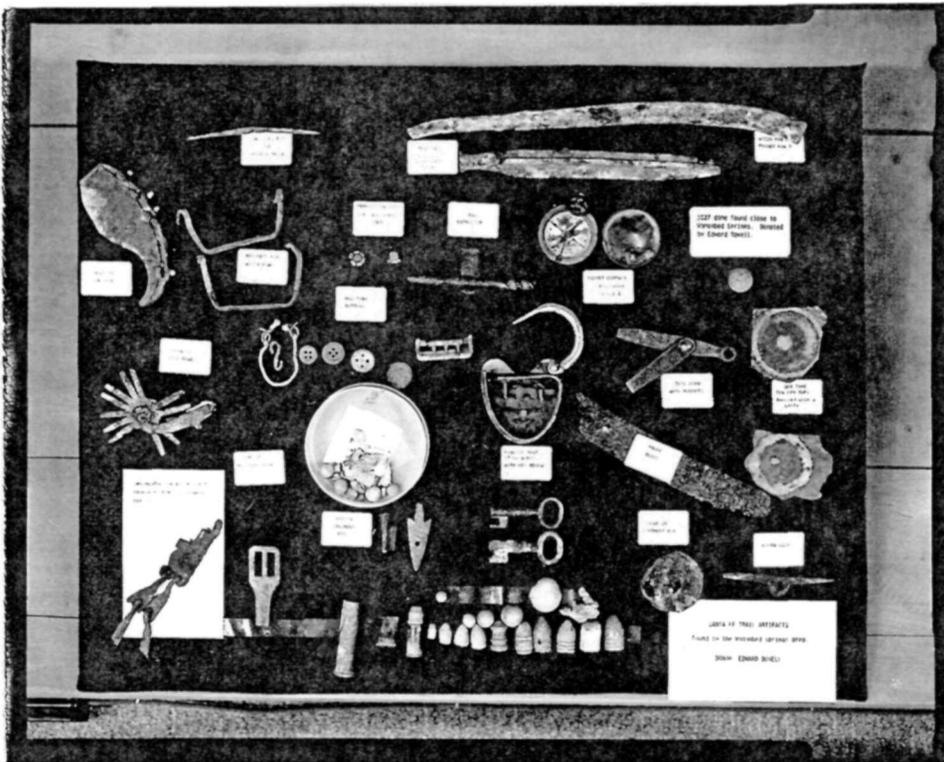
**Photo 3:** Depression of Joyce-Dappert ice house with Cimarron River bend in background, looking south.



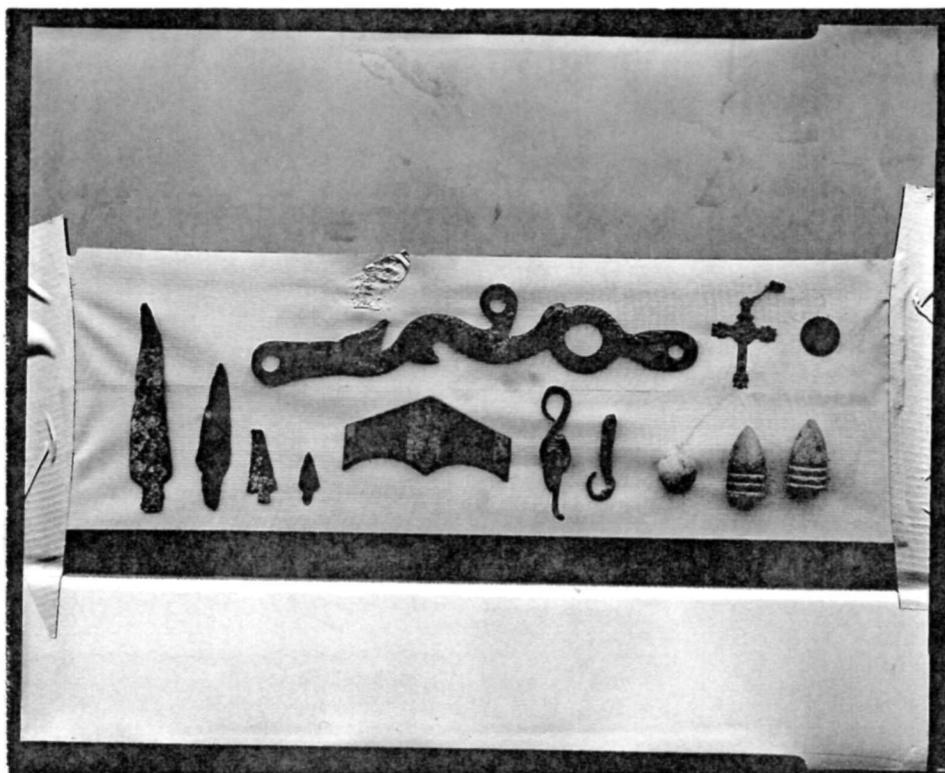
**Photo 4:** Depression of Joyce-Dappert ice house, looking west.



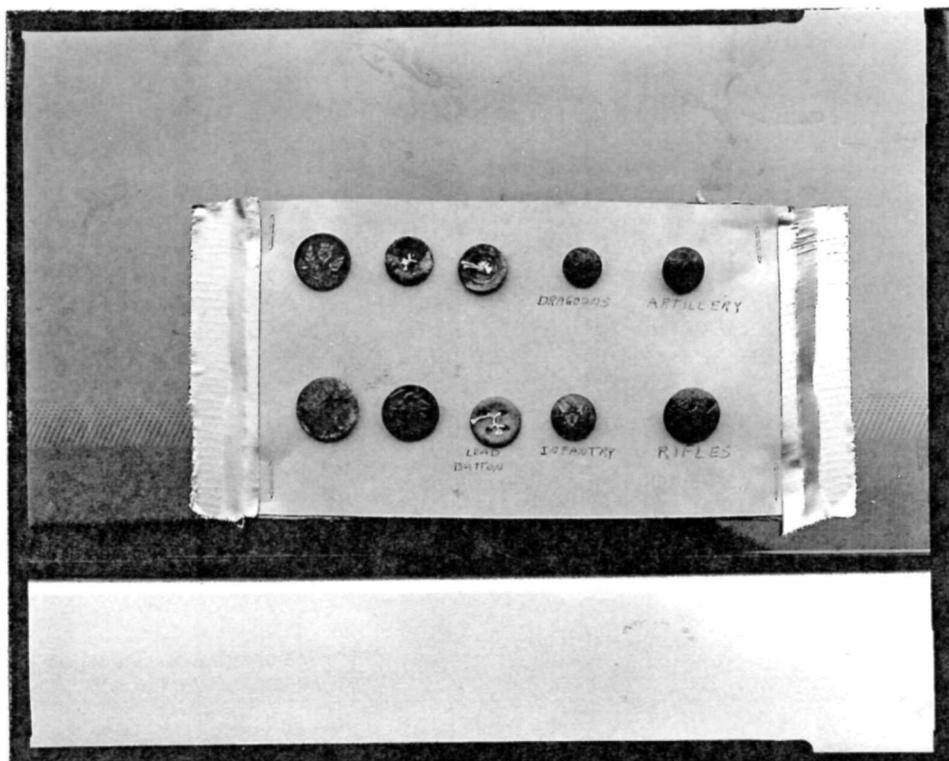
**Photo 5:** Santa Fe Trail artifacts collected by William Purnell, on display at the Grant County Museum in Ulysses, Kansas.



**Photo 6:** Santa Fe Trail artifacts collected by Edward Dowell in the vicinity of Lower Cimarron Spring. Dowell, an amateur archeologist, has collected approximately 3,000 artifacts, most of them related to commercial and military activities along the Santa Fe Trail. The collection includes wagon parts, food cans, bullets and lead casings, coins, keys, and hardware.



**Photo 7:** Santa Fe Trail artifacts collected by Edward Dowell include rifle parts, metal arrowheads, and a crucifix.



**Photo 8:** Buttons collected by Edward Dowell in the vicinity of Lower Cimarron Spring.

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