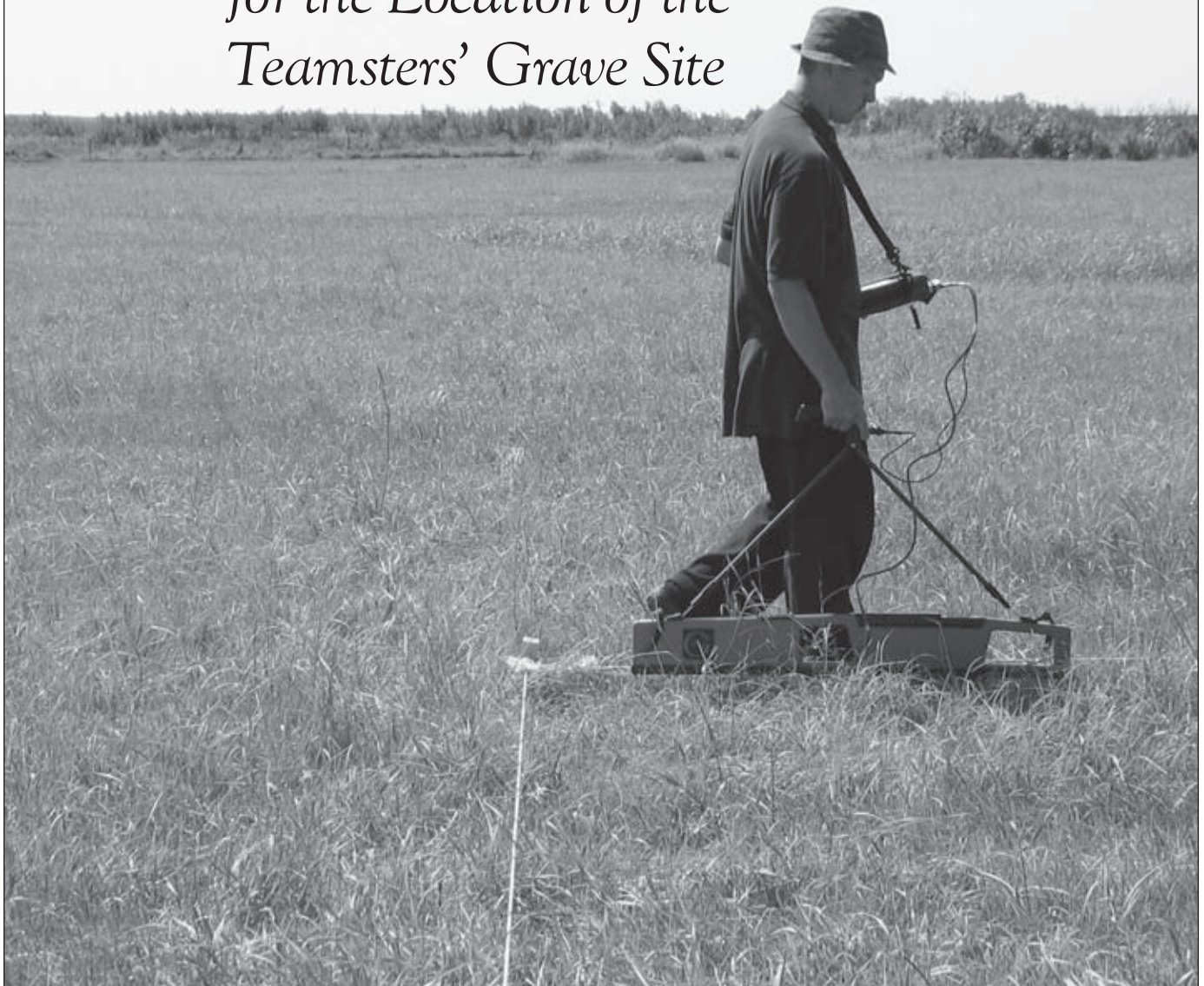


BY STEVEN L. DE VORE

THE PLUM CREEK MASSACRE SITE  
*The Archaeo-Geophysical Search  
for the Location of the  
Teamsters' Grave Site*



# The Summer of 1864

IN 1864, WHILE THE  
CIVIL WAR THUNDERED

IN THE EAST, ANOTHER STORM WAS BREWING WEST OF THE MISSOURI RIVER.

Beginning in the 1840s, a flood of wagon traffic poured west across the Great Plains and Rocky Mountains. By the spring of 1864, hundreds of thousands of overland emigrants, countless livestock, and an endless stream of military, mail, freight, and stagecoach traffic had crossed the homelands of the Cheyenne, Lakota, and Arapaho Indian people. Because the country's resources were unfenced, white travelers assumed they were unclaimed and underutilized, and they helped themselves to everything. The river valleys were now largely stripped of the wood, grass, and game that native people needed for survival, and some of the best camping areas had been claimed for homesteads and farms. Adding to these difficulties, violent clashes had erupted in June 1864 between the Colorado militia and the Cheyenne and Arapaho. As their grievances mounted, the tribes prepared to sever the emigrant trails, expel the settlers, and reclaim their lands.<sup>1</sup>

On Sunday, August 7, Cheyenne warriors ambushed six freight wagons at Indian Hollow, on the Little Blue River about six miles south of Hastings, Nebraska. It was the first of a series of coordinated attacks that day against travelers, farms, stage stations, and road ranches up and down the Little Blue, roughly from Deshler, Nebraska, northwest to the Platte River. By sunset, twenty men, women, and children were slain, two men hovered near death, another lay wounded, and five women and children had been carried away as captives.<sup>2</sup>

The wagon road along the Little Blue River was part of the Oregon and California trail, feeding traffic from northeastern Kansas across south-central Nebraska to the Platte River corridor. From there wagons continued along the trail to points west.

On the evening of the attacks along the Little Blue, twelve commercial freight wagons bound for Denver were encamped together near the south bank of the Platte, southeast of present-day Lexington, Nebraska. Three of the wagons, loaded with provisions, belonged to Thomas Frank Morton of Sidney, Iowa. Morton was accompanied on this business trip by his wife, Nancy Jane; her brother, William Fletcher; and a cousin, John Fletcher. Three wagons carrying hardware and provisions belonged to William Marble, a freighter from Council Bluffs, Iowa. Traveling with Marble were his nine-year-old son Danny, Mr. and Mrs. James Smith, Charles Iliff, and a Mr. St. Clair. The remaining six wagons, carrying farm equipment and shelled corn, belonged to Michael Kelly, of St. Joseph. Kelly had hired six teamsters to deliver his goods to Denver. The three parties were from different points of origin, did not know each other, and were traveling separately, but happened to come together in the same campground that evening. They were blissfully unaware of the day's deadly rampage on the Little Blue, about seventy miles east of their camp.<sup>3</sup>

Shortly before seven on the morning of August 8, the three freighting parties (today known

1 See Eugene Ware, *The Indian War of 1864* (Topeka: Crane and Co., 1911), for an account of Sioux grievances on the eve of the Plains Wars.

2 Ronald Becher, *Massacre Along the Medicine Road: A Social History of the Indian War of 1864 in Nebraska Territory* (Caldwell, Idaho: Caxton Press, 1999), 451.

3 *Ibid.*, 252–253.

(opposite page) FIGURE 1. Conducting the conductivity survey with a ground conductivity meter.

collectively as the Kelly-Morton-Marble party) set out in a widely spaced column up the Platte River toward the mouth of Plum Creek, at Lexington. (Figure 2.) While the train was still about a mile and a half east of the creek, a hundred warriors galloped out from the sand hills, formed a battle line, and swept through the column. Before the smoke from the burning wagons had cleared, all thirteen men of the party lay dead. Missing were Nancy Morton and little Danny Marble, carried off as captives.

From Thomas Station two miles away, some sixty teamsters and several soldiers watched in anguish as the attack unfolded, but they had neither the numbers nor the weapons to engage that many warriors, and in any case could not have reached the victims in time to save them. They telegraphed news of the attack to the garrison at Fort Kearny, about ninety miles east, urgently requesting assistance, but troops did not arrive until 10 o'clock that night. While searching the grisly scene, soldiers discovered Mrs. Smith, who had leaped from her wagon and concealed herself among cattails growing between the road and the river. She was physically unharmed, though severely traumatized.<sup>4</sup>

The following morning, August 8, eleven of the dead from the Kelly-Morton-Marble party were buried in a mass grave near the scene of the attack. Two other men, possibly Smith and St. Clair, are believed to have been buried farther down the trail where they fell.<sup>5</sup>

Between August 7 and August 16, warriors attacked numerous wagon trains, work parties, stagecoaches, stations and road ranches across Nebraska Territory and northeastern Colorado. Before the storm of violence was spent for the

season, sixty-one victims were slain, nine were wounded, and seven were held captive. Cheyenne and Arapaho captors released a woman and three of the four children on September 11, 1864, but Danny Marble died in Denver of typhoid fever before he could be delivered to his mother in Council Bluffs.<sup>6</sup> Nancy Morton's captors, after keeping her for five months, traded her for horses and supplies in January 1865. The remaining two prisoners, a woman and her baby boy who had been carried off during the August 7 raids along the Little Blue River, were turned in at Fort Laramie in May 1865, after nine months with the Lakota and Cheyenne.

#### THE PLUM CREEK PROPOSAL

In autumn 2008, Steven R. Holen, curator of anthropology for the Denver Museum of Nature & Science, approached the National Park Service to seek support for an investigation of his family farm at Plum Creek. Since the late 1940s, three generations of the Holen family have used their fifteen-acre pasture for grazing and for prairie hay (Figure 3). They never plowed the native pasture because local tradition held that the field contained the mass grave of eleven teamsters killed in the Plum Creek attack on August 8, 1864. A number of swales, which could be either abandoned channels of Plum Creek or wagon ruts associated with wagon traffic, are visible in the hayfield, and Dr. Holen reported that wagon parts have been recovered from adjacent property.

Dr. Holen proposed that a geophysical survey be conducted to identify any potential archaeological remains associated with the attack, including the locations of burned wagons, and to seek evidence of the mass grave. Intrigued by the possibility of

4 Ibid.; Russ Czaplewski, *Captive of the Cheyenne* (Kearney, Neb.: Morris Publishing, , 1993).

5 Becher, 256–263, 269–270.

6 Ibid., 326–327.

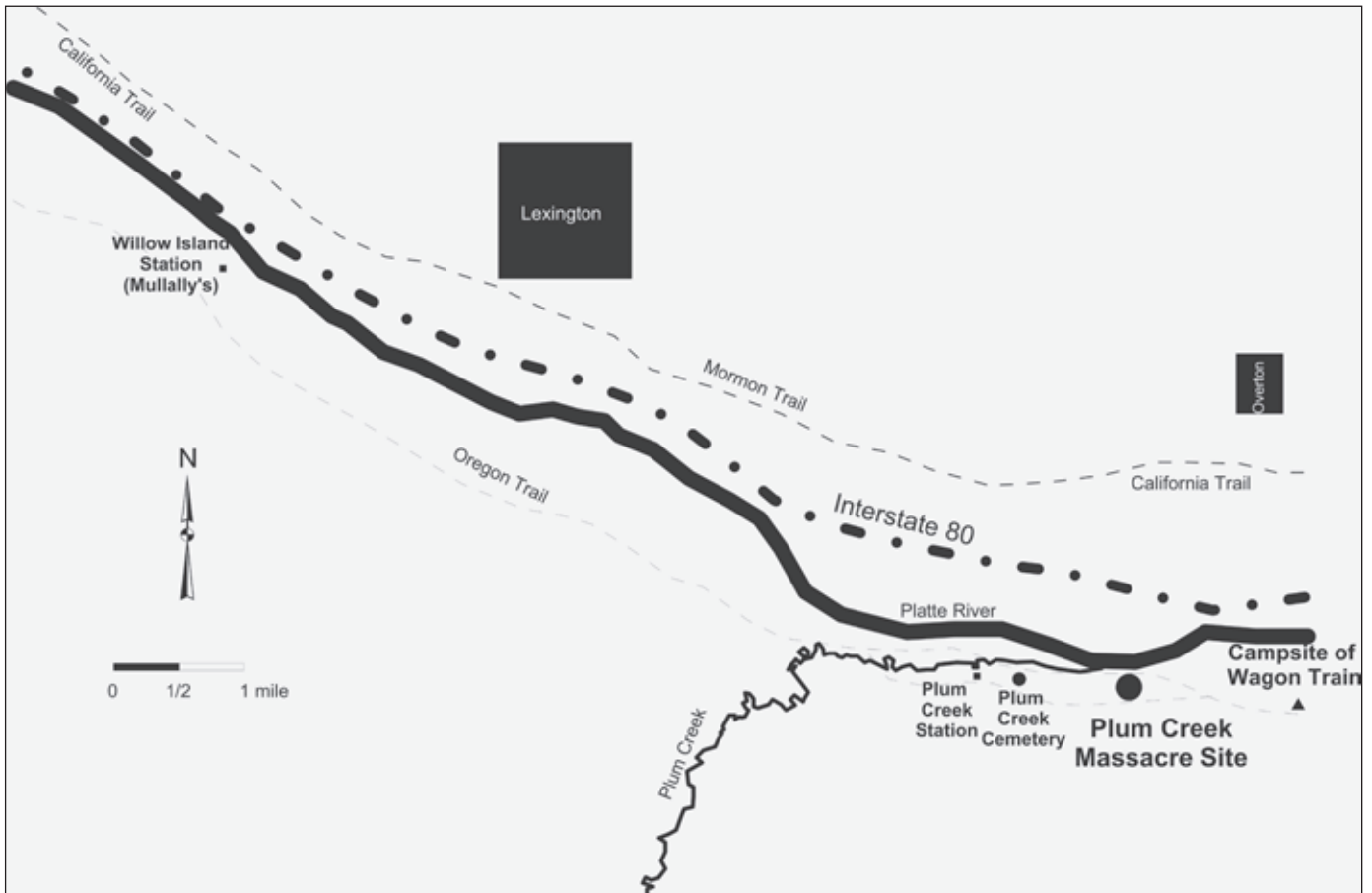


FIGURE 2. General trail map of the Plum Creek vicinity.

documenting physical evidence of the Plum Creek Massacre, the National Trails Intermountain Region office of the National Park Service (NPS) agreed to fund the project. Accordingly, the NPS Midwest Archeological Center planned and carried out the fieldwork in August 2009 (Figure 4).

#### GEOPHYSICAL SURVEY:

##### METHODOLOGIES AND PERSONNEL

Geophysical survey employs instruments that send electrical, electromagnetic, or acoustic

signals into the ground, typically to a depth of about two yards. The return signals are collected, and the resulting data are used to produce plots of the subsurface target area. These plots indicate places, called anomalies, where the measured characteristics of the earth are significantly different from those of surrounding ground. Archeologists must then attempt to interpret the meaning of the anomalies: for example, they might indicate buried building foundations, a fire hearth or modern burn pit, a grave or collapsed cellar, ground that has been compacted by heavy traffic, a buried



FIGURE 3. General view of the geophysical project area.

stream channel, or some other cultural or natural feature. Sometimes the shape of the feature provides clues to its origin. For example, an anomaly in the shape of a hollow square or rectangle suggests a building foundation, or a long, linear area of compaction may indicate an old road or trail. In conjunction with historical records that support such an interpretation, archeologists may suggest a possible identification of the anomalous feature. Typically, however, geophysical survey serves primarily to identify areas of particular interest and to generate hypotheses, and follow-up archaeological testing is needed to identify the cause of the mapped anomaly.

Archaeologists can choose among a battery of remote sensing methodologies, and they often select several that have different, complementary strengths and advantages. Results can then be compared and locations of primary interest identified.

We chose five methodologies for our geophysical survey at the Plum Creek site. The first would employ simple hand-held metal detectors, which are able to locate wagon and harness hardware, bullets and shell casings, horse and ox shoes, coins, nails and staples, and metal buttons, as well as modern objects such as beer cans, bottle caps, pull tabs, and fencing wire (Figure 5). Experienced



FIGURE 4. Aerial view of the Plum Creek Massacre Site near Overton, Nebraska.

volunteer operators would use metal detectors to survey the target area for historic debris that might indicate the locations of the overland trail and the wagons that had been burned.

Next, we chose magnetometer survey to detect variations in the magnetic properties of the soil (Figure 6). Magnetic anomalies can be caused by naturally occurring iron, manufactured ferrous materials, by fire, and by soil disturbances such as wells, dugouts, and other structures. This approach could help locate the places where wagons were burned, even if metal debris from them were no longer present.

The third methodology selected was an electrical resistivity survey (Figure 7). Here, a current is sent into the ground to measure resistance to the flow of electricity through the soil between four electrodes. Electricity, of course, follows the path of least resistance and is easily conducted by water. Changes in resistance detected as the charge passes through the soil can indicate buried

objects such as brick or stone foundations, areas of compaction or soil disturbance, and other soil characteristics that affect water saturation. This approach could help identify high-traffic areas such as the old wagon trail and areas of earth disturbance such as graves.

Fourth, we chose electromagnetic induction survey (Figure 1), which introduces an electromagnetic field into the ground to measure soil conductivity (the opposite of resistivity). This methodology identifies changes in the electrical and magnetic properties of the soil, and could help locate buried metal objects, areas of soil compaction such as wagon trail, and areas of soil disturbance, such as graves.

Finally, we decided also to use ground-penetrating radar (gpr), which sends pulses of radar energy into the earth (Figure 8). The radar wave is reflected off buried objects, features, and interfaces between soil layers. The depth of the object or soil interface can be estimated from the time it



FIGURE 5. Conducting the metal detection survey with multiple metal detectors.

takes the wave to strike the object and reflect back to the receiver. This methodology is not suitable for soils with high moisture content, high electrical conductivity, or highly magnetic materials, but works best in dry soils with low clay content. Therefore it complements the magnetometry, electrical resistivity and electrical conductivity surveys. Because it can be used to estimate the depth and shape of buried objects, gpr could help us identify gravesites.<sup>7</sup>

7 For the specific models of equipment used and details of the survey methodology, see Steven L. De Vore and Steven R. Holen, "Geophysical Investigations of the Plum Creek Massacre Site (25PP24) along the Oregon National Historic Trail in Phelps County, Nebraska," report submitted to National Trails Intermountain Region, National Park Service, January 2011.

Convergent results from these methodologies would help investigators to "read" the earth and hone in on those areas of particular interest.

Fieldwork was planned and directed by the author, an archaeologist with the National Park Service's Midwest Archeological Center (MWAC) in Lincoln, Nebraska, where I specialize and teach coursework in geophysical applications. Other field crew and equipment operators were MWAC archaeological technician Drew LaBounty and volunteers Dr. Steve Holen (property owner), Brad Kindler, Jim Lindsey, Linda Boamah-Wiafe, and Gaven Holen. The metal detection crew was directed by Dr. Douglas Scott (adjunct professor of anthropology, University of Nebraska–Lincoln),



FIGURE 6. Conducting the magnetic survey with the dual fluxgate gradiometer.

recently retired after 30 years as an NPS archaeologist, where he became widely recognized for his work in battlefield archaeology, historical archaeology, and military history. Assisting Dr. Scott with the metal detection were Dr. Peter Bleed (professor of anthropology, University of Nebraska–Lincoln), and volunteers Dick Harmon, Tom Frew, Larry Gibson, Phil Whitlow, and Dr. Steve Holen. The investigations were conducted between August 11 and August 17, 2009.

#### THE HOLEN FARM/PLUM CREEK PROJECT AREA

Our project area is located on the route of the Oregon and California National Historic Trails<sup>8</sup> near the confluence of the Platte River and Plum Creek in Phelps County, in central Nebraska

<sup>8</sup> Gregory M. Franzwa, *The Oregon Trail Revisited* (Tucson: Patrice Press, 1988); Franzwa, *Maps of the Oregon Trail* (St. Louis: Patrice Press, 1990); Franzwa, *Maps of the California Trail* (Tucson: Patrice Press, 1999).





FIGURE 7. Conducting the resistance survey with the resistance meter and twin probe array.

(Figure 9). The project area consists of approximately twelve acres of the Holen property and twenty acres of the adjacent Carlson property.<sup>9</sup> The site is on gently rolling plains drained by

9 Douglas Scott, "Plum Creek Metal Detecting Inventory," in De Vore and Holen, "Geophysical Investigations of the Plum Creek Massacre Site," pp. 49–59, 1999.

narrow stream valleys, with broad flood plains and terraces along the river. Prairie grasses are abundant in unplowed areas, and cottonwoods and deciduous hardwoods grow along the stream channels.

The Holen hayfield is bordered by cornfields on its south and east sides and by a shallow drainage



FIGURE 8. Conducting the ground penetrating radar survey with a gpr cart and 400 mHz antenna.

and marshy area on the north. A barbed wire fence separates the field from a neighboring hayfield to the west. Other than the possible wagon swales, no evidence of the events of August 8, 1864, is visible on the ground surface.

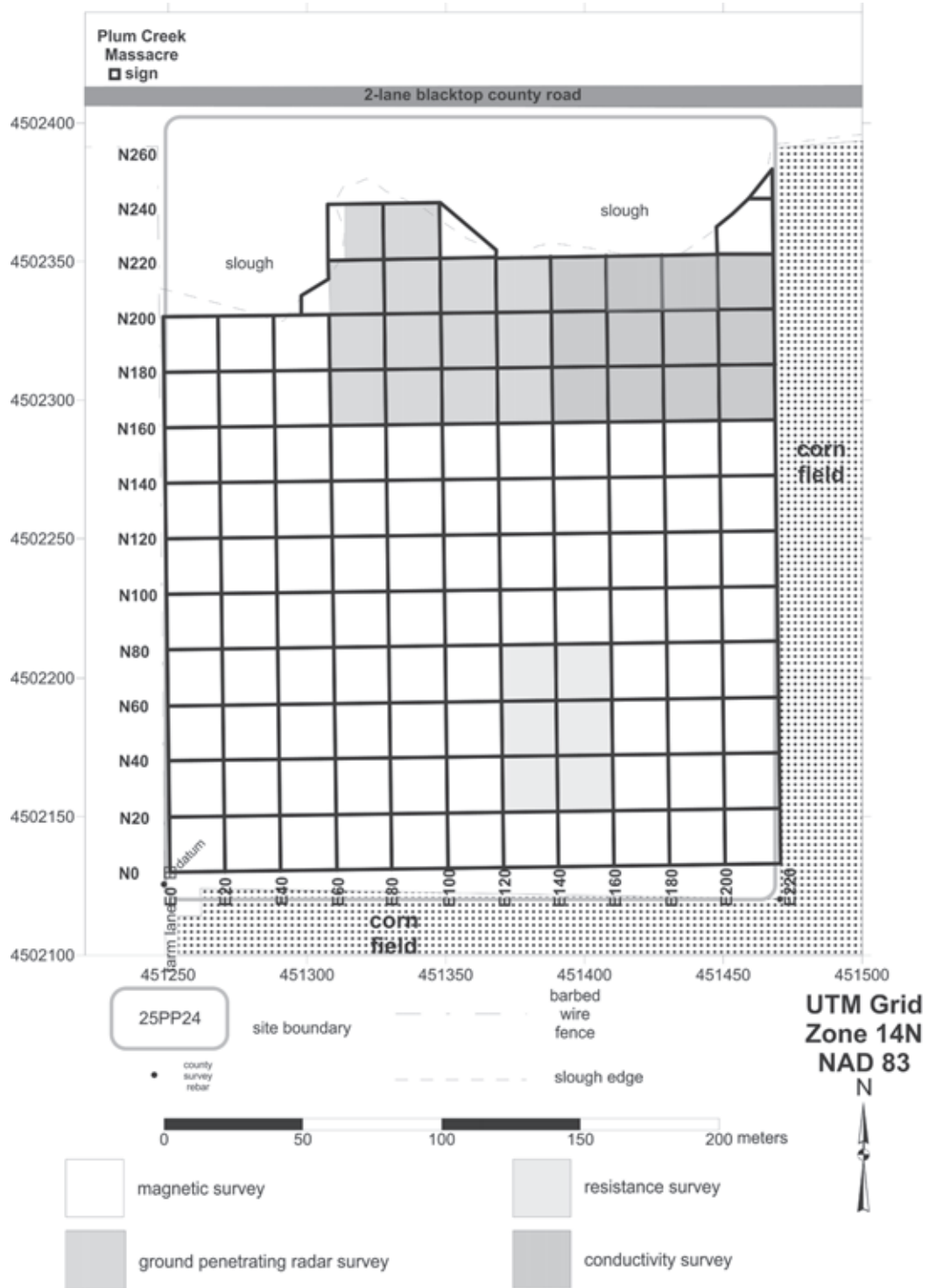
For each of the methodologies employed at the project area, archaeologists systematically laid out grid units or regular survey transects and documented unit locations with GPS. When a metal detector indicated buried objects, the operator and assisting personnel marked the location with pin flags and continued surveying, while the rest of the metal detector crew excavated the object. If the object was determined to be a potential trail-era artifact, the crew field-cataloged, GPSed, and

collected the object for later analysis. Artifacts that post-dated the period of interest were examined and reburied.

#### SURVEY RESULTS

Our survey identified numerous magnetic anomalies across the native pasture and hayfield. Several were linear, appearing to represent the California and Oregon overland trail across the site (Figure 10). Other more sinuous, linear magnetic anomalies probably indicate old drainage locations across the field. In addition to the linear anomalies across the field, the western boundary fence is represented by a series of high and low

FIGURE 9. Geophysical site map.



magnetic anomalies. Evidence of the eastern field fence, which has been removed, is represented a series of magnetic anomalies representing fencing staples, electrical fence post anchor plates, and fencing wire fragments.

Four concentrations or clusters of magnetic anomalies may represent locations of the remains of the teamsters' wagons or cargo from the wagons that were destroyed by the Cheyenne warriors. In addition to these clusters there are five rectangular magnetic anomalous areas. One of these may be the location of the mass grave of the eleven teamsters killed by the Indians during the attack. The resistance data from the northeastern corner of the geophysical project area contains two subtle linear resistance anomalies that are located in the same approximately areas as the linear magnetic anomalies in this part of the field (Figure 11). The conductivity data contains a roughly rectangular area of higher contrast, which is identified as a potential location for the mass grave (Figure 12).

In addition, a strong oval-shaped conductivity area is located to the east of the roughly rectangular area. The ground penetrating radar data identified a number of linear gpr anomalies that resembled two-track lanes or wagon ruts (Figure 13). Two of the linear gpr anomalies were visible in the field and were identified as farm trails or lanes. The remaining linear gpr anomalies were more curved or at different orientations than one would expect for farm equipment in the rectangular field. These linear gpr anomalies suggest locations of numerous trail ruts from the heavy wagon traffic along the California and Oregon overland trails in the nineteenth century.

A rectangular anomaly in the hayfield next to the slough measures approximately six meters (roughly, yards) by seven meters. The gpr anomaly is present in several of the time slices, making this anomaly a strong candidate for the mass grave of

the teamsters killed on August 8, 1864. The gpr anomaly matches with a rectangular magnetic anomaly in this portion of the pasture/hayfield.

The geophysical anomalies are highly suggestive that the pasture/hayfield belonging to the Holen family contains several buried archeological resources related to the Plum Creek Massacre and to the California and Oregon overland trails, including the mass grave of the killed teamsters. Archeological testing of these anomalies is required, however, to test these hypotheses.

The metal detection survey recovered forty-two artifacts recorded in thirty-one find locations (Figure 14). Some were later determined likely to post-date the timeframe of the attacks. Key artifacts recovered from the Holen property include a harness buckle, two sections of trace chain, fragments of a three-legged, cast iron kettle, a staple for securing a wagon bow to the wagon box; and a hand-forged rivet. Artifacts recovered from the Carlson property include a cartridge case from a Spencer carbine or repeating rifle, and a wagon side brace. Overall, nine artifacts related to wagons or harness are consistent with nineteenth century overland wagon construction, and the fifteen kettle fragments likely represent a single broken vessel, consistent with loss on the trail or the destruction of the wagons in 1864. The area where the artifacts were found appears to be within the general area of the overland trail; however, nothing about the objects links them firmly to the events of August 1864. Such items are typical of objects that were lost or discarded along the trail, and their distribution across the project area could be attributable either to casual loss or with the destruction of the Kelly-Morton-Marble Party.<sup>10</sup>

*(continued on page 31)*

<sup>10</sup> Ibid., pp. 51–55.

FIGURE 10. Interpretation of the magnetic data.

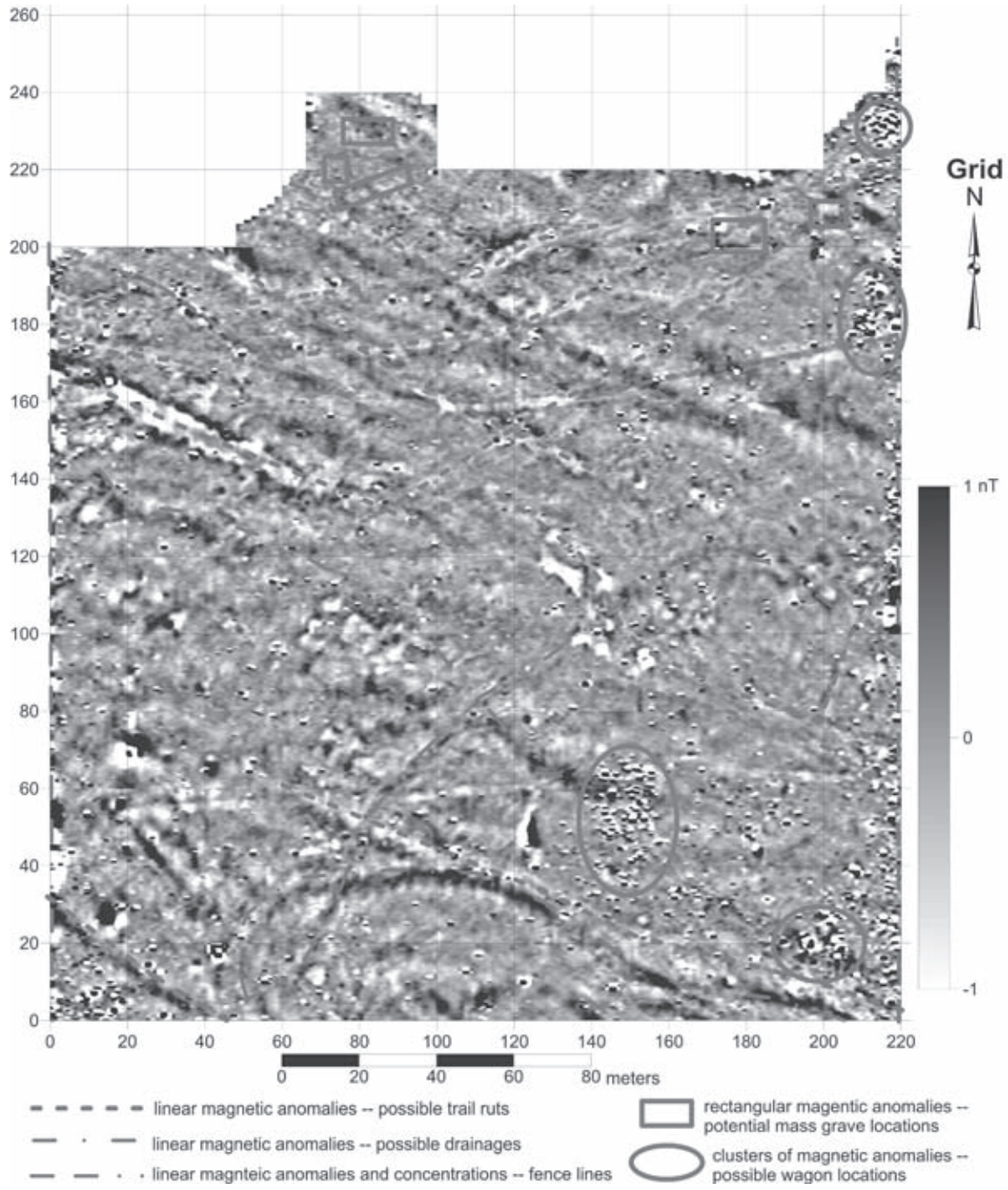


FIGURE 11. Interpretation of the resistance data.

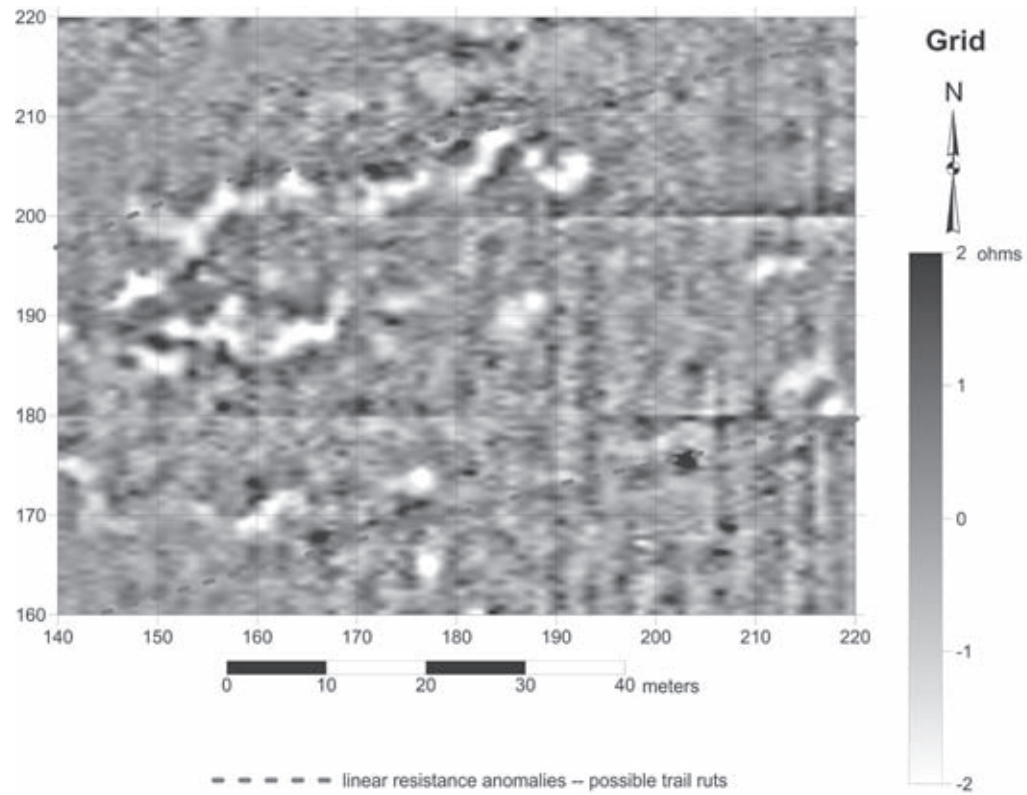


FIGURE 12. Interpretation of the conductivity data.

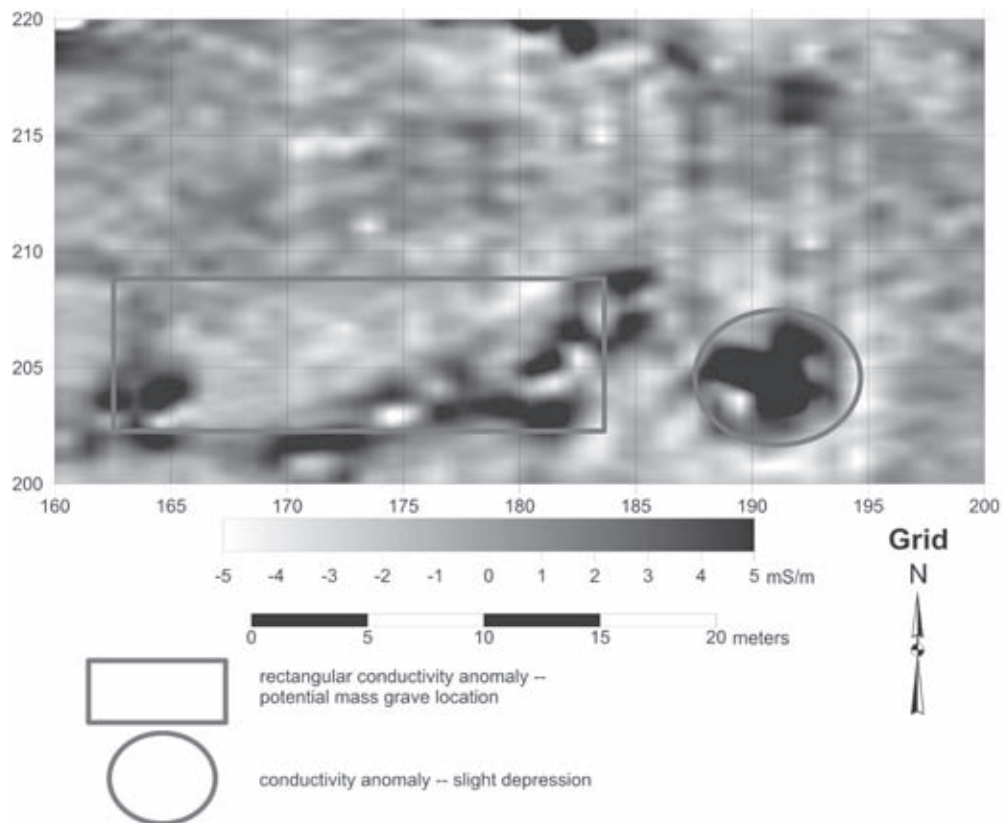


FIGURE 13. Interpretation of the ground penetrating radar data.

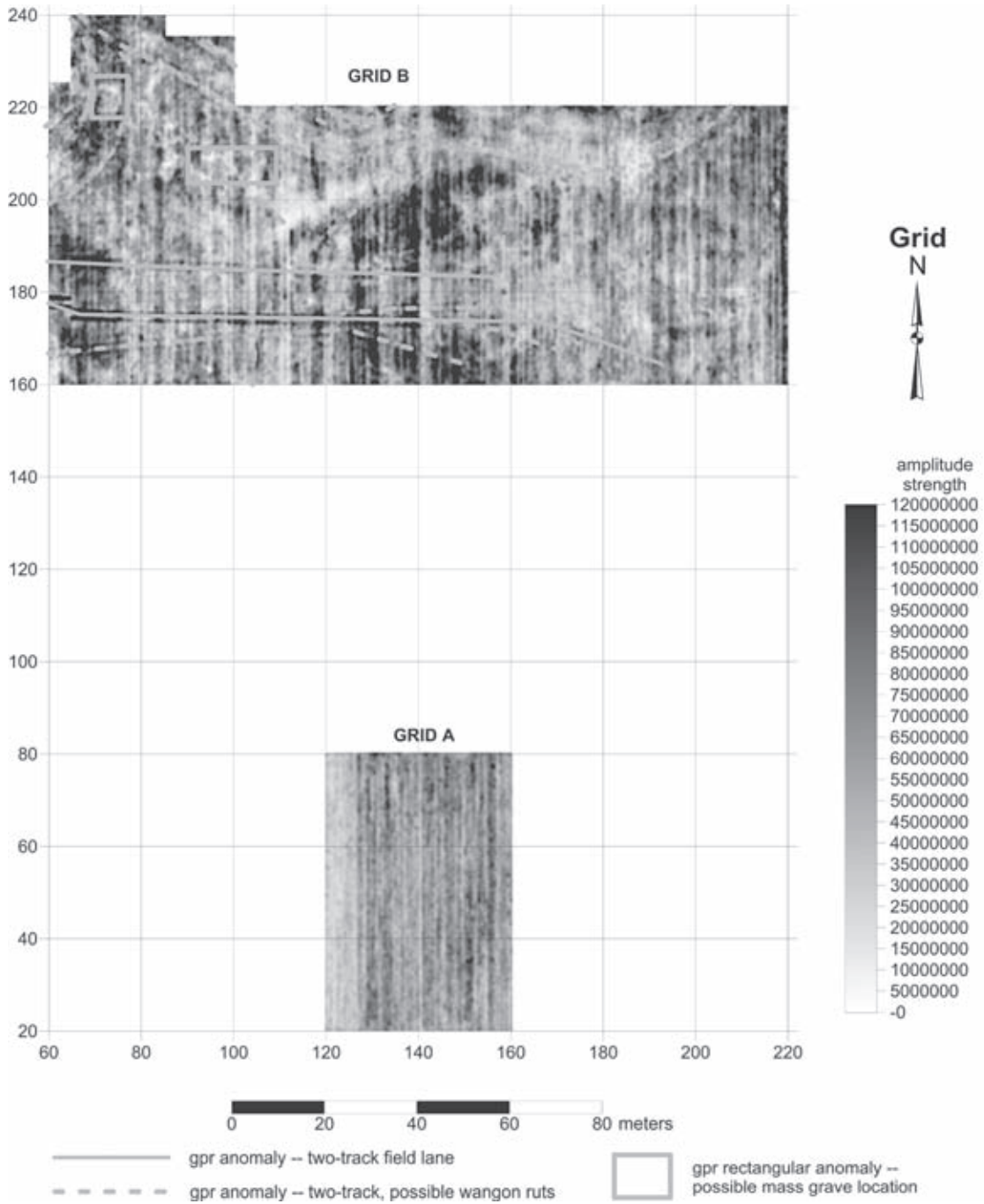




FIGURE 14. KEY ARTIFACTS RECOVERED DURING ARCHAEO-GEOPHYSICAL INVESTIGATIONS

(left) Harness and wagon parts recovered during the metal detector survey of the Holen and Carlson properties.

(center) Kettle fragments recovered during the metal detector survey of the Holen property.

(right) Cartridges recovered during the metal detector survey of the Carlson property.

### CONCLUSIONS

Although none of our results were conclusive, we did pinpoint some anomalies for further archeological testing and ground-truthing. We also recognize that, although the extent of site 25PP24 is presently limited to the native pasture, in reality it extends over a much larger area. During the attack of the Cheyenne warriors on the small freight train, the teams bolted and wagons were spread out over a mile or two. According to local informants, wagon parts were removed from the field to the north of the Holen property by the landowner's children in order to avoid damage to the cultivation equipment. Additional archeological and geophysical investigations are warranted in the adjacent fields to the native pasture to identify the extent of the archeological resources

associated with the Plum Creek Massacre on August 8, 1864. The massacre and the capture of two people from the wagon train was one of the major events in the Indian War of 1864 that led to the Sand Creek Massacre at a Cheyenne and Arapaho village by Colorado volunteers on November 29, 1864.

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