1. NAME OF PROPERTY

Historic Name: **LOWER CIMARRON SPRING**

Other Name/Site Number: WAGON BED SPRINGS, WAGONBED SPRINGS, LOWER CIMARRON SPRINGS

2. LOCATION

Street & Number: Approximately 12 miles south of Ulysses, Kansas
West side of U.S. 270
Not for publication: N/A

City/Town: Ulysses
Vicinity: X

State: Kansas County: Grant Code: 067 Zip Code: 67880

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	X	Building(s):	__
Public-Local:	__	District:	__
Public-State:	__	Site:	X
Public-Federal:	__	Structure:	__
		Object:	__

Number of Resources within Property

Contributing	Noncontributing
__	__ buildings
1	__ sites
__	__ structures
__	1 objects
1	1 Total

Number of Contributing Resources Previously Listed in the National Register: 0

Name of Related Multiple Property Listing:

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

_____ _____
Signature of Certifying Official Date

_____
State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

_____ _____
Signature of Commenting or Other Official Date

_____
State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain): _____

_____ _____
Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	TRANSPORTATION	Sub:	road-related
	DOMESTIC		camp
	COMMERCE/TRADE		
	LANDSCAPE		natural feature
Current:	AGRICULTURE	Sub:	agricultural field

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: N/A

MATERIALS:
Foundation: n/a
Walls: n/a
Roof: n/a
Other: n/a

Describe Present and Historic Physical Appearance.

Description

Lower Cimarron Spring was designated as a National Historic Landmark (NHL) in 1960; it was listed under the name "Wagon Bed Springs."[1] This nomination establishes a boundary for the NHL, and clarifies the historic location of the spring. The NHL boundary has also been expanded to include the historic campground associated with the spring. In addition, this nomination changes the name of the National Historic Landmark to "Lower Cimarron Spring" which, during the period of the Santa Fe Trail (1821-1880), was the historic name of the spring site. The label "Wagon Bed Springs," which refers to a later incident when a wagon bed was placed in the spring to serve as a water collector, remains as the secondary name, since the NHL is popularly known by that designation.

Located in southwestern Kansas, the Lower Cimarron Spring National Historic Landmark (NHL) is a historical archeological site that encompasses approximately 195 acres in an agricultural area about 12 miles south of the farming community of Ulysses (1993 population: 5,474) in Grant County. The NHL boundary includes Lower Cimarron Spring, which is now dry, its associated campground, and several remnants of the Santa Fe Trail. The NHL also includes the depression at the site of an ice house that was constructed in 1886 and was associated with the spring during the area's homesteading era; the depression was used to help identify the location of the spring. Also within the NHL boundary is an interpretive display of Lower Cimarron Spring that was constructed by the Wagon Bed Springs chapter of the Santa Fe Trail Association; the display is northwest of the historic location of Lower Cimarron Spring and is a non-contributing object. The NHL is on private land, and is accessible by a dirt road that leads west off of Highway 25.

The Cimarron River is the NHL site's predominant landscape feature. Over the years, a series of floods, as well as changes to the Cimarron River, have affected Lower Cimarron Spring. Once on the banks of the Cimarron River, the spring site is now on the river's bed. Until the late 1970s, the entire NHL site was utilized for pasture to graze cattle. In the 1960s, the western quarter of the site was impacted by two 40-acre pivot irrigation plots, which lowered the water table and eliminated the possibility of Lower Cimarron Spring having running water. With the exception of changes to the spring itself, aerial photographs from 1939, 1953, 1960, 1967, 1973, 1981, and 1991 indicate that the overall site integrity of the NHL is extremely high. The Cimarron River formed a natural boundary for the historic camping area associated with the spring, and archeological investigations have revealed a high concentration of Santa Fe Trail-related artifacts within the NHL. Based on metal detector surveys, the archeological resources buried on the alluvial fans, terraces, and side slopes range in depth from surface to approximately 4 inches below the surface, while the materials recovered from the floodplain may be buried to a depth of 14 inches.

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[1]Ray Mattison, "Wagon Bed Spring; Lower Cimarron Spring National Survey of Historic Places and Buildings Form," 1958.

Introduction

In 1993, the Southwest Regional Office of the National Park Service requested the Rocky Mountain Regional Office undertake a boundary study of the Wagon Bed Springs National Historic Landmark. In recent years, the NHL had become a source of considerable controversy, as the local chapter of the Santa Fe Trail Association disagreed with the landmark boundary designated in 1960. In 1989, the Wagon Bed Springs chapter of 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 of the National Park Service, 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, to resolve the boundary controversy and to consider, in light of recent archeological discoveries in the area, the expansion of the NHL boundary to include the historic camp site associated with the spring. Congress designated the Santa Fe Trail, including both the Mountain and Cimarron Routes, as a National Historic Trail in 1987.

The locations of historic trails and trail-related sites often prove elusive to modern researchers. Trails that once may have 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 and/or contradictory information regarding the locations of trails and camping sites.

In the case of Lower Cimarron Spring, the task of finding the historic location was 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. In addition, deepwell pump irrigation had dramatically lowered the water table and eliminated all possibility of the spring running again. Since the spring is no longer extant, the National Park Service drew upon a variety of sources for information relating to the spring's historic location. These sources included published histories of the trail, the accounts of Santa Fe Trail travelers and early Grant County residents, historic maps, aerial photographs, interviews with long-time residents, early newspaper accounts, and an analysis of the geological and hydrological characteristics of the area. The National Park Service also examined archeological artifacts that were found in the vicinity of the spring site, and which illustrate the area's use as a camp site for Santa Fe Trail travelers. For an overview of historic descriptions of the site, and their comparison with the results of the hydrological and archeological studies of the NHL, see Section 8.

Environmental Description

Walter Prescott Webb, in his classic history of western settlement, *The Great Plains*, observed 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."[2] It was the arid environment of the western plains that forced these changes. Westbound travelers following the Santa Fe Trail were physically and psychologically affected once they entered the High Plains. To many Santa Fe traders, the treeless, flat, 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 route between the Arkansas and Cimarron rivers as "the most desolate part of the whole Santa Fe Road." 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 . . . "[3] 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 Cimarron River originates in New Mexico near 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 2,080 feet above mean sea level (amsl) along the river to 3,100 feet amsl on the uplands. Located within the rain-shadow of the Rocky Mountains, the climate is semi-arid.[4] 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.

Lower Cimarron Spring lies in the High Plains section of the Great Plains physiographic province in southwestern Kansas.[5] 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

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[2]Walter Prescott Webb, *The Great Plains* (New York: Ginn and Company, 1931), 8-9.

[3]Adolphus Wislizenus, *Memoir of a Tour to Northern Mexico, connected with Col. Doniphan's Expedition in 1846 and 1847* (Washington, DC.: 30th Congress, 1st session, Senate Miscellaneous Document, 1848), 11.

[4]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), 44-45; Merle J. Brown, "Climate" in Hamilton et al., 47; 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.

[5]Nevin M. Fenneman, *Physiography of Western United States* (New York: McGraw-Hill, 1931); and Hamilton et al, 1.

relief.[6] 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."[7] These soils are susceptible to water and wind erosion.

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.[8] 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 have cut through the unconsolidated sediments into the underlying rock formations, seeps and permanent springs occurred, such as Lower Cimarron Spring.[9]

Lower Cimarron Spring also 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.[10] The short grass association is highly resistant to drought and grazing. In addition, these grasses, especially the grama grasses and the

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[6]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.

[7]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 gravely 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).

[8]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.

[9]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.

[10]Lee R. Dice, *The Biotic Provinces of North America* (Ann Arbor: University of Michigan Press, 1943), 26-27; and Hamilton et al., 27-28.

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.[11]

Previous Archeological Investigations

The first systematic archeological investigations of the Lower Cimarron Spring area did not occur until the late 1980s. Although amateurs had collected in the area prior to the late 1980s, no systematic inventory of artifact provenance had been kept. In 1987, amateur archeologist Edward Dowell of Ulysses, Kansas, began collecting artifacts along the Cimarron Route of the Santa Fe Trail in the vicinity of Lower Cimarron Spring. Unlike the earlier, random, amateur collections, Edward Dowell's collections represented more controlled collection. (In 1993, Dowell's methodology was reviewed by National Park Service archeologists and determined to be adequate.) Dowell utilized a metal detector in identifying artifact concentrations and individual artifacts in the river valley. Dowell then documented these concentrations and individual locations on an aerial photograph of the area. By use of the aerial photograph, Dowell was able to match the collection areas on the ground with their location on the photograph. In many cases, Dowell also provided individual locations for artifacts recovered during his metal-detection activities. The recovered artifacts were stored in individual containers or sealed plastic bags with the provenance written on the containers with permanent ink.

Given the fact that Lower Cimarron Spring was a major campground on the Santa Fe Trail, the presence of metal artifacts are to be expected, but are not the only type of cultural material or feature that would be expected from a campground of this type. There should be numerous fire hearths since this was a major resting point on the trail. However, the investigations of the site have been limited to surface collections and the limited metal detector collections of Edward Dowell. Much of the area from which the artifacts has been recovered lies on the left bank of the river above the lower floodplain of the valley, which is to the south of the river. While flooding would have a major erosional effect on the river channel and the lower portions of the floodplain, the upper part of the site – which includes the major portion of the campground – would not have suffered from the negative impact of the floodwaters. Based on Dowell's metal detection, there are over 14 inches of archeological deposits associated with the campground. This is the effective depth limit for the metal detector that was used by Dowell. As a result, the potential for recovering additional information on nineteenth-century plains travel is extremely high, especially concerning commercial trade and military activities within the area.

In 1990, personnel from the Kansas State Historical Society conducted an archeological investigation of the interpretive display on Lower Cimarron Spring, which had been erected by the local chapter of the Santa Fe Trail Association.[12] 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

[11]O'Brien, 22.

[12]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.

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, and identified a few bone scraps.

Recent National Park Service Archeological Investigations

During September 1993, the Rocky Mountain Regional Office of the National Park Service conducted additional archeological and historical investigations of the Lower Cimarron Spring site in order to reassess the NHL boundaries. These investigations, which are discussed in more detail in Section 8, included a photographic analysis of the site by James Walker of Brigham Young University, and a hydrological study of the area by Edwin Gutentag, formerly of the U.S. Geological Survey. As part of the photographic study, James Walker took low-altitude, large-scale aerial photographs of the spring site. Walker compared these photographs with aerial views of the area that were taken by the Agricultural Stabilization and Conservation Service (ASCS) between 1939 and 1991. Walker's analysis illustrated how the riverbed and other land features in the area have changed over the years. In addition, the 1939 aerial photographs were revealing in that they showed numerous wagon wheel ruts leading to a junction at the Lower Cimarron Spring site.[13] Gutentag's study analyzed the hydrological characteristics of the area and determined the most likely location of the historic spring site.[14]

Historical records were also used to help identify the location of Lower Cimarron Spring. These records include the survey notes and maps of Joseph C. Brown, who mapped the Santa Fe Trail in 1825, as well as a description of an ice house that was constructed adjacent to Lower Cimarron Spring by Grant County settlers R.H. Joyce and J.W. Dappert in 1887. In September 1993, National Park Service archeologists Steven De Vore and William Butler located the depression of the Joyce-Dappert ice house on the northern bank of the Cimarron River. James Walker's aerial photographs also showed the location of the ice house depression. This area matched historical descriptions of the spring site; and the hydrological analysis also supported the identification of this area as the historic spring site. The area surrounding the Cimarron River in the vicinity of the spring site was mapped, and the ice house depression, the edge of the Cimarron River, section and half section fence lines, Santa Fe Trail ruts, a row of trees associated with the Joyce homestead, and the artifact locations/concentrations identified by Dowell were demarcated and recorded during the mapping process. Based on Dowell's metal detecting, an area of approximately 171 acres was identified as containing artifacts related to the Santa Fe Trail traffic and the Lower Cimarron Spring camp site.

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[13]James Walker, "Interpretation of Area around Wagon Bed Springs from USDA Imagery Obtained between 1939 and 1991, Report Number 2," 1993, copy in the files of the National Park Service, Omaha, Nebraska.

[14]Edwin D. Gutentag, "Location and Hydrological Characterization of Wagon Bed Spring, Grant County, Kansas.," 1993, copy in the files of the National Park Service, Omaha, Nebraska.

The National Park Service also 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.[15] The major functional categories include architecture (n=1183), commerce and industry (n=1,459), personal items (n=70 artifacts), personal and domestic transportation (n=43), domestic items (n=40), aboriginal lithics (n=27), and miscellaneous items (n=117[16]

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 .22 cal. bullets and casings and modern shotgun shells, the hunting artifacts are related to activities along the Santa Fe Trail during the nineteenth century. 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.

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

[16]Christine Whitacre, Steven De Vore, and William Butler, *Lower Cimarron (Wagon Bed) Spring Camp Site, National Historic Landmark (NHL) Boundary Study* (Denver, CO: National Park Service, Rocky Mountain Region, 1994), 26-32, and Steven De Vore, "Lower Cimarron Spring, Kansas, Archeological Field Summary" (Denver, CO: National Park Service, Rocky Mountain Region, 1993), 11-16.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide:_ Locally:_

Applicable National Register Criteria:	A X B_ C_ D X
Criteria Considerations (Exceptions):	A_ B_ C_ D_ E_ F_ G_
NHL Criteria:	1 and 6
NHL Theme(s):	V. Developing the American Economy 6. exchange and trade VIII. Changing Role of the United States in the World Community 2. commerce
Areas of Significance:	Archeology Transportation
Period(s) of Significance:	1821-1873
Significant Dates:	1821, 1824, 1825, 1873
Significant Person(s):	n/a
Cultural Affiliation:	n/a
Architect/Builder:	n/a
Historic Context:	X. Westward Expansion of the British Colonies and the United States, 1763-1898 D. Western Trails and Travelers 2. Santa Fe Trail

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Significance

Lower Cimarron Spring National Historic Landmark (NHL) is nationally significant under Criteria 1 and 6. As a dependable source of water on a dangerously dry crossing on the Santa Fe Trail, Lower Cimarron Spring was a major landmark for trade caravans as they crossed the open plains of the trail in what is now southwestern Kansas. The spring and its associated campground were on the trail's Cimarron Route (sometimes referred to as the Cimarron Cut-Off), which was the original and principal route of the Santa Fe Trail. The spring also was on the so-called *jornada*, the arid desert plain between the Arkansas and Cimarron Rivers. As the spring offered westbound travelers the first reliable source of water during the *jornada* crossing, it became a major resting point on the Santa Fe Trail. Numerous travelers recounted their immense relief, after crossing the *jornada*, of finding the cool, sweet, running water of Lower Cimarron Spring. While the spring provided drinkable water, the valley supplied grasses for draft animals. The Lower Cimarron Spring camp site also allowed travelers to regain their strength for the next leg of the journey, and an opportunity to repair equipment. The spring's reliable water also made it an important campground for the many American Indians who frequented the site, including the Kiowa, Comanche, Plains Apache, Cheyenne, and Arapaho.[1]

Archeologically, Lower Cimarron Spring is nationally significant under Criterion 6 in that the site has a high potential to yield information on campground activities associated with the Santa Fe commercial trade ventures. Recovered materials indicate great variation in artifacts deposited at the site, representing numerous functional categories. Artifacts recovered from the site may answer research questions related to methods of travel over the plains, travel hardships, relations between Native Americans and Euro-American travelers, commercial freight train activity, the roles of women and/or minorities in plains travel, differences between commercial and military travel, and day-to-day life on plains travel. Future archeological investigations may also look at the placement of features and artifacts to determine differences between the military and commercial freight train use of the campground. Due to the specific and random nature of metal-detector surveys of the site, features associated with camping activities (e.g., hearths) have yet to be identified. However, the probability of their presence is extremely high since the area was a major camp site for over 40 years.

Lower Cimarron Spring 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." It also comes under National Historic Landmark Theme VIII: Changing Role of the United States in the World Community. The period of

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[1]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.

significance for Lower Cimarron Spring is 1821-1873. The Mexican Revolution of 1821 opened commercial trade along the Santa Fe Trail. Beginning in the late 1860s, the westward advance of the Kansas Pacific Railroad (formerly the Union Pacific Railroad, Eastern Division) and the Atchison, Topeka & Santa Fe Railway progressively shortened the Santa Fe Trail. In 1873, the Atchison, Topeka & Santa Fe arrived in Granada, Colorado, and the Santa Fe Trail's Cimarron Route was virtually abandoned. In 1880, the railroad arrived in Santa Fe, ending the Santa Fe Trail's use as a major commercial route.

Santa Fe Trail, 1821-1880

The Santa Fe Trail, which extends between Franklin, Missouri, and 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, Native American, 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 the manufactured goods and textiles available in the United States, 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 earlier. 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.[2]

Led by Augustin de Iturbide, the Mexican Revolution of 1821 gave Mexico its independence, and eliminated Spain's earlier opposition to foreign trade in the northern provinces. Missouri trader William Becknell was the first American trader to benefit from Santa Fe's new-found independence. On November 13, 1821, a small trading expedition led by Becknell encountered Mexican troops near present-day Las Vegas, New Mexico, and learned of the Mexican Revolution. Three days later, Becknell's party arrived in Santa Fe. While earlier foreign traders who had ventured into Santa Fe were jailed and had their trade goods confiscated, Becknell found an eager and ready market. When Becknell returned to Missouri, he carried a message from New Mexican Governor Facundo Melgares that American traders were now welcome in

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[2]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.

Santa Fe. Although Becknell was the first American trader into an independent Santa Fe, others soon followed. On December 1, 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.[3]

During 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."[4] 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.[5]

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 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. Conducted between 1825 and 1827, the survey delineated what later became known as the Cimarron Route, but which was the original Santa Fe Trail. From its eastern terminus in Missouri, the trail followed the Arkansas River across central Kansas, crossed the waterless plains of the *jornada* to the Cimarron River, and then coursed through what is now the Oklahoma Panhandle and entered New Mexico. The later Mountain Route (also known as the Bent's Fort Route and the Raton Route) followed the Arkansas River to Bent's Old Fort in Colorado before heading south towards Santa Fe.[6]

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[3]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; Leo E. Oliva, *Soldiers on the Santa Fe Trail (*Norman: University of Oklahoma Press, 1967), 7-8; and Michael L. Olsen and Harry C. Myers, "The Diary of Pedro Ignacio Gallego Wherein 400 Soldiers Following the Trail of the Comanches Met William Becknell on his First Trip to Santa Fe," *Wagon Tracks,* Vol. 7, No. 1 (November 1992).

[4]Archer Butler Hulbert, *Southwest on the Turquoise Trail* (Denver: Stewart Commission of Colorado College and the Denver Public Library, 1933), 78-79.

[5]Billington, 390; Oliva, 10; and Hulbert, 78.

[6]Hulbert, 107; and ***Santa Fe National Historic Trail Comprehensive Management and Use Plan***, 14.

The Santa Fe Trail soon became a lucrative trade route, adding to a broader network of international trails — and the wealth of both Mexico and the United States. Trade caravans along the Santa Fe Trail became an annual event. Around the first of May, Santa Fe-bound 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 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. The major point of rendezvous for eastbound travelers was the area near La Junta (later Watrous), New Mexico.[7]

By 1844, Josiah Gregg observed that the "Pittsburgh wagon," a variation of the Conestoga wagon that was usually pulled by eight mules or oxen, was the most used vehicle on the Santa Fe Trail.[8] The lucrative Santa Fe Trail trade soon 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.*[9]

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 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.[10]

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 what later became known as the Mountain Route of the Santa Fe Trail as he led the Army of the West from Fort Leavenworth, Kansas, to Las Vegas, New

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[7]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.

[8]Josiah Gregg, 24n.

[9]D.M. Draper, "Freight Trip to Ft. Wise, Colo.," Ms., dated 1861, M72-161, 2, Western History Department, Denver Public Library.

[10]Oliva, 19.

Mexico. The Mormon Battalion and other elements of the army followed the original (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.[11]

During the Civil War years, the Mountain Route gained in popularity as Union authorities in New Mexico feared that Confederate soldiers from Texas might cut the supply and communication lines along the trail's Cimarron Route. Although that threat never materialized, some traders also avoided the Cimarron Route because of escalating confrontations with American Indians. In 1861, the commanding officer at Fort Larned directed all wagon trains to use the Mountain Route. In 1866, one traveler noted that "the usual Route is by the Raton Pass and the Arkansas River."[12]

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 eastern terminus of the Santa Fe Trail. Beginning at Topeka in 1868, the Atchison, Topeka & Santa Fe Railway reached Dodge City, 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, and reached Santa Fe on February 16, bringing an end to nearly 60 years of overland traffic on the Santa Fe Trail.[13]

The Cimarron Route of the Santa Fe Trail

For westbound 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

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[11]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.

[12]"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.

[13]Oliva, 23; and Rittenhouse, 27.

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 within present-day Kansas City) and Fort Leavenworth, Kansas, also served as points of origins.[14]

Santa Fe-bound wagoneers 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.[15]

Near Great Bend, Kansas, which was approximately 270 miles west of Independence, the caravans reached the Arkansas River. Near present-day Larned, the Santa Fe Trail temporarily split into two branches. Caravans could choose either the more northern "Dry Route," which was shorter and faster, or the southern "Wet Route," which had available water. A short distance east 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. Prior to the Mexican War, the Arkansas River in this area also marked the boundaries between U.S. and foreign soil.[16]

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 40 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.[17] All of the crossings led to Lower Cimarron Spring.

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[14]Oliva, 13-14; and ***Santa Fe National Historic Trail Comprehensive Management and Use Plan***, 14.

[15]Billington, 390.

[16]*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.

[17]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, which was the primary route during most of the commercial years of the trail, it was approximately 753 miles from Independence to Santa Fe. The Mountain Route, which followed the northern bank of the Arkansas River into Colorado before heading south over Raton Pass to Santa Fe, measured 797 miles. With Santa Fe Trail caravans averaging ten to 15 miles a day, the Cimarron Route could eliminate at least three days of travel time. In addition, the Cimarron Route also avoided the difficult trek over Raton Pass, which required additional travel time.[18]

Although the Cimarron Route was at least 40 miles shorter than the Mountain Route, it was considered to be a more dangerous journey as it necessitated crossing the *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.[19] On the *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."[20]

Trade caravans were also wary of encountering the many American Indians who traveled the Santa Fe Trail's Cimarron Route. Native Americans hunted buffalo in the area, and congregated along the trail in anticipation of receiving annuities and trading with the caravans. However, as increasing numbers of trade wagons began to disrupt tribal life and encroach on traditional lands, the trail became the site of several conflicts between traders and Indians. Despite their apprehensions, caravan travelers also frequently relied upon the Indians to guide them through the region, particularly in the early years of the trail. In 1831, when Josiah Gregg's caravan got lost on the "inhospitable desert" of the *jornada*, the group encountered Indians who led them to Lower Cimarron Spring.[21]

As it was for Gregg, the immediate destination point for all *jornada* travelers was Lower Cimarron Spring. The Lower Cimarron Spring provided drinkable water, and the valley supplied grasses for draft animals. By camping at Lower Cimarron Spring, travelers could rest and regain their strength for the next leg of the journey; the campsite also gave them the opportunity to repair equipment. As noted by historian William Brown:

> *On the westward journey, the Lower Spring of the Cimarron was the lifesaver of the traders. This pinpoint in the dry bed of the Cimarron was the destination of the long trek*

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[18]Rittenhouse, 15; and ***Santa Fe National Historic Trail Comprehensive Management and Use Plan***, 14.

[19]Stocking, 149 and 160.

[20]Hezekiah Brake, *On Two Continents: A Long Life's Experiences* (Topeka, Crane Publishing Company, 1896), 130.

[21]Josiah Gregg, 55-57.

across the Jornada, or Cimarron Desert. Here was the only living water for many miles. To miss it meant death for the straining animals that had gone at least two and usually three days with little or not water. This is turn meant abandonment of the wagons, disaster for the caravan, and possible death for the traders. No spring on the Santa Fe Trail was of such critical importance for the traders.[22]

Before leaving the Arkansas River to cross the *jornada*, travelers often spent a day or so of rest on the Arkansas River, where they filled water barrels and prepared for the journey. Lower Cimarron Spring was approximately 58 miles southwest 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 traveled through the night, stopping for only a few hours rest. With perseverance and luck, they reached Lower Cimarron Spring the next day. Aerial photographs of the Lower Cimarron Spring vicinity show numerous trail ruts leading to the spring site, underscoring its importance as a destination stopping point for Santa Fe Trail travelers.

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 traveler who follows them in search of water, is liable to constant disappointment."[23]

On his first journey to Santa Fe, Becknell followed the Arkansas River into what is now Colorado before heading south into New Mexico. In 1822, on his second trip to Santa Fe, Becknell crossed the *jornada* between the Arkansas and Cimarron Rivers. Becknell's expedition consisted of 21 men and three wagons, which reportedly marked the first use of wagons for commercial trade on the trail.[24] Becknell did not detail his crossing of the Cimarron desert in his journal of the expedition, but Josiah Gregg described the hardships that were, reportedly, endured by the Becknell party. Santa Fe Trail scholars have since questioned Gregg's accuracy in attributing the following tale to the Becknell party. However, even if fictionalized, this often-told tale only increased traders' trepidations about crossing the *jornada*:

. . . 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

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[22] William Brown, *The Santa Fe Trail* (St. Louis, MO: The Patrice Press, 1988), 110.

[23] Josiah Gregg, 55-57 and 64-65; and aerial photographs of the Lower Cimarron Spring taken by James Walker in October 1993, and Social Conservation Service photographs of Grant County in the vicinity of the spring site dated April 1, 1939; August 12, 1953; July 2, 1960; May 3, 1967; July 5, 1973; May 14, 1981; and September 9, 1991.

[24] Beachum, 34. Becknell's 1822 expedition is the first recorded journey across the *jornada*.

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.[25]

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.[26] 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.[27]

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."[28] 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.

Early Descriptions of Lower Cimarron Spring

Journals and diaries of travel on the Santa Fe Trail 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

[25]Josiah Gregg, 14.

[26]Hulbert, 73.

[27]Ibid.

[28]Josiah Gregg, 358 and 359.

of the stream water enough for drinking, much less in sufficient quantities for the stock was to be had."[29]

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 ground 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.[30]

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.[31] 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° West Longitude mark.[32] 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

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[29]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.

[30]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.

[31]Ibid., 88. At this location, each second of latitude equals approximately one hundred feet; each second of longitude equals approximately eighty feet.

[32]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.

site as being at approximately the same latitude and longitude as given by the Sibley-Brown party.

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.*[33]

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 bulrushes. The marsh is north of the creek and near it. The spring is constant, but the creek is sometimes dry . . ."[34] Brown's description of the spring site as a marshy area coincides with other descriptions of the site. A 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."[35]

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. However, as trail traffic increased, the relationship between the Indians and the caravan travelers deteriorated, and Lower Cimarron Spring became the site of several violent encounters. By 1863, hostilities had escalated to the point that Brigadier General James H. Carleton, Commander of the Department of New Mexico, recommended placing a cavalry regiment at a number of strategic points along the Santa Fe Trail, including Lower Cimarron Spring. The following year was the most violent in the trail's history. On August 13, 1864, Comanche Indians killed five traders near Lower Cimarron Spring and stampeded the caravan's cattle. Six days later, another battle near the spring left ten men dead. In 1865, the federal government took several measures to ensure safer travel for trade caravans, including a new system of military

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[33]Kate Gregg, 88-89. It must be noted that Sibley's description of the spring being at the *southeast* end of a valley conflicts with the latitude coordinates that he recorded, and which were later verified by Brown. It also conflicts with other historical accounts of the spring's location, including J.W. Dappert's description of the spring site, as well as the 1874 Government Land Office Survey of Grant County. It also conflicts with the physical evidence provided by archeological investigations of the campsite, the location of trail ruts, and the hydrological analysis of the area. Based on this evidence, Lower Cimarron Spring is located at the *northwest* end of a valley that is approximately 300 acres in size.

[34]Hulbert, 122.

[35]Wislizenus, 49-55; and James C. Hall, "Personal Recollections of the Santa Fe Trail," *Kansas Magazine*, January 1911.

escorts for caravans, the establishment of additional military posts, and renewed efforts to negotiate a peace settlement with the Indians.[36]

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. 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.[37]
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 2,400 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 wood and still had strips of flat iron 'Straps' nailed upon top edge of plank."[38]

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.) According to 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.*[39]

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

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[36]Oliva, 146, 154-155, and 160-161.

[37]*Ulysses (Kansas) News*, October 28, 1992, 16.
[38]J.W. Dappert, letter to the *Ulysses News*, January 1, 1944.

[39]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.

> *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 . . .* [40]

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 in the northwest quarter of the northeast quarter of Section 33, Township 30 S, Range 37 W. Similar to the accounts of several Santa Fe Trail travelers, Lewis noted that the spring site was a large marshy area, approximately 40 feet across, and filled with cat tails and rushes. The presence of such a large marsh indicates a long-term, reliable source of water, rather than an intermittent discharge of ground water. Lewis also recalled that the spring water ran through the winter, providing a continuing source of ice. Because of changes to the river channel, that site is today located in the river bed.[41]

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." 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.[42] Lucille Towler Lewis stated that the spring was almost directly south and slightly east of the marker. According to Lewis, it would

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[40]Ibid.

[41]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.

[42]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 mapshowing 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.

have been impossible to have placed the marker much closer to the spring without getting into the swampy marsh land.[43]

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.*[44]

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. The 1914 flood effectively destroyed the spring site and its associated marsh, although spring water continued to surface in the general area.[45]

In 1937, the local 4-H Club, in cooperation with the Joyce family, moved the DAR marker to a site approximately 1,200 feet 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 a brick cistern at the new location; the cistern filled with water and served as a representation of Lower Cimarron Spring.[46]

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

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[43]Lucille Towler Lewis interview.

[44]Dappert letter.

[45]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.

[46]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.

spring site generally lined up with a row of trees located on the Joyce property.[47] The row of trees, which still stands, lines up with the 1907 DAR-designated site.

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 Wagon Bed 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.[48] 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 upwelling ground 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 Wagon Bed 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 Wagon Bed 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 Wagon Bed Springs chapter of the SFTA relocated both the DAR and NHL markers to a site closer to the original 1907 location of the

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[47]Joyce interview.

[48]"The National Survey of Historic Sites and Buildings: The Santa Fe Trail," 23-II.

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, Range 37 W. Here, SFTA members constructed an interpretive exhibit that included a wagon bed placed in the ground and watered by a solar-powered pump.

Hydrological Characteristics of the Lower Cimarron Spring Site

In an effort to determine the historic location of Lower Cimarron Spring, the National Park Service also contracted with Edwin D. Gutentag, a water hydrologist formerly associated with the U.S. Geological Survey (USGS). Gutentag conducted an on-site field inspection, as well as an investigation of the geographic and hydrological conditions of the Lower Cimarron Spring area. Gutentag concluded that the most likely historic location of the now-dry spring is at North Latitude 37° 24' 07" and West Longitude 101° 22' 10". This places the spring in 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.

Gutentag found that the water table at the Lower Cimarron Spring site was historically 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 was 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 was very close (approximately two feet) to the land surface in 1941. Therefore, Gutentag 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. (By 1975, the water level in the vicinity of Lower Cimarron Spring was approximately 30 feet below the land surface, a consequence of deepwell pump irrigation in the area.)

Gutentag concluded that Lower Cimarron Spring was historically located in the old sand and gravel stream channel of the Cimarron River. In a probable sequence of events, a flood along the Cimarron River when the channel was narrow produced a deep scoured cut that was below the water table. As a result, ground water was able to fill this site. Gutentag also noted that springs that develop in sand and gravel can be considered artesian springs, and most springs of this nature are associated with quicksand. (The springs at the Highway 23 bridge over the Cimarron River south of Meade, Kansas, have artesian boils and quicksand.) As in the case of what eventually became known as "Wagon Bed Springs," an effective way to stabilize a low spot with upwelling ground water is to install a water collection device, such as a wagon bed. A wagon bed would maintain the spring, and prevent it from being trampled by animals or affected much by quicksand.

Gutentag also observed that during different seasons and years, the upwelling ground water could have surfaced in more than one place along the Cimarron River, which could account for some of the varying descriptions of the spring. In hydrological terms, the area is considered to be a "diffuse ground water discharge area" that includes other springs and a marshy area, with Lower Cimarron Spring as the main water source. As noted above, the historic marsh and shallow pools associated with Lower Cimarron Spring would have resulted from a steady ground water

discharge.[49]

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 site also agrees, generally, with information found in historic journals, survey notes, and maps, particularly the Sibley-Brown survey of 1825. The archeological remains of the Joyce-Dappert ice house also provide strong evidence regarding the historic location of Lower Cimarron Spring. The ice house remains (which match the dimensions given by J.W. Dappert in his diary) are located at North Latitude 37° 24' 08" and West 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.

[49]Gutentag report; and Edwin D. Gutentag, letter to Christine Whitacre, National Park Service, Rocky Mountain Region, December 16, 1994.

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Previous documentation on file (NPS):

___ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
_X_ Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
_X_ Designated a National Historic Landmark.
___ Recorded by Historic American Buildings Survey: #
___ Recorded by Historic American Engineering Record:

Primary Location of Additional Data:

_X_ State Historic Preservation Office
___ Other State Agency
_X_ Federal Agency
___ Local Government
___ University
_X_ Other (Specify Repository): Grant County Museum

10. GEOGRAPHICAL DATA

Acreage of Property: 195 acres (approximate)

UTM References:	Zone	Easting	Northing
A	14	289950	4142730
B	14	290859	4142467
C	14	290800	4141170
D	14	289770	4141560

Verbal Boundary Description:

The Lower Cimarron Spring National Historic Landmark is located on the valley side slopes, alluvial fans, and flood plain of a sharp bend of the Cimarron River in the south ½ of Section 28 and the north ½ of Section 33, Township 30 South, Range 37 West, Grant County, Kansas. The boundary of the NHL forms a polygon with outward curving sides. The N-S axis measures approximately 1200 meters in length and the NE-SW axis measures approximately 1,300 meters in length. Beginning at the N axis point and going clockwise, the sides of the polygon measure 500 meters, 1280 meters, 520 meters, and 1100 meters in length. It is outlined on the accompanying U.S.G.S. map.

Boundary Justification:

The boundary of the Lower Cimarron (Wagon Bed) Spring National Historic Landmark encompasses the historic spring site, the surrounding lands that have a high concentration of trail-related artifacts and that represent the area's historic use as a major Santa Fe Trail campground and the original (mistaken) spring location of the National Historic Landmark as designated in 1960. The boundary encompasses approximately 195 acres, and includes numerous Santa Fe Trail ruts that lead to and from the spring, including a segment that is just north of the spring. The boundary also includes North Latitude 37°24'00", which government surveyors George C. Sibley and Joseph C. Brown identified as the location of the "famous Semerone [Cimarron] Spring" in September 1825. The general location of the spring is also supported by the 1874 Government Land Office Survey of Grant County. More specific locational information on the spring is provided by oral and written accounts of early homesteaders and residents of Grant County, including County Surveyor J.W. Dappert who mapped the location of "Wagon Bed Spring." The discovery of the remains of the Joyce-Dappert ice house, which historical accounts indicate was just north of the spring, places the spring in the bend of the Cimarron River within the NHL boundary. A hydrological analysis of the area by Edwin Gutentag also places the spring in this location. The size and extent of the camp site surrounding the spring was determined by metal-detection survey, shovel excavations, and surface artifact collection done by Edward Dowell of Ulysses, Kansas. Dowell's identification of the distribution of metal artifacts initiated the NHL boundary revision, and indicate that the core of the Lower Cimarron Spring campground is within the boundary. NPS archaeologists, who discovered the ice house remains and oversaw low-altitude aerial photography of the area, agreed with Dowell's conclusions. Based on Dowell's metal detection,

there are over 14 inches of archeological deposits associated with the campground, indicating that the potential for recovering additional information within the NHL boundary is extremely high.

11. FORM PREPARED BY

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