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# Colonel Loring's Expedition Across Colorado in 1858

With an Introduction and Notes by LeRoy R. Hafen

#### INTRODUCTION

The first road across Colorado was along the route which Senator Thomas Hart Benton called the "Central Route" to the Pacific. This crossed the continental divide at Cochetopa Passthe lowest crossing of the mountains in Colorado—and followed for some distance along the Gunnison and Colorado rivers. It was traversed by J. W. Gunnison, J. C. Fremont, and E. F. Beale, with three separate parties in 1853.

In 1858 the first big wagon train traveled this route, having to make its own road much of the way. This train was a military detachment under command of Colonel Loring and comprised fifty wagons and 300 men. The journey was from west to east; the command set out from Camp Floyd, Utah, on July 19 and reached Fort Union, New Mexico, September 13, 1858. This occurred in the year Denver was founded, but previous to the establishment of the settlements at the mouth of Cherry Creek.

Colonel William Wing Loring, leader of the expedition, was an interesting character, who saw much military service.2 He was born at Wilmington, Delaware, on December 4, 1818. He fought in the Florida wars and was commissioned a second lieutenant at the age of nineteen. Then he took up the study of law, practiced in Florida, and became a member of the Florida legislature.

On May 27, 1846, he was appointed a captain in the newly created regiment of Mounted Riflemen. For gallant and meritorious service in the Mexican War, in which he lost an arm, he was brevetted a lieutenant colonel on August 20, 1847. In 1849 he led five companies of Mounted Riflemen, with a train of 171 wagons, over the Oregon Trail—the first military unit to traverse the entire length of that famous highway.3 After commanding the Eleventh Military District in Oregon for several years, he was sent to New Mexico. Early in the spring of 1858 he took reenforcements from Fort Union, New Mexico, to General A. S. Johnston's "Utah

Senator Benton of Missouri strongly advocated this route as the course for the first railroad to the Pacific Coast.

<sup>&</sup>lt;sup>2</sup>F. B. Heitman, Historical Register and Dictionary of the United States Army, I, 642; and Dictionary of American Biography, XI, 420-21. <sup>3</sup>R. W. Settle, The March of the Mounted Riflemen, etc. (1940).

Expedition" at Fort Bridger, going through the Colorado region along the Front Range of the Rockies, and thence along the Oregon and Mormon trails to Utah.4 The Mormon troubles were soon adjusted, and Colonel Loring was directed to lead a command from Camp Floyd, Utah, back to New Mexico, on a more southern route than he had taken the preceding spring.

Before presenting the record of this expedition, let us note briefly the Colonel's subsequent career. After spending a year's leave of absence traveling in Europe in 1859, he returned to command the Department of New Mexico, 1860-61. With the outbreak of the Civil War he resigned his commission and became a brigadier general in the Confederate Army. After fighting through the war in the South, he surrendered to General Sherman in April, 1865. He lived in New York until 1869, when he entered the service of the Khedive of Egypt, assuming command of all Egyptian Coast defenses in 1870. After his service against Abyssinia, 1875-76, he was elevated to the rank of Pasha. He died in New York City in 1886.

The manuscript of Colonel Loring's report of his 1858 expedition, reproduced below, was obtained by Mrs. Ann W. Hafen at the National Archives in January, 1945. It is here published for the first time:

> Fort Union, New Mexico. November 1st, 1858,

Asst. Adjt. General,

Hd Qrs Dept of Utah,

Sir: I have the honor to report that in obedience to Department Orders, dated Head Quarters Department of Utah, Camp Floyd, Cedar Valley, July 15th, 1858, I left with the following command: Company K and Detachments of Companies H and G Mounted Rifles, under the command of Lieut. Alexander McRae, Rifles; Companies A, E and F, 3rd Infantry, respectively under Capt. A. W. Bowman, Lieut. A. N. Shipley and Capt. John Brevitt, 3rd Infantry.

Lieut. Shipley acting as Adjutant, Lieut, C. H. McNally acting as Asst. Quarter Master, Lieut. B. V. D. DuBois acting as Topographical officer, and Dr. A. H. Kellog acting asst. Surgeon.

Camp Floyd, July 19th, 1858. The Command left this camp on the 19th of July, 1858, taking a southern direction through Cedar Valley to what is called the northern Mormon settlement, a population of about 100, with a mill and a small stone fort-5 miles; thence to the southern settlement with a similar fort and same num-

\*House Ex. Doc., 2, 35 Cong., 2 sess., 11, 182-87.

ber of inhabitants-5 miles.6 Encamped one mile beyond, upon water coming from the spring near the fort. At both these settlements there are good springs; at the camp we have good grass and water, but scarce of wood. Near the spring cedar is abundant. I am informed that near here is where General Johnston intends establishing his post. West of us is Rush Valley with a ridge easily crossed. General course ESE. Distance 11 [miles].

Near Goshen, July 20th. Left camp near Southern Settlement 7 a. m. Continuing in Cedar Valley. Course a little east of south to dividing ridge between it and Little Utah Lake, 9 miles, road level and passing through a sage country, from dividing ridge to fork of roads, 2 miles, the left is nearer the Lake and better camp; the other saves 1/2 mile but difficult to water animals, 2 miles. The direction here changes to the south to meadow 3 miles, and fine springs 1 mile, where there are good camps. Good grazing continues to the village of Goshen,8 4 miles, near which we are encamped with good grass, wood and water. Population about 300. Good section. Wheat. General course E.S.E. Distance 23 [miles].

Salt Creek, or Onapah. Left camp at 6 a.m. Instead of the Mormon roads by the town of Summit, took a more direct course crossing a mountain ridge 51/2 miles distant,9 made a new road and saved 10 or 12 miles to a fine spring branch which empties into Salt creek 31/2 miles, where there is a good camp. Thence to a meadow on Salt creek near a spring 2 miles, with sage for wood, good water and grass. The valley of Salt Creek is six or seven miles wide, with a good sod easily irrigated. Hay obtained in great abundance. Protected by mountains, good winter pasturage. On the east side of this valley the mountains are high. Had a fine view of the mountains bordering Utah Lake and the canons of Hobble, Provo and Spanish Fork. It was through one of them that we intended in the first instance to make our way to the head of White River and down it to Green river, but after a casual observation it was thought our time did not permit the work required. There is little doubt but that a road can be made and the distance saved 160 miles. Several Utah Indians visited camp today. Course south. Distance 14 miles].

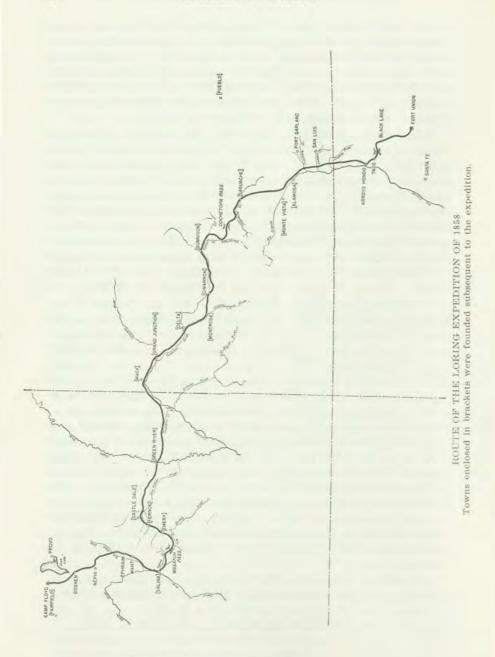
Pleasant Creek, July 22nd. Left camp on Meadow 6 a. m. Soon after leaving camp the roads forked; one to Nephi a Mormon

Camp Floyd, named for the Secretary of War, John Buchanan Floyd, was established by the United States Army in 1858. It was located at the site of the present town of Fairfield, Utah, about thirty-five miles southwest of Salt Lake City. A large monument, erected in 1939, marks the site,

<sup>&</sup>quot;Both of these little settlements have since been abandoned.

General Albert Sidney Johnston, in command of the Army in Utah, and who was later killed as a Confederate leader at the Battle of Shiloh, April 6, 1862. The town of Goshen is about four miles south of the southern tip of Utah

<sup>&</sup>quot;In the summer of 1945, Professor A. N. Woodbury of the University of Utah, Mrs. Am W. Hafen, and the present editor followed most of Loring's route through Utah. At the crossing of the ridge here mentioned, about one mile northwest of Mona Reservoir dam, we saw clearly the old and long-abandoned road. South of this place the old road is covered by the present Mona Reservoir.



village and the other to Salt Creek Canon, took that to the canon 6 miles, leaving the village a short distance to the right. Course southerly. Entered canon and followed up Salt Creek, 10 crossing it repeatedly until leaving the main creek 5 miles, thence up its small right hand fork to a spring and ridge 3 miles, across ridge to camp 4 miles. Course through canon easterly. Before reaching the ridge the canon valley is narrow, after that it opens two or three miles wide. Fine grass and sides of mountains well timbered. Nephi with a population of about five or 600, mostly foreigners, is well situated in a wheat region highly cultivated. A number of well built two story adobe houses and offers a good market. Good camps can be found anywhere since crossing Salt Creek, with great abundance of wood, bunch and blue grass, there is also hops and wild flax. The northern side of the mountain opposite to the spring in the canon is formed of salt of a grayish color and is used by the inhabitants. Our camp<sup>11</sup> is where you first strike Pleasant Creek in San Pitch Valley, which is formed by the Wahsatch Mountains running north and south on each side of it, Mount Nebo bearing northwest. Since leaving Utah Valley we have been ascending perceptibly and are full 1000 feet higher than Salt Lake City. This creek empties into San Pitche creek and then into Sevier river.

Course of canon southerly—through canon easterly. Distance, 18.

Willow Creek, July 23rd. Left Camp Pleasant Creek 6 a.m. to a fine spring. Good grass with sage for wood, 61/2 miles. Near this there is another spring ½ mile beyond. The road forks, one to the east which crosses the San Pitche creek over a bridge, is used in wet weather and when the creek is high. The right hand fork is through a meadow and is some 3 or 4 miles nearer, took this to the crossing of the creek 3 miles, to the main road again 3 miles. To the village of Ephraim, 5 miles, and to Willow Creek 11/2 miles. Grass not so abundant, being near the village. Our course has been southeast and diagonally across the valley to the village, passing through fine rush and blue grass, the valley protected by mountains and well for wintering stock. Ephraim is a Danish settlement with a population of 5 or 600 with rich soil; they have under cultivation over 3000 acres in one field, of wheat, rye and oats. All of it in good condition and some of it fit for harvest. They irrigate and have abundant water, and though there is plenty of stone and timber near by, they live mostly in mud hovels. We found a good market. Course south east. Distance, 191/2.

<sup>&</sup>lt;sup>10</sup>He is following the general route of Highway 189 leading from Nephi to the Sanpete Valley.

<sup>&</sup>quot;Near the present town of Fountain Green.

Taviniquint Creek, July 24th. Left camp Willow creek 6 a.m., passed through to Manti, 6 miles, crossing a creek which runs through the center of the village to Salt and Sulphur springs 3 miles, crossing soon after leaving the village a small mountain rivulet of good water. Early in the season there is grass and a camp at the spring, the hill grass a short distance to the left is the best. Near the springs the wire grass is not good, by sending 34 of a mile toward the village you can get good water. Beyond 11/2 miles you gently ascend a mountain gap, thence to camp, a fine mountain stream of cool water, good bunch grass and wood. Manti contains a population of 1000 or 1500 inhabitants, is situated in a rich valley with numerous fields of wheat, oats and rve under high cultivation. and a good market. The mountain stream which runs through the village and the numerous springs near, afford abundance of water for irrigation. With timber and a fine quality of limestone for building they have well built two story stone houses and a stone wall surrounding the village, which covers several acres, eight or ten feet high and three or four feet through, with gates only where the road passes. General direction, south. Distance, 12,12

Leainiquint Creek, [?] July 25th. Left Camp Taviniquint 6 a. m., taking a course a little west of south over a rugged country to a creek 4 miles. This and another one mile beyond we crossed, up the latter 21/2 miles, there is a camp of San Pitche Indians, the remnant of Walker's13 tribe, numbering now about ten lodges under Arrapee, the brother of that once noted chief. This creek, at which there is a good camp, is called by the Indians Ah-wan-nah-voo. It comes out of a considerable canon. The road improves and for 8 or 9 miles camps can be found by leaving the road a short distance. The last six miles the course changes to the south. About one mile beyond the last point of camping is the camp of today. This creek is narrow with muddy banks, willow and sage for fuel. The best grass is about 3/4 of a mile to the right of the road. Mountain salt is found on our left, of a reddish color.14 The chief of the San Pitche Indians came into camp. Laments the Mormons taking his entire country from him and now no home to go to. General course W. of S. Distance, 15.

Onapaha Salt Creek, July 26th. Left camp Leainiquint creek at 6 a.m. over a good road and barren country to the pointed red

hills near the entrance of the Wahsatch pass15 and where salt creek16 comes out, 7 miles. A short distance before reaching the pass touched Sevier river, its banks sandy and abrupt. Crossed salt creek three times, the last time 4 miles from the red hills. Grass tolerable at the second crossing, very good at the third, on the opposite side near the mountain and a good camp. Our course since coming into the canon has been east. Leaving the creek17 with a rough road to a ridge 3 miles, a fine valley opens with abundance of bunch grass mixed with blue & pinon trees on its sides. Road becomes level and continues so until within one mile of camp, it is then thick with pinon, and the trail broken in its descent to the camp, 4 miles. Course still east. The command did considerable work today. Several deep arroyas can be bridged easily, stone and timber convenient. This is a small valley and has all the essentials of an excellent camp, cool water, good bunch and blue grass, and pinon covering the hills and conveniently. Rained heavily today. General course S. E. Distance, 18.

Head of Fork Salt Creek, July 27th. Left camp Onapaha at 8 a. m., following the valley two miles and ascended a ridge 1 mile beyond to branch of the creek. The valley we have left is about 5 miles long and 11/2 wide, numerous ravines and smaller valleys entering it. Everywhere bunch and blue grass abundant, pinon and cedar covering the mountains on each side. Course to branch Southeast. Followed it for 3 miles, road in places rough and some sand, Aspen abundant, to quite a steep ascent, with a better & more level road to camp 11/2 miles. We have ascended all day and are now in a high altitude. Grass of every kind in great abundance, aspen near by and water at the head of the fork in a good spring. Considerable work was put upon the road, being entirely new, in order to facilitate the march tomorrow. Sent in advance guide and pioneer party to hunt the best track and work the road. From a height near camp we have seen today Mount Leroux, a bald peak which has been a prominent mark for some days. It is about north, the valley of San Pitche, N.N.W., and what we take for the valley in which Fillmore is situated, west, valley of Green River, east. Mountains tumble, country broken and valleys only now and then to be

<sup>&</sup>lt;sup>19</sup>He is following the general course of U. S. Highway 89 from Manti to Salina, Utah.

<sup>&</sup>quot;Chief Walker of the Utes, whose horsestealing excursions had taken him frequently over the Old Spanish Trail to southern California. The Walker Indian War occurred in 1853-54. The chief died on January 25, 1855. In conformity with Ute customs, and befitting the dignity of a great chief, four Indian captives, two squaws, two children and twenty horses were killed to accompany Walker to the happy hunting ground.—A. L. Neff, History of Utah, 382.

<sup>14</sup>Salt is obtained here in commercial quantities today.

<sup>&</sup>lt;sup>15</sup>Wasatch Pass was used by Captain Gunnison in crossing the mountains in 1853. See his map in the Reports of Explorations and Surveys to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, in Sen. Ex. Doc. XI, 36 Cong., 2 sess. It is also shown on the War Department map, "Territory and Military Department of Utah," prepared under the authority of Secretary Floyd in 1860.

<sup>&</sup>lt;sup>16</sup>Salina Creek. Near the mouth of the canyon, the town of Salina was founded in 1863.

<sup>&</sup>lt;sup>17</sup>This road turned south from Salina Canyon, probably going up what is now known as Soldiers Canyon. L. C. Rasmussen, a ploneer of Salina, Utah, says that a road up Salina Canyon (the route of the present highway) was not built until many years later, the terrain in the canyon being difficult for road building.

seen. Heavy rain last night and shower today. General course E. Distance,  $7\frac{1}{2}$ .

Salt Creek, July 28th. Left camp at the head of Fork of Salt Creek 71/2 a. m. Guide and large pioneer party in advance. Ascended main dividing ridge 11/2 miles, not difficult, descending rapidly one mile to a spring. Camp site for a small command, plenty of grass and wood, water sufficient at this and other small spring just above, gentle descent to crossing of Salt Creek-good camp 1½ mile. Here commenced the greatest labor we have had since leaving Camp Floyd—to camp 2½ miles. Crossed the creek six times today. Over 300 men engaged in making the road. Had to cut down the banks of the creek, clear out the fallen timber in the narrow canon, cut down steep ascents and excavate the sides of the mountain, to enable the train to pass. The hill or ridge would be more difficult returning the road here, it being the case over all these mountain ridges, can be vastly improved and when new grades are hunted more easily crossed. It is not difficult now with double teams. This camp is in what is called by the Mexicans Middle Valley, rich and is covered with great abundance of good bunch and blue grass. Immediately at the camp a large number of cottonwood trees, a little way down the creek the mountain ridges come together and are covered with pinon. Several of the San Pitche Indians came into camp today. Say they live in the mountains, acknowledging no chief; that Arrapee, Walker's successor, is under the influence of the Mormons, with whom they are not friendly, that large numbers like them are wandering in the mountains without any particular head. General course N. Distance 53/4.

July 29th. Remained in camp to rest animals, burn coal and repair wagons.

Slover Creek, <sup>17a</sup> July 30th. Left camp at 6 a. m., crossing Salt creek for the last time, over a good rolling road 1½ miles to a small creek cutting the banks in order to cross and excavating the sides of a hill to reach the dividing ridge. The descent being easy, in 1¾ miles came to another rivulet, followed it up to a spring on the left side of the narrow valley, 3 miles, the trail passing just above the spring and camped at the head of the rivulet ½ mile beyond. The best camp is between here and the spring, good wood, water and grass & pinon timber. The road today has been good. Crossed numerous trails which lead through this valley from California to

New Mexico.<sup>18</sup> Marching slowly to make a good road for the train and to give the animals an opportunity to rest. Several Indians of San Pitche tribe were in camp today. Wanderers like the rest. General course S of E. Distance, 6½.

Media Creek, July 31st. Left Slover Creek 6 a. m. Ascent gentle to the dividing ridge, between the waters of Salt Lake Valley and Green River, to the highest elevation that we cross of the Wahsatch Mountains, 2 miles, by a descent scarcely perceptible to Shipley Creek,19 2 miles. At this creek there is a good camp with a good quality of grass, wood and water, pinon and cottonwood trees. For 3/4 of a mile cut the road through the canyon, along the creek. with no little labor. About 3/4 of a mile beyond the road is rough and some sand. You then descend into an open plain with good road. Half a mile further and to the left some grass without water. Two miles you come to a small creek, to the right cane growing near the creek and not much grass. The guide thinks that water here in dry seasons is only found in holes. From this creek to one we are encamped upon is 51/2 miles. Here the ground is rough, covered with grass and sage brush and difficult to find a camping place. About two miles up the creek it comes out of the canon and along the hills near it there is some grass. Near the crossing and to the right of the road on the hills there is also some, not abundant anywhere. The creek being muddy and with deep sides, no timber, made a bridge of stone to cross it. The creek does not look permanent, water can no doubt be found in holes the year through. Immediately in front 1/2 or 3/4 of a mile over a ridge there is a bed of very good bituminous coal. Ordered a guide to Green River tomorrow to ascertain the best ford and grass. We are now over the Wahsatch range of mountains and out of the valley of Salt Lake and its waters. Should it be desirable to have a road into the southern settlements of Utah, there is no difficulty in making a good and permanent road over any of the country we have passed. The country for the last ten or twelve miles is barren, in some places the road is soft. General course north of east. Distance, 171/2.20

St. Raphael, Aug. 1st. Left Media Creek 6 a. m. over a rolling country to a dry creek 5 miles. A rough road 1½ miles to Garamboyer Creek<sup>21</sup> where there is abundance of grass and good camp. Our animals faring badly last night, remained here several hours

<sup>&</sup>lt;sup>17a</sup>It is possible that this may have been "Clover" creek, but in the manuscript it looks like "Slover." The creek could well have been named for Isaac Slover, one of the pioneer colony that moved from New Mexico and settled near the site of San Bernardino, California, Antoine Leroux, guide for the Loring expedition, in writing to Senator Benton in 1853 about routes to California, says that Slover and Pope went over the Cochetopa Pass and Spanish Trail route to California in 1837 (New York Tribune, March 16, 1853). See also H. H. Bancroft, History of California, V, 722.

<sup>&</sup>lt;sup>18</sup>The Old Spanish Trail. From here to a point a little east of Green River, Loring will follow the general course of this historic trail. It was used regularly during the 1830s and '40s by the annual traders' caravan from Santa Fe to Los Angeles and return.

<sup>&</sup>lt;sup>19</sup>This is an upper branch of Muddy River, an affluent of Dirty Devil River, which flows into the Colorado.

<sup>&</sup>lt;sup>39</sup>Loring now follows the present course of Highway 10, through the sites of Emery, Ferron and to the vicinity of Castle Dale, Utah.

MOn Gunnison's map, op. cit., Garambulla Creek is shown as a southern branch of San Rafael River, and was probably Ferron Creek of today.

to graze. The creek is muddy. Cut down the banks and made a good crossing. After crossing and a little to the right of the road there is a coal bed. The road from here for a short distance is over a broken country, then for 9 miles it is over a plain to the knobs when it is again broken and rolling to the creek 41/8 miles. The crossing good; fine stream, wide and fertile bottoms, plenty of grass, few cottonwood trees; willow and sage mostly for fuel. The road today has been good, the country barren. The course to Garambover NE by N, from there to St. Raphael N.N.E. Distance, 1934.

San Mateo or Sivareeche Creek, Aug. 2nd. Left camp St. Raphael 8 a. m. over a rolling country. Steep hills up and down to creek again 3 miles. Good camp. Over hills again to the creek and followed its bottom 1½ miles. Cottonwood trees and grass abundant, 1½ miles beyond left the creek. Same sort of country. The road more level, soil soft, cutting in four inches. Come to gap in the ridge five miles. Continuation of an arroya to the creek. Some grass and sage brush. Cottonwood trees on the river 34 of a mile from the road. The same character of road and country continues, rocky in places, to camp 33/4 miles. Here there is great abundance of cottonwood trees, grass and good water; stream easy to cross, bottoms wide and rich. Visited by several Sivareechee Utah Indians. Course of creek southeast. General course N.E. to North. Distance, 1134.

Two Miles from Water in Barek, Aug. 3rd. Left Camp San Mateo or Sivareechee creek 6 a. m. over a good rolling road 21/6 miles to San Marcus or Taveajo Creek. Rocky bottom, good grass and water, sage for fuel. The guide thinks water can be found here at all times, dry seasons in holes. From here two miles over a gravelly road with two or three gentle ascents, a very small spring just after leaving, then a good plain road 8 miles to water in an arroya. I do not think it permanent. Over a similar road 134 miles to the hills. Abundance of water and grass here. The guide thinks it permanent. It does not appear so. A tank could be easily made. Rested several hours. Over a rocky hill, winding road, descended into ravine, water in the rocks, 11/2 miles from the road. Abundance of water in arroya, with good grass. Over a similar road to a ravine 7½ miles and encamped with good grass within two miles of water. General direction, east. Distance, 24.22

Camp at a Spring, Aug. 4th. Left camp without water 9 a. m. In two miles came to water in a rocky tank formed in the bed of an arroya. With little difficulty a tank can be made to hold water in

abundance, it is not now permanent. Grass and wood in abundance. A good ridge road for about six miles, heavy sand 3 miles. Road still sandy 13/4 miles to camp. The spring is large and water good, plenty of wood but scarcity of grass, by following down the bed of the creek it is more abundant. There is a trail 3 miles nearer for horsemen from Rocky Bank to this spring. Saw the course of White River<sup>23</sup> yesterday and today, about ten miles distant. It empties into Green River about 3 miles above and St. Raphael 8 miles below the crossing. The mountain forming the great canon through which Green River runs has been in view several days, also Salt Mountain24 distant in the southeast. Leroux25 pointed the direction of Captain Gunnison in '53 up White River, no remains of the road. From observation we are confirmed in the opinion that a road can be made up White River to Salt Lake Valley, by the way of Provo Fork or Hubble Creek, possibly the Spanish Fork. General course about east, a few points south and very winding. Distance, 123/4.

Green River, Aug. 5th. Left spring26 5 a.m. In places for five miles the sand is heavy. With some labor a ridge road can be made to avoid it. Five miles from this over a good ridge road there is water in springs in the bed of an arroya, that to the right of the road is the best for animals, and here you find grass, the one to the left was used by the men, it is salty and not good and is only drank when thirsty. Rested here 3 hours. The road is good 71/2 miles to Green River, the best grass not abundant, is below, some in an arroya a little way back. Grass is also reported still farther below. The course of Green River is about southeast and 4 or 5 miles from where it comes out of the canon. The bottom of the river is extensive and thickly covered with cottonwood. General course east by south. Distance, 18.

Aug. 6th. Remained in camp to rest animals and repair train. A number of Sivareeche Utahs came into camp, they are very destitute. Say they are not friendly with the Mormons. Cut the bank of Green River and prepared the ford for tomorrow.

Aug. 7th. Crossed Green River today, the best ford is 13/4 miles above. Upon striking the river you go to the lower end of a small pebbly island near the center of the river, 27 slightly against the current, then with the current diagonally for the opposite side, where there is a good shore to come out, the crossing is little over the 1/4 of a mile, camped on elevated ground. Opposite to camp,

<sup>&</sup>lt;sup>22</sup>Loring is following the general course of the Old Spanish Trail eastward from the Castle Dale area, instead of the Gunnison route that circled north almost to Price and for some distance followed the Price River. These routes are shown on Gunnison's map, cited above.

<sup>23</sup>Price River of today.

<sup>24</sup>La Sal Mountain, immediately east of Moab, Utah. It is a landmark.

clearly visible for many miles.

\*\*Antoine Leroux of New Mexico, the guide of the expedition, and an outstanding trailblazer of the entire Southwest. See Charles Kelly, "Antoine Leroux, Pathfinder," in *Desert Magazine*, VIII, 5-9.

<sup>20</sup>This apparently was Trail Spring, northwest of Green River, Utah.

<sup>27</sup>A short distance below the present railroad bridge spanning the river.

about 1 mile from the river, grass though scanty may be found. Finding Green River fordable and satisfied that the rivers in advance are so too, we have determined to leave the flat here, which was brought with us from Camp Ford. Cottonwood trees on both sides of the river are large and can be used for flats, bringing plank with you to complete it. We had with us on our wagons, 500 feet. With the aid of cottonwood made a flat 23 feet long and 12 feet wide, crossing the south fork of the Platte River.<sup>28</sup> Eight hundred or 1000 feet on these expeditions ought to be carried. Salt Mountain bears southeast from this camp. Distance,  $2\frac{1}{2}$ .

13 Mile Spring, Aug. 8th. Left camp on the eastern bank of Green River at daylight. For a few miles the road is winding and several arroyas to cross, then a straight and very good road to camp. The water is slightly salt; the best is at a spring in a deep arroya, two and ½ miles above there is another spring. Good grass one mile in advance of us, sage bushes for fuel. Country today barren. Salt Mountain bears south of east. Elk Mountain<sup>28a</sup> now in view, north of east, Santaria Mountain west of north. Rocky mount west side of Green River near our encampment while there, a little north of west. Course today southeast. Distance, 13.

An Arroya, Aug. 9th. Left camp at daylight. Passed between two rocky buttes, the left hand one is in the direct line to camp, struck the Mormon trail<sup>29</sup> which left Green River where we did, but takes a long circuit to a spring 15 or 18 miles south of our road and more distant. At this camp the water is not permanent, good bunch grass within <sup>3</sup>/<sub>4</sub> of a mile of camp, greasebush for wood. Country barren. Course south of east. Distance, 12.<sup>30</sup>

The Water Holes, or Cottonwood Creek, Aug. 10th. Left camp at daylight, over a broken country to a water hole 9½ miles, grass abundant, water does not look permanent. From here the road in places sandy and heavy. Crossed several arroyas, one with cottonwood trees growing in it one mile from present camp. This camp is situated between two mountain ridges, water is said to be permanent, grass is abundant. Course east by north. Distance, 20½.

Grand River, Aug. 11th. Left camp at 6 a.m. Two and ½ miles to Grande River. 31 Camp is contracted, numerous cottonwood trees, the best grass is one mile above, when the river is low, good

grass may be found on the opposite side. Several Tabareachee Utahs were in camp today. Course northeast. Distance, 12.

Grand River, Aug. 12th. Left camp at daylight. By taking it over the ridge at leaving camp you avoid 1/4 of a mile of sandy road and intersect the one made by us. The first part of the road is rolling and sandy with considerable ascent, it is then more level, now and then a hill. When you get within 3 miles of the river there is a succession of hills, sandy and heavy pulling, making it laborious for animals. The bottom here is extensive with numerous large cottonwood trees,32 grass abundant and trout found in the river. The road from Green River taken by us is south of that taken by Gunnison, our guide thinking water scarce on the other and very sandy.33 There is another trail of the Mormons nearer the mountain. From observation and what guides and Indians say it is likely that a good road, escaping sand, with water and grass can be found by following Gray Mountain<sup>34</sup> some distance north of our trail. The Indians say they have a farm near the mountain, at the head of one of the arroyas which we crossed since leaving Green River. When the country is examined a better road may be found with permanent water and plenty of grass. With the information we now have we would, before leaving Green River, examine the country along the base of the mountain, even if permanent water could not be reached nearer than a mile or two, with a good road and plenty of grass it matters little. Course today north northeast. Distance, 13.

Aug. 13 and 14. Remained in camp to cut a road on the side of a mountain ridge 4½ miles distant, the cutting is on a precipitous side and immediately above a deep gorge. Engaged more than two days with several hundred men, we succeeded in making a solid and permanent road, and with the exception of two or three slight ascents a very good one. The valley we are in is some six miles in length and two or three in width, surrounded on all sides by high mural precipices. Soil good and covered with large cottonwood trees and sage bush, grass abundant and numerous fish in the river. Since striking it, there have been similar valleys to the one described. Passing through this valley there are numerous Indian trails, leading to Salt mountain and to San Miguel and Dolores rivers. Grand River so far winds through deep canons, its general course has been north. The mountains are mostly of sandstone with now and then flint.

1½ Miles Off Grand River, Aug. 15. Left camp at 5 a. m. First 3 miles level road, two short ascents in a distance of 1½ miles

<sup>\*</sup>The crossing referred to at the site of Denver was made on Loring's expedition from Fort Union to Utah in the spring of 1858.

<sup>\*\*\*</sup>Grand Mesa of today.

\*\*The Mormon "Elk Mountain Mission" took wagons to the Moab region in 1855, traveling from Manti, Utah, over about the same route as Loring traversed. See O. B. Huntington's detailed report of this mission in the Mormon Church Historian's Office, Salt Lake City.

\*\*This would bring them to or near the station of Thompson.

The Colorado River of today. Loring appears to have reached the river at Horse Shoe Bend, due east of Cisco. Hayden's Atlas of Colorado and Portions of Adjacent Territory (Surveys made in 1874-78) shows the "Salt Lake Wagon Road" as reaching the river at Horse Shoe Bend.

<sup>35</sup> Mouth of Cottonwood, or Bitter Water, Creek.
55 Following Gunnison's route from the west, one reaches the Colorado River near the mouth of Cottonwood Creek.

<sup>34</sup>The Roan, or Book, Cliffs.

to the mural precipice. From here to the top of the ridge it is two miles, 1/2 mile from the top of the ridge there is a steep descent and then one mile of gentle descent to the valley. Halted to give the animals the benefit of good bunch grass. The river is in too deep a canon to give them water. In advance one mile the road passes through two rocky buttes resembling huge pillars of agate, back of them a short distance water is in an arroya, where men can get it and animals may be led to it. In the distance of five miles you first pass through a short canon, and then over a soft road, in places sandy 11/2 miles of level road with gentle ascent to a ridge, 23/4 miles of gentle descent and good road to camp, it is 1½ miles from the river. Owing to its steepness wagons cannot approach nearer. With abundance of bunch grass, sage for fuel, we prefer this camp to one on Salt river which is near, the water there being salt. However slightly tinctured injures animals while travelling. Gray mountain which has been in view since leaving the spring on the other side of Green River, is still on our left. We see about where Marcy<sup>35</sup> crossed it last winter to Salt creek and where the Mormons left it to come this way. We are still more satisfied that a road with water can be found along the base of this mountain to Green River. 36 Leroux says the Dolores empties into Grand River 10 or 12 miles below where we first struck it, and that San Miguel is the north fork and much the smallest.37 He thinks the best winter pack trail, with little or no snow, is south of Salt mountain crossing Grand River and following up the Dolores to its head, then around Salt Mountain and across spurs of the San Juan to the head of Rio Mancos, which empties into the San Juan, across the river to the Abiquiu trail,38 thence to that place. A command with pack animals can go through from Santa Fe to Camp Floyd in 25 or 30 days. General course first 14 miles north, the remainder east. Distance. 163/4.

Grand River, Aug. 16th. Left camp at 7 a. m. Upon leaving made a considerable descent in 21/2 miles, crossing a short plain to Salt creek.30 The Mormon trail here passes up a dry creek north of east in the direction of Gray Mountain. Our road immediately after crossing Salt creek ascends a ridge and skirts the mountain buttes along Grand River. Near Salt creek bunch grass is abundant and fresh water is 11/2 miles to Grand River where there are cottonwood trees, animals to be driven to it. The road to within 31/2 miles of camp continues rough, crossing three or four narrow ridges.

39A little west of Mack. Colorado.

thence level and good. Near our encampment the river passes into a canon "Caxagano" or Little Mountain south of it, Gray mountain continues to follow the course of the river, making a valley of 15 or 16 miles wide, barren with little but sage and grease bush on it, except near the river where the bottom, covered with cottonwood trees, is good soil 1/4 to 1/2 mile wide. Course of the river is west. Eighteen or 20 miles distant is the canon of Gray and Elk Mountain, through which Blue River40 runs in a southwesterly course and empties into Grand River. Just before getting to camp on the hills to the right of the road, bunch grass is abundant. Three miles further in advance, opposite to the lone cottonwood tree, blue grass covers the bottom. Course south of east. Distance, 91/2.

Blue River, Aug. 17th. Left camp at daylight. Level road and clay soil, good now but bad in wet weather. Good camps everywhere on the river, soil good and easily irrigated. Crossed the Mormon and numerous Indian trails. Blue River enters into Grand River 3 miles below. Little Mountain bears southwest and Elk Mountain north of east. Rested from 11 to 4 when the command forded the river.41 The ford commences on a pebbly bank which leaves the northern side and runs towards the center of the river. It is soon covered with water and is what the mountain people call a "riffle." You continue in this direction until you get within fifty yards of a rolled stone island where you strike diagonally for the island on the opposite side, covered with cottonwood trees and grass. A stone having been placed near it to guide you, from here it is easy with a steep ascent to camp. The distance across is about 1/4 of a mile Our wood we get from the island on the north side (opposite), where there are large cottonwood trees, there being none near on this side. One mile in advance bunch grass is very good. A bed of coal is near this camp. Course east southeast. Distance, 163/4.

On an Arroya, Aug. 18th. Left camp at 7 a.m. Over a level road 1 mile to Grand [Gunnison] River where it bends in the form of a horse shoe, the bunch grass on the surrounding hills being abundant. We had our animals here last night. The banks are too steep to water them. Ascending from here a dividing ridge, gentle and hard, but precipitous and sandy in its descent, we came into a narrow valley about 21/2 miles where there is a good camp upon the river, with wood and grass in abundance. The road then passes over a country cut up with several arroyas, requiring work. To one 41/2 miles which comes from Elk Mountain with water and cotton-

<sup>\*</sup>See L. R. Hafen, "A Winter Rescue March Across the Rockies," in the Colorado Magazine, IV, 7-13.

\*Loring's road between Cottonwood and Salt Creeks is much nearer the

Colorado River than the present highway.

<sup>37</sup>This checks with Hayden's map. 38One route of the Old Spanish Trail from Ablouin, New Mexico.

<sup>&</sup>quot;Above the site of Grand Junction, Loring, like Gunnison, calls the Gunnison River branch the Grand River, and calls the Colorado River of today the Blue

The Loring road crossed the Colorado River three miles above its junction with the Gunnison.

wood trees.42 it is likely water can be had here almost any season in holes, it being muddy, bridged it. Found here one of Marcy's last winter camps. The road is then level and good to Leroux's creek, 43 41/4 miles. This is a fine little stream coming also from Elk Mountain with abundance of cottonwood trees, hill and bottom grass, Remained here from 11 to 4 p. m. Immediately ascending a ridge and soon after descending into a level and narrow valley, with a good clay road, to an arroya, 61/4 miles, in our front and on our right grass is good and abundant, the water is not thought permanent though the guide thinks it may be found in holes. One mile from us in a northerly direction towards Elk Mountain, there is a creek at its base in which there is always water. Between us and it he thinks Gunnison crossed the ridge. Grand River is not far from us on our right, but its canon is so rocky and deep that it is difficult getting down to it. About 6 miles after leaving camp this morning passed the mouth of a small creek emptying into Grand River, which the guide says is the - put down on the maps further below Blue River. On the ridge soon after leaving Blue River, San Juan Mountain is in view. The valley here has grown very narrow. high ridge on both sides. General course south. Distance, 181/2.

Grand River, Aug. 19th. Left camp 5 a.m. Country rolling, several high ridges, both steep, in the ascent and descent to water in a ravine 6½ miles. Diverged to the left taking a ridge to avoid miry and low ground in the valley, in a short distance came to a temporary water hole where we rested, thence into the plain again to Double Creek, 7½ miles. Abundance of grass, some cottonwood and likely permanent water in holes. Between here and the river you cross a ridge, gentle in the ascent but steep going down 1¾ miles to camp. The valley here is broad and rich, covered with every variety of grass and has numerous cottonwood trees, the mountains well covered with timber 10 or 12 miles distant. Oncom-pa-gre [Uncompahgre] creek empties into this river about 3 miles above. Heavy rain with thunder and lightning this afternoon. General course E.S.E. Distance, 15¼.

On-com-pa-gre Creek, Aug. 20th. Left camp at 8 a.m. Ford good, 4 not more than waist deep and 100 yards wide—banks good.

In 6 miles crossed a dry creek which empties into the Oncompagre with water in holes and at right angles with what we think must have been the Mormon trail. In 3 miles over a high, level and hard ridge road, came to a well beaten trail that is usually travelled by Indians and possibly the Mormons who were here last spring. Soon after by a gentle descent came into the extensive bottom of the Oncompagre. This bottom extends along the creek for 30 miles, & is in places 1 mile wide, covered with grass in abundance and of every variety. Numerous cottonwood trees along the stream, in the mountains cedar and pinon. The soil is rich, easy of irrigation and rains are frequent. This is in the center of the Utah Indian country and in the immediate vicinity of numerous streams with well timbered and fertile bottoms. Fifteen or twenty miles above there is an extensive valley, great abundance of timber and grass and is the favorite residence of the Utah Indians in the winter. The Mormons have for some time contemplated a settlement in this country. 45 By taking a more direct course from our last camp to this, the distance can be shortened several miles. Saw the peak on the southern side of San Juan mountain, where Las Animas (a stream emptying into San Juan river) takes its rise. On the same side in the same chain of mountains the Rio del Norte also takes its rise; on this side the Dolores and other streams. Portions of the mountains are now covered with snow. Sent an express today to the Headquarters of Dept. of New Mexico with information of our march. General course about east. Distance, 12.

Oncompagre Creek, Aug. 21st. Left camp 101/2 A. M. Remained to let the roads dry, along the creek to a dry creek 8 miles. Here an abundance of berries. Left the bottom of the Oncompagre in consequence of a bluff coming down to the creek, and followed the dry creek 34 of a mile, turned to the left and followed it up with gentle ascent a ravine 1/2 of a mile, then a pine ridge road 3 miles. Descended again to the bottom of the creek, 21/4 miles along it with good road to camp. At any time in today's march camps can be made. The bottom here is wider than below and like it covered with cottonwood and the finest description of bunch and blue grass, mixed with rushes. Wood and water convenient. One & 1/3 miles above there is an extensive senigilla covered with grass. At this camp is the best ford of the creek, a prominent butte of white colored sandstone marking it. The creek here runs about south. Little Mountain, Elk and San Juan Mountains and Grand River in view. This is a great resort for the Utah Indians, none have been seen by us. The gap we enter in our ascent of the mountains again

White Water Creek,

<sup>43</sup>Kahnah Creek of Hayden's Atlas, and the same today,

<sup>&</sup>quot;They appear to have forded the Gunnison near the mouth of Roubideau Creek. Hayden's Atlas shows the "Sait Lake Wagon Road" crossing at this point. Gunnison mentions the ruins of Robidoux Fort (sometimes called Fort Uncompangre) as being on the south side of the river and one mile above where he crossed it. (Reports of Explorations and Surveys, etc., op. cit. II, 56.) He and Loring probably crossed at the same place. On August 14, 1842, Joseph Willams, returning from Oregon, reached "Fort Compogera" in company with Antoine Robidoux, and preached a sermon to the inhabitants of the fort. See Joseph Williams, Narrative of a Tour, etc., 82. Regarding Robidoux, consult J. J. Hill, "Antoine Robidoux, Kingpin in the Colorado River Fur Trade, 1824-1844," in the Colorado Magazine, VII, 125-182.

<sup>&</sup>lt;sup>45</sup>None was made. In fact some the far-flung Mormon colonies—such as those in San Bernardino, California, and Carson Valley, Nevada—were called in on account of the "Johnston Army" episode of 1857.

bears about east. Out of it Cedar Creek comes. General course southeast by east. Distance,  $14\frac{1}{2}$ .

Cedar Creek, Aug. 22nd. Left camp at 101/2 a. m. Delayed in consequence of rain last night, to let tents and roads dry. Sent a party ahead to cut out cottonwood and thick brush on the opposite side of the creek. Hard bottom on both sides, from where our camp to the opposite side one mile. In a very gentle ascent and level road entered the gap in 6 miles, and followed Cedar Creek 31/2 miles to its first crossing. Found water in holes not enough for the command. Cedar along it and grass on the hills. In the next 21/2 miles the canon narrows, making considerable labor necessary to get the train through. Recrossed the creek and encamped on limited ground. The water here runs in a small rivulet for fifty yards and sinks, 34 of a mile in advance to ravine on the right there is some grass and water, there we placed our animals, that on the left hand is our road. In 21/2 miles, a short distance to the right, near the top of the ridge is a pond with abundance of water and fine bunch grass for a good camp. The mountain we are now ascending is called on some of the maps "On Compagre." Near our camp is where Marcy camped and cached a good deal of the property he was compelled to abandon last winter. General course east. Distance, 13.

Devil Rock, Aug. 23rd. Left camp at 7 a.m. A party of pioneers in advance. Cut the sides of Cedar Creek and the defile to the left, crossing it several times, and finally ascended the dividing ridge by a gentle ascent about 4 miles. Descent more difficult to a ravine where we found water in holes in great abundance one mile from the dividing ridge. Another ascent & then a sideling ridge to a permanent water hole, where we rested from 12 to 3 p. m., good grass and sage for fuel, with a few scattering cottonwood trees and a great abundance of wild ripe currants. From here crossed the ravine, digging down its sides. One mile before reaching Devils creek47 quite a steep ascent and corresponding descent. When you first strike the creek it runs west, high mountains in the north and east of it. The creek suddenly changing its course and running north between two mountains, forming what is called "Devil's Canon." In the angle the bottom of the creek is covered with cottonwood. Our camp is in a bottom 50 yards wide surrounded by high mountains covered with fine timber, bunch grass near. General course east. Distance, 834.

Northern Fork of Devil's Creek, Aug. 24th. Left camp at 7 a.m. Considerable labor in cutting out cottonwood, excavating and

filling up ravines. Crossed it seven times in 3 miles, beds of rolled stone. As far as we could ascertain Captain Gunnison's trail led from here direct without difficulty across the mountains to Cedar Creek, near our encampment there. Our camp is near the Twin Forks, 48 they rise in the San Juan, called by some Oncompagre Mountains, the one we are on runs west, the other north, both filled with speckled trout. The bottoms large and rich and covered with good grass and cottonwood. Abundance of ripe wild currants, buffalo berry, and black hawes. Rain today. Camped early to rest the animals and enable guides to go ahead and hunt out the best road. An Indian was seen today but he could not be approached. General course east. Distance, 3.

Cebolla Creek, Aug. 25th. Left camp at 7 a. m. In 11/2 miles ascended a mesa, crossed an arroya, passing through thick sage brush. Commenced in two miles the ascent of the mountain, gentle and winding near its top to a pond of permanent water 2 miles. good bunch grass. Another gentle rise and gradual descent to camp on Cebolla Creek49 21/2 miles. The mountains on either side very high and peaked, covered with pine and pinon, very fine bunch. blue, white and other grasses, with oats and flax. Rich black soil in the valley and on the mountain sides. The Cebolla here comes out of a narrow canon south of us, its sides so covered with pine and pinon as to hide the view of its course, and runs north 3 miles, entering another rocky, narrow and precipitous canon. This country seen from a height is broken and tumbled Since entering the mountains grouse have been abundant, cold last night with white frost. Course varied from southeast to northeast. General direction east. Distance, 73/4.

Ruidas Creek, Aug. 26th. Left camp 7 a. m. Commenced a somewhat gradual ascent to a mountain ridge ¾ of a mile to its crest. In the descent a distance of ½ a mile to Indian Creek<sup>50</sup> there are two pitches 15 or 20 feet each, where our wagons were let down with ropes, double locking with the mules hitched. We subsequently found a better descent by going a little to the right. Immediately after descending commenced another ascent of ¾ of a mile to the crest of the ridge, steeper than the previous one, descent better to a mountain rivulet, up it ½ of a mile, in places miry, crossing it to the foot of another hill, somewhat steeper than those back, by double teaming can be ascended it is a ½ mile to its crest. From here you have a gradual descent through a small forest to camp. This creek

<sup>\*</sup>They have reached the site of Montrone.

<sup>\*7</sup>Cimarron Creek of today, reaching it at the town of Cimarron.

<sup>\*</sup>The Forks of Cimarron and Little Cimarron as shown on R. D. George's Topographic Map of Colorado (1913). On Gunnison's map the Cimarron is called Cebolla Creek. Hayden's map shows the west fork of the Cimarron as Cebolla Creek.

<sup>&</sup>quot;Big Blue Creek of Hayden's map, and the same today.
"Willow Creek of Hayden's map.

5 feet wide is a fine mountain rivulet, its valley though contracted is wide enough for camps, abounding in fine bunch and other grasses, wood on the ridges nearby. (This applies to the creek we have passed today. We are now crossing the span of the San Juan mountains. The Sawatch mountain is in view today.) The creek runs a little west of north, much better grass can be found passing over these spurs than those we have taken, our time being limited it has been out of our power to look them up. There is little doubt but that a good road can be made over them to San Luis Valley, bridging, maybe, Sagua [Laguna?] Creek, shortening the distance at least 75 miles. It was thought that evidence of Gunnison's trail was seen passing over the ridge, but very indistinct. Cold and white frost tonight. General course west of north. Distance,  $5\frac{1}{2}$ .

Grand River, Aug. 27th. Left camp at 6 a.m., following the ravine of the creek, crossing several easy hills and then the creek and a spring branch 11/4 miles. Passed over another easy hill and immediately commenced winding around the mountain on our right making 11/2 miles, Grand [Gunnison] River in view in a deep canon some distance below us on our left. Two canon streams emptying into it from the north and Laguna [Lake] Creek from this side. Changing our course more to the east, passed over a rocky, rolling & winding road, gradually descending 21/2 miles, when the descent for 1/2 a mile to Laguna Creek 51 becomes more precipitous, the creek which is crossed here is 20 yards wide, in a distance of 1/2 a mile this creek is crossed three times. Here you have an ascent of one mile, steep in places & a gradual descent of 21/2 mile to a short ascent, then two miles of descent to camp, 34 of a mile above and near the mouth of Tabawatche creek52 and also in rear of us among the sage there is good grass. Cottonwood on the river, and speckled trout in abundance. Two miles before reaching camp crossed a dog creek where there is good grass, and fifty yards above a fine spring. Rain last night. General course northeast. Distance, 13.

Grand River, Aug. 28th. Left camp at 8½ a. m. Crossed the [Gunnison] river 50 yards wide with bed good. Half a mile an ascent of 10 yards and crossed the river a second time today, bottoms wider, grass and cottonwood abundant. In 1¾ miles made a third crossing, here there is a good camp, passed over a ridge, gentle ascent, 1 mile to surprise creek, good camp. A gradual ascent turning to the right around a mountain ridge to a spring 2½ miles. A rolling road for two miles to Pioneer creek, a good camp & a good road of one mile to fourth crossing of the river today. The valley

"Lake Fork of the Gunnison.

is level, five or six miles in length and 11/2 miles in width,53 good grass, cottonwood trees at each end, trout in abundance. Rested here several hours. In 11/2 miles commenced the ascent of a mountain ridge, 34 of a mile to its crest, steep in four places. A gradual descent of 31/2 miles to Grand River (just before reaching the river crossed Phantom creek, it comes out of a canon near camp and runs northerly into the river). The last part of the road today was in places sandy. The bottom here is large; rich soil and abundance of grass, cottonwood and willow, Antelope, Elk and Bear with great numbers of grouse, ducks, and speckled trout. Numerous trails and signs of Indians, from their movements they are frightened at our approach. The general course of the river here is south of west, saw evidence of Gunnison's trail today, but lost all trace of it at this river. A good road can be made from here to Beaver Creek across the ridge south of our camp, cutting off some distance. Very cold and frost. The course has varied. General direction N. of E. Distance, 141/2.

Goochatope River, Aug. 29th. Left camp at 7 a.m. Up the river 11/2 miles, the soil deep in wet weather and difficult travelling. Crossed the river, banks and bed good. Continued up the valley, road gravelly and better to crossing again, which is good, three miles. Soon came to the valley formed by Grand River running east, its fork from the north and Goochatope,54 its tributary from the south, extending over 15 or 20 miles. Good soil, easy irrigation, good grasses and cottonwood trees, pine on the mountain sides, speckled trout in the streams. Antelope, bear and grouse, also recent buffalo signs and numerous Indian trails seen. Crossing the valley 41/2 miles over a level road to Goochatope. Here near the Point of Rocks its valley narrows to 40 yards. Upon passing the point it opens again, good road 21/2 miles along it, to good camp at cottonwood. Rested here 2 hours. Soon after leaving crossed and recrossed the river, good banks and beds. In 71/2 miles, with the exception of two short mountain spurs, level and good road to camp. This camp has excellent wood, water and grass. Valley wide and rich soil. Abundance of antelope, deer, bear, grouse, duck, geese and sand hill cranes, & also recent buffalo signs. Numerous Indian trails seen. Same description applies to the valleys throughout today's march. It is thought that a road could be made across the ridge south of camp today, to Beaver Creek,55 cutting off several miles. Saw Gunnison's trail today at the second crossing of Grand River but soon lost it. Ice last night and cold. General course east. Distance, 18.

This is the valley where Iola is located.

<sup>©</sup>Cebolla (Spanish for Onion) Creek of today; Hayden called it White Earth River. One may still see traces of the old road coming to the Gunnison at Cebolla from the south side of the river.

MTomichi Creek of today, the town of Gunnison at its mouth.

<sup>55</sup> Cochetopa Creek. See heading at beginning of succeeding day's entry.

Spring Near Beaver Creek, Aug. 30th. Left camp at 6 a.m. Over good road 1½ miles to fork56 coming from the mountain on the left. Crossed it and in 1/2 mile beyond also the river; continued up it 11/4 miles and recrossed, in two miles crossed the Goochatope [Tomichi] again, following the valley 13/4 miles where we suddenly turn to the right and follow the valley of the Eagle Tail,57 one of its branches, 11/4 miles the valley opens again, numerous others coming into it. Here the command rested, good camps anywhere today. By leaving Goochatope at its first crossing of today, and following up a ravine near, it leads direct into the Eagle Tail Valley, and cuts off 4 or 5 miles of the road. While here a large body of Tabawatche Utahs rode into camp, professing friendship and appeared very much alarmed that they would not be kindly received. We learned of them that recent New Mexican traders had been amongst them and told of our return through their country, and that it was our intention to make war upon them and that this was the occasion of their leaving the large extent of their country over which we have just passed. This band is the largest and most warlike of any in the Utah nation & occupy a fine country, rich in soil & game. They are nomadic and own large numbers of horses. A talk was held with them and they expressed themselves, notwithstanding their alarm. as very much pleased to see troops passing through their country. We leave Eagle Tail here and turn to the right, after passing over three ridges, at the base of the third, in 5\\ miles to the spring, by clearing out the holes good and clear water may be had for men, to the right about one mile from camp is the creek. 58 With some difficulty animals can be watered. Saw today the ridge which is immediately opposite to our last camp on Grand River. No doubt but that a road can be made there, in a distance of 12 miles. Kachoom-pee-ache, a principal chief of the Tabawatche band, came with us into camp and remained during the night. Ice and very cold tonight. Course varied from E. N. E. to Southwest, general course south, southeast. Distance, 20.

Head Waters of Sawatch Creek, Aug. 31. Left camp at spring 6 a.m. Crossed a rolling country to the valley of Bear creek, good camp 3 miles. Left the creek changing course from south to east and following up its fork, a small mountain rivulet, with a wide valley and gradual descent 8 miles to the canon, leading to the west of Sawatch mountain. One mile in the canon halted two hours at the junction of three cascades which come from the mountains, fol-

lowed up the one to the right through which runs a small rivulet, by a gradual ascent, crossing it three or four times. Two & 2/3 miles to good camp at a Spring near the base of the mountain. With little difficulty in a direction south of west reached its summit<sup>59</sup> in 11/4 miles, the thick pine, balsam and aspen being cut out to enable us to drive. The descent more rocky, winding and timbered, but gradual, 1/2 & 1/3 of a mile to good camp, from the dividing ridge which separates the waters of the Atlantic and Pacific. There are two valleys in advance, one, 11/2 mile and other 1 mile further, both wider and better camps. This mountain is a succession of buttes, rich soil, well timbered, with pine, balsam and aspen, and covered with good bunch and grama grass. The valleys of Goochatopee, Eagle Tail, Beaver and their tributaries are also rich soil, susceptible of cultivation and easily irrigated. A number of Tabawatchee Utes were in camp today, as usual very much impressed with the command passing through their country. Mustered companies K Rifles, A, E & F 3rd Infantry since arriving in Camp. Ice tonight. General course southeast. Distance, 163/4.

Sawatch Creek, Sept. 1st. Left camp at 6 a. m. with some descent, crossing the rivulet frequently through timber, the road in places rocky to the valley below, 7 miles. The rivulet here empties into one from the north and together with others which flow into it from the valley. The course in the canon E.S.E. the road then runs south 1/4 mile, when it turns to the east and in one mile strikes the Sawatch [Saguache] Creek, crossing it, the bed and bank hard, followed it up over a slightly ascending and good road 4 miles, where we halted 21/2 hours. With the same load and course continued one mile and then to the left, crossing several rivulets in a distance of 41/4 miles, to the second crossing of the Sawatch. After crossing turned to the right in an easterly direction 34 of a mile, crossing several rivulets, then south to an excellent camp 21/4 miles. At all the bends in the valley of today, good soil, grass, wood and water. Pine, pinon, and cottonwood found in places. General course east. Distance, 211/2.

Carnero Creek, Sept. 2nd. Left camp 6 a. m. From here a good level road in a southeast course to the Sawatch buttes 7 miles, and to the last crossing of the creek 1½ miles. Here there is a good camp. Speckled trout in the creek. The Sawatch runs in a northerly direction to the Lake in San Luis Valley. The same fertile soil and good grass continues. San Luis Valley is here about twenty-five or thirty miles wide. Captain Gunnison on entering this pass

SQuartz Creek.

<sup>57</sup>Razor Creek. This was also the route of Gunnison.

<sup>&</sup>lt;sup>28</sup>Cochetopa Creek of today. The present highway from Tomichi Creek to Cochetopa Pass follows up Cochetopa Creek. This is a very recent road, the creek's canyon having prevented use of this route in early years. The Salt Lake Wagon Road shown in Hayden's Atlas takes a route between Cochetopa and Razor creeks.

This would appear to be North Cochetopa Pass, rather than the pass over which the modern highway crosses. Daniel Slane, a pioneer of the town of Saguache, says the old road crossed at North Cochetopa Pass,

<sup>60</sup> Near the town of Saguache,

skirted the northern limit of San Luis Valley, passing the Mosca and Williams passes. The objection to that way is the deep sand near Mosca Pass. It bears from the last crossing of the Sawatch, southeast. Rested several hours, changed direction to the south, passing near the south point of the mountain of the pass, over a gravelly road to a fine spring, good grass and water, greasewood for fuel, 8 miles. Near the spring miry, just below good bottom. Continued with good road to Carnero Creek, 2 9½ miles, abundant bunch and grama grass, water good and creek hard and pebbly. Willow for fuel. Timber can be had one mile distant at the mountain. From the camp to the Sawatch Pass is west of north. Williams Pass north of east, Poncha Pass north, Mosca east, Sangre de Christo south of east. General direction south southeast. Distance, 25½.

Garita Creek, Sept. 3rd. Left camp at 3 p. m. Good road to Garita Creek 3½ miles. Grass and fuel not so abundant as at Carnero Creek. Sent an express to Fort Garland. The crossing of the stream is in places miry, and like Carnero Creek, runs about north of east into the Lake. General course Southeast to South. Distance, 3½.

Rio Grande Del Norte, Sept. 4th. Left camp 6 a. m. in a direct South Southeast course, to a slough of the river 16½ miles 4—the road is level and good, country covered with greasewood. The bottom here ¾ mile wide, is covered with good grass, cottonwood and wild pea, the soil is fertile and extends some distance from the river. The same character of soil, timber and grass extends about 25 miles to Leroux's Pass, 44 from where the river comes out of San Juan Mountain, and runs in a westerly direction. On our way to camp saw the canon of the — [blank] Creek where it runs northerly out of the San Juan Mountain, and like the — [blank] which runs easterly flows into the south side of Rio Grande. San Luis Valley to Poncha Pass, its extreme northern limit, is about 70 miles, and from Leroux's to the Mosca Pass 75 or 80 miles. General course South Southeast. Distance, 16½.

Rio Grande, Sept. 5th. Left camp 6 a.m. to river land, good grass and wood. Abundance of speekled trout. The valley still broad. General course North [South] of East. Distance, 6.

Fort Garland Day Camp, Sept. 6th. Left camp at 7 a.m. Continued down the river for 12 miles and halted to rest and graze the animals. The first 6 miles the broad belt of cottonwood continued, since then there has been none on this river. Here there is an excellent camp of grass, driftwood and willow for fuel—5½ miles over a road, in wet seasons miry, but now very good, to the meadow about 17 miles from Fort Garland, where the post gets an abundance of hay. Near this camp are successions of springs, willow and sage for fuel, grass excellent. The river valley still broad and soil fertile. Hail and rain today. Snow on the White Mountains east and San Juan Mountains west of us. General course Southeast. Distance, 17½.

Culebra Creek, Sept. 7th. Left camp at 6 a.m. Ordered Captain Bowman and company, in accordance with orders, to Fort Garland. The road to the Trinchera 43/4 miles is over a sandy mesa, improved by the rain last night. Good wood, water, grass and soil. Crossed the creek, hard bottom, and passed over a similar mesa somewhat sandy and more rolling to Culebra [Spanish for Snake] Creek 103/4 miles. Crossed it and then an island 1/2 mile wide, recrossing the creek to camp, hard bed on both sides, good camping anywhere near the creek. Cottonwood in abundance, valley broad and soil fertile. There are settlements on this creek about 8 miles above.65 The road to Conejos [Spanish for Rabbits] passes near the creek on the other side. Received an express from General Garland, Commanding Department of New Mexico, approving of our suggestion for the disposition of the Command, and congratulating us upon making so successful an expedition. Rain during the night. White and San Juan Mountains still covered with snow. General course S.S.E. Distance, 16.

Lates Creek, Sept. 8th. Left Camp Culebra 7½ a. m. Passed over a high rolling valley, road tolerably good in any weather to Costilla |Spanish for Rib| Creek 10¾ miles. The valley broad with cottonwood and not much bottom grass and tolerable grama on the hills. Crossed the Conejos trail for the settlements four or five miles above on this creek. Remained to rest and graze animals three hours. While here a band of over 100 Utah Indian warriors came into camp, dressed and painted for war. They said they were in pursuit of a band of Arrapahoes who they had heard were in the valley. From this, both good road to the Conejos trail 8 miles, which leads to Red River, and six miles to this creek, it is small with hard bed, grass tolerable above and below us, good water, and sage for fuel. Instead of going to Fort Garland from the head of the

<sup>&</sup>quot;Near the Sand Dunes National Monument,

<sup>62</sup> Carnero, Spanish for sheep.

<sup>&</sup>quot;Some of the buildings still stand, at the town of Fort Garland. The fort was established in 1858.

<sup>&</sup>lt;sup>64</sup>He reached the Rio Grande about five miles east of the site of Monte Vista, figuring from his subsequent distances to Trinchera Creek.

da Leroux's Pass, at the head of the Rio Grande, is shown on the "Map of the Territory of New Mexico, compiled by J. G. Parke and Richard Kern, by order of Bvt. Col. Jno. Munro, U. S. A., Comdg. 9th Mil. Dept., Santa Fe, 1851." This map is reproduced in A. H. Abel (Ed.). The Official Correspondence of James S. Calhoun (Washington, 1915).

San Acacio, and farther up, San Luis.
The town of Costilla, New Mexico.

Del Norte and following the old road we have taken a direct course here, making a new road, finding good camps, escaping the Mexican towns (always miserable), cutting off from 30 to 35 miles, and with equally as good a road. We intersect the Ford Garland road 1/2 mile in advance of the camp. Passed today the canon of Costilla Creek, a road can be cut through it to Black Lake, intersecting the Taos and Fort Union road, and cutting off nearly 50 miles of the road now travelled between Fort Union and Fort Garland, leaving Taos a long distance to the west.67 A road can also be made from the Rio Grande where it comes out of the San Juan Mountain by skirting the mountains, passing the Aqua Caliente<sup>68</sup> and so on to the Abiquiu trail 30 or 40 miles from Santa Fe, shortening the distance considerably. General course — [blank]. Distance, 243/4.

Asceguia Near Lama Creek, Sept. 9th. Left camp Latos 8 a. m. Crossed within 11/2 miles two other creeks of the same name as that of our camp. In 1/2 mile from camp the Fort Garland road, and 91/2 miles over a good road to Red River, 69 passing through a Settlement near it under cultivation. Immediately after crossing the river ascended a steep hill over a broken country covered with pine to Lama Creek, 21/2 miles. Another ascent more gentle 11/2 miles over a similar country to camp. Grass good, but not abundant, pine thick, and water good. General course, south. Distance,

Meadow Near Indian Pueblo, Sept. 10th. Left camp 6 a.m. In 6 miles crossed San Christobal, descent somewhat steep, ascent better. This valley is well cultivated. Over another ridge and descended into the fine valley of the Rio Hondo, 70 41/2 miles. It is highly cultivated in wheat and corn. From here over a hard and bad road 91/4 miles to camp, 21/2 miles from Taos. The valley of Taos is one of the largest, richest, and most highly cultivated in New Mexico. Wheat and corn are the principal productions, stock abundant. Course varied very much over the mountain ridges today. General course about west of south. Distance, 1934.

Taos Creek Canon, Sept. 11th. Left camp 71/2 a. m. Road passing through the city of Taos. Ordered Capt. Trevitt and Lieut. Shipley, Commanding Compy F & S, 3rd Infantry, to be relieved from duty with the expedition and to proceed via Bargain, to Albuquerque in accordance with orders. Passed through the settlements to the entrance of the Canon of Taos Mountain 3 miles, crossing frequently the Canon creek to camp 10 miles. The bed of the creek is hard, grass along the road coarse and not abundant, but better at this camp. With the aid of grain our animals have fared very well. General course east. Distance, 13.

Guadaloupita, Sept. 12th. Left camp 6 a. m. Followed Taos Creek canon 5 miles about north. Crossed the creek and ascended the dividing ridge of Taos mountain, ascent easy but steep in the ascent, road tolerable. In 4 miles crossed the mountain ridge to a fine little stream, good wood, water and grass. The road then turns a little south of east crossing several short ridges to Black Lake, 9 miles. The Lake is a succession of ponds and has for several miles in its vicinity good camps. The command today is encamped on a little stream running into the Lake, good wood, water and grass. Leaving the command, crossed several mountain spurs over a rough road and crossing Coyote Creek 6 or 7 times and following its course to the Guadaloupita settlement 11 miles. Good camps along it, fine timber, and grama grass in abundance. General course South. Distance, 29.

Fort Union, Sept. 13th. Left Guadaloupita 8 a. m. Followed Coyote Canon 3 miles East of South and then 1 mile to a Mexican Settlement. Here the road turns south and passes through in a short distance a narrow gap in a rocky ridge, it then turns south of east and passes over a fine prairie 9 miles to canon and through it 11/4 mile over prairie to Fort Union. General course ----. Distance, 201/4.

In obedience to the orders of General [Albert Sidney] Johnston, Commanding the Department of Utah, as full a report as we could make is given. Should it be desirable to construct a road into the Southern Salt Lake Basin, it can be made with wood, water and grass in abundance, and shortened at least 200 miles less than that travelled by our command. A road from Fort Leavenworth up the Arkansas River to Huerfano Creek, which empties into it, thence Captain Gunnison's road over White Mountain [Sangre de Cristo Range], through Sangre de Christo Pass to Fort Garland in New Mexico, about 750 miles, to connect with that described from Camp Floyd in Salt Lake Valley, 637 miles, the whole distance 1387 miles less 200=1187 miles, the proposed road. The mountainous character of the country from Huerfano Creek to the Basin will make it difficult in the winter, anytime from the middle of June to the middle of Sept. it will be safe.

During the march we met with large bands of Utah Indians, they were impressed with the command passing through their country with its large train of over 50 wagons, & it had a very good effect upon them.

TA country road up Costilla Canyon now leads to Elizabethtown and Black Lake, New Mexico.

Sojo Caliente is about fifteen miles northeast of Abiquiu, New Mexico. There was a regular trail from Conejos along the route indicated.
The Rio Colorado branch of the Rio Grande. The town of Questa is on this

<sup>70</sup> Arroyo Hondo of today. Scene of one of the attacks in the Pueblo uprising of January, 1847.

The following officers left New Mexico in the spring and are entitled to equal consideration: Captains A. W. Bowman and John Trewitt, Lt. A. N. Shipley, Lt. C. D. Hendrea, 3rd Infantry, Lts. Alex. McRae, I. G. Tilford, C. H. McNally, and I. Y. D. Dubois, Rifle Regiment and Dr. I. H. Kellogg, acct'g asst. Surgeon.

From Camp Floyd to Fort Union Lieut. Shipley acted as Adjutant, Lieut. McNally as A.A. Q. M., I. G. Tilford A.A. C. S., and Lieut. DuBois as Topographical Officer.

Lieut. McRae after a march of over 1600 miles nearly all of it in the mountains, brought back to Fort Union — [blank] horses in good condition, with the loss of but two from unavoidable accidents, Lieutenant DuBois commanded 25 of them as far as Camp Floyd. Enclosed you will find the map of Lt. DuBois, <sup>71</sup> his unremitting industry and observation has enabled him to perfect as far as the limited instruments would permit an accurate sketch of the road and country.

Sergeant Charles Meinhold, Co. K Rifle Regiment, was untiring the whole march. Mr. Antonio Leroux, an old and faithful guide, has our thanks, his influence with the numerous Indians we met, and his knowledge of the mountains, after a residence of over 40 years, was of great service to us.

Respectfully, I have the honor to be, your obdt. Svt.

(Signed) W. W. Loring
Col. Rifle Regiment
Commanding.

#### The Historic Silverton Railroad

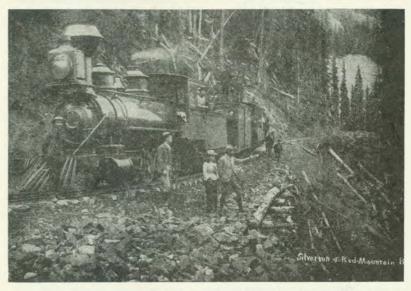
D. B. SANFORD and M. C. Poor\*

Some time ago while searching through some old historical records in the Crerar Library in Chicago, a paper relating to an odd turntable arrangement on the old Silverton Railroad in Colorado was discovered by D. B. Sanford in an old Bulletin of the American Society of Civil Engineers. The article, accompanied by a map, was written by Mr. C. W. Gibbs, who was Chief Engineer of the Silverton Railroad at the time it was constructed by Otto Mears in the late '80s. The following paper, which includes additional data on some other historical sidelights of this road, was prepared by M. C. Poor. In keeping with Mr. Gibbs' article, this story is written in the present tense.

Tunfortunately, the War Department and the National Archives have been unable to find this map.

\*Mr. Poor, who has long studied and written upon pioneer railroads, lives in Chicago.—Ed.

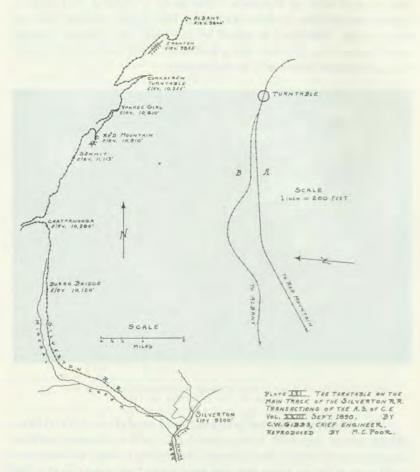
Located in the San Juan country in Southwestern Colorado is the Silverton Railroad. It is a short line, but seventeen miles long, but it has the reputation of being the steepest, with five per cent grades, and the crookedest, with thirty degree curves, and the best paying road in Colorado. The story is related that even a jackass would have to have hinges in him to get around some of these curves. The road is owned by one man, Otto Mears. Among other things, the railroad has a turntable built on its main track, the operation of which will be explained.



Courtesy Western Collection, Denver Public Library SILVERTON AND RED MOUNTAIN RAILROAD ENGINE NO. 100, PLACED IN OPERATION IN 1888

The Silverton Railroad was chartered on July 8, 1887. It is a narrow gauge line with thirty-pound rail used in its construction. The line is projected to build from Silverton to Ouray, a distance of twenty-six miles, to serve the rich gold and silver mines in the Red Mountain district. By 1889, the road was completed to Red Mountain, and in the following year it was pushed on to Ironton. A few years later it was completed through to Albany (Joker Tunnel) and this point remained the end-of-track, as the mountains proved too great a barrier for the road to be built on through to Ouray.

The Silverton's profits, derived from the transportation of minerals, mining machinery, timber, etc., have been so great that Otto Mears has put on two daily passenger trains each way, for the benefit of the miners and their families, and others desiring transportation to and from the mines. Mears refuses to draw up a passenger tariff, but instead has permanent passes made of gold and silver. Each pass is good for the life of the holder, and indicates



ROUTE AND TURNTABLE OF THE SILVERTON RAILROAD

the standing of the man who carries it. A gold pass denotes that the owner is a prominent mine operator in the territory; a silver pass denotes those not so prominent; while the common run-of-the-mill miner is given a paste board ticket. If the train is crowded, the gold and silver pass gents rate seats, while the paste board boys just try and find a place to stand and do the best they can. It seems that

Mr. Mears also handed out a few passes made of leather. They are called "buck-skin" passes.

And now to explain the operation of the turntable located on the main line. The accompanying map will show its location. The railroad, upon leaving Silverton, gradually climbs until it reaches a mountain pass 11,113 feet above sea-level, and then drops down toward the mining districts of Ironton and Albany. The country is very rough and rugged. In order to reach the town of Red Mountain, it was necessary to run up on a switchback, as no room for a loop could be located by the surveyors. A short wye was therefore built, so that the engine can be turned while the train stands on the main track. The engine is thus placed ahead of the train, but the train is pulled out of the station rear end ahead. It runs thus until the turntable is reached. The train is then stopped at point "A"; the engine uncoupled, run onto the turntable, turned, and pulled up to point "B," where it is stopped. By releasing the brakes slightly. the train is then allowed to drop down-grade across the turntable and stopped. The engine then backs down, couples onto the front end of the train and proceeds to Albany in the usual manner.

At Albany is located another short wye. Here the engine is turned again, so that upon leaving for the return trip, it will be at the head end, although the train is once again running rear end ahead. In coming up from Albany, the train is stopped on the downgrade at point "B." The engine is then uncoupled, turned on the table, and pulled up to point "A." The train is then allowed to drop down grade and across the turntable as before, and the engine backs down and couples on. The whole operation does not require more than five minutes in going either way. The train then pulls into Red Mountain where the engine is again turned on the wye and placed at the head end, returning to Silverton in the usual manner, except however, that the train is pulled in rear end ahead.

Mr. Gibbs explains that this is quite a novelty in railroad construction, being the only turntable ever heard of which is used upon a switchback in this manner, and where the approaching grades are built as they are, so as to let the train run by gravity down to and across the turntable from either leg of the switchback. He also added that the turntable, which is completely covered to protect it from the snow, has been in actual use and operation every day since June, 1889, and that no accident has ever occurred.

The Silverton Railroad was abandoned about 1911.

<sup>&</sup>lt;sup>1</sup>The State Museum at Denver has two of these buck-skin passes. One was issued to H, A. W. Tabor, and the other to J. M. Jardine. Both are dated 1888. Dr. LeRoy R, Hafen, Director of the State Historical Society, states: "In 1889, Mr. Jardine received a silver pass, so I doubt if there was any great significance to the buck-skin type of pass."

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### Smelting in Colorado

C. H. HANINGTON\*

The smelting industry in Colorado is almost a lost art. I have always been interested in the subject, having spent six years of my early life in the employ of the old Boston and Colorado Smelting Co. at Argo and in later years shipped quantities of ore to the smelters at Leadville and Pueblo. Having some knowledge of the inner workings and knowing many of the prominent men connected with the smelters, I never sided with many members of the mining fraternity as to the smelter methods.

As a matter of record for future generations, I have prepared the following sketch, not in any great detail but simply to show the extent of the industry during the early days of the state. No doubt I have overlooked some few locations where the art was at least experimented with but in a small way.

Colorado at the close of the last century and well into the present century was the center of a vast industry in the production and reduction of the precious metals, gold, silver, lead, and copper. All ores containing but a small percentage of zinc were heavily penalized by the smelters, and it was not until the high price for this metal in the Joplin district in 1901 and the discovery of zinc carbonates in Leadville that zinc was recognized as an asset to the miners. At this time concentrates and crude ores running forty per cent and over were shipped either abroad or to the zinc smelters in the Kansas gas belts. In 1900 the American Smelting and Refining Co. erected a plant at Blend, a suburb of Pueblo, for the recovery of the zinc. The Belgium retort method was employed. It operated but a few years. The plant was dismantled in 1923. The first records of smelting in the state which I have found places it at the ghost town of Nevadaville. Here in 1861 or 1862 was erected a furnace by Caleb S. Burdsall and in 1866 one by J. J. Cranmer, Albert Gilbert, and John R. Bentley. They evidently operated but a short time as there is no record of any production. About this time or soon after, plants were erected at Black Hawk and Swansea, somewhere below Empire or South Clear Creek.

Evidently the first fairly successful smelter was a plant erected at Black Hawk in 1865-6 known as the Rocky Mountain Smelter and operated by James Lyons and Co. George W. Pullman of palace car fame was also interested. It was located near the Dory Hill toll gate and for years their only stack was on a high point to the east. The first successful and permanent plant was that of the Bos-

\*Mr. Hanington, who has made previous contributions to this magazine, is President of the Colorado Museum of Natural History.—Ed.

ton and Colorado Smelting Co., erected in 1867. With the discovery of rich silver ores in the Georgetown district, additional plants were erected in Georgetown and Golden. In 1877, Leadville, on account of the discovery of rich silver-lead ores, took the lead in the industry.

With new camps coming into production throughout the state. the industry was finally concentrated in Denver, Pueblo, and Leadville. All these plants with the exception of the Boston and Colorado Smelting Co. were afterwards consolidated into the American Smelting and Refining Co.

Ores were treated not only from Colorado but from Montana, Wyoming, Arizona, New Mexico, Utah, and Old Mexico. Blast furnace process predominated, with a few including Argo using the reverbatory process.

Following the Civil War from its close and well into the seventies, the mines of Colorado were much sought after by eastern capitalists. Money for a time was plentiful and vast sums flowed into the state for mining properties. This in a way accounts for the great number of smelters that were erected in the numerous camps. Lack of developed ore bodies and inexperience resulted in many failures. All used either the reverbatory or blast furnace practice. It is interesting to note the camps where these furnaces were located. A list of most of these sites follows:

Nevadaville, 1861-6; Black Hawk and Swansea, 1872; Georgetown, 1864; Idaho Springs and Hall Valley, 1872; Ni Wot and Boulder, 1872; Pearl, 1904; Kokomo, 1881; Robinson, 1881; Montezuma, 1872; Crossons, Red Cliff, and Lincoln City, 1872; Alma, 1873; Alamosa, Salida, Bonanza, Buena Vista, and Florence, 1900; Aspen and Lake City, 1875; Leadville, Crested Butte, Tin Cup. Gothic, Marysville, and Dunton, 1897; Silverton, 1900; Rico, 1880; Ouray, 1896; Grand Junction, 1904; and Durango, 1880.

None of the plants with the exception of Durango and Leadville lasted more than a few years. Failure in most cases was attributed to lack of ore reserves, fluxes, fuel, transportation, and mismanagement. The only plants operating in the state today are the Arkansas plant of the American Smelting and Refinery Co. at Leadville and portions of the Globe plant in Denver, which is refining cadmium from residues shipped into the state from outside plants. The 350foot stack of the Omaha and Grant plant at Denver and vast piles of slag in the numerous camps throughout the state are all that remain today to tell of the former glory of this once great industry.

Incidentally, all the slag from the Boston and Colorado Smelting Co. was used as ballast on the railroads as far east as the Missouri River. The Globe and Grant dumps are gradually disappearing for road construction.

The captains of this once vast industry have nearly all died. From it, however, developed many nationally known scientists who with the decline of the industry either retired to private life or scattered to the far corners of the globe.

The first really successful plant was that of the Boston and Colorado Smelting Company at Black Hawk. In the late sixties the rich oxidized surface ores of the country were practically exhausted and the stamp mills could make but poor recoveries from the complex sulphide ores which were encountered as the mines deepened. It is here that the late Senator N. P. Hill enters the picture.

In 1864 he was sent to Central City by a syndicate of Boston and Providence capitalists to investigate the ore reserves with the possibility of erecting a plant for their treatment. With samples taken from the various developed mines, he went to Swansea, Wales, then the home of smelting in England. Here he soon convinced himself that with some modification the Gilpin County ores could be successfully treated with the Swansea process. Returning to Boston with a favorable report to the syndicate, they at once organized the Boston and Colorado Smelting Company, and in 1867 Mr. Hill was sent to Black Hawk to erect the necessary plant. The following year the plant was in operation with Mr. Herman Beeger, a Freiburg, Germany, graduate and always known as the Father of Smelting in the West, as metallurgist. He had operated at Swansea near Empire, but with little success. He was followed by Mr. Richard Pearce a graduate of the Royal School of Mines of London, who remained with the company until nearly the time of its liquidation in 1910.

The first matte was produced in 1868 and shipped to Swansea, Wales, for refining. During the early years or until the advent of the Colorado Central railroad, the only fuel used was cordwood from the surrounding hills. Mr. Pearce was appointed metallurgist in 1872 and soon after introduced the Ziervogal process for the recovery of the silver, followed soon after by a secret process of his own for the recovery of the gold from the rich copper bottoms. Both products, 999 fine, were shipped to the United States mints. The copper after extracting the precious metals was shipped either as an oxide to the chemical works in the east or melted into pigs and sold on the market. In 1878, with the development of the mining camps throughout the state, the plant was moved to Argo, a suburb of Denver, and the late Henry R. Wolcott was employed as general manager, followed upon his retirement by Mr. Richard Pearce, who in turn was followed by his son Harold V. Pearce. Owing to a

scarcity of copper ores, keen competition by the American Smelting and Refining Company, which had absorbed practically all the smelters in the state, the company was liquidated in 1910. Today even the site is difficult to locate as absolutely nothing remains.

With the discovery of rich silver ores in the Georgetown district and the extension of the railroad in 1872 to Golden, it became the next smelting center. Both reverbatory and blast furnaces were used. Operations were continued here well into the present century and with varying success. Ores treated came principally from Gilpin and Clear Creek counties. Today nothing remains but slag piles and ruins. Following were the principal establishments:

The Golden City Smelting Works and Bagley and Sons, 1872; Colton Smelter, 1875; Colorado Dressing and Smelting Company, 1876; French Smelting Works, Trenton Dressing and Smelting Works, Valley Smelting Works, Malachite Works, and a semipyritic smelter in 1901 afterwards known as the North American Smelting Company and operated by F. R. Carpenter.

With the discovery of the rich silver-lead carbonate ores, Lead-ville in 1877 at once took the lead in the smelting industry. These ores were comparatively easy to reduce, which probably accounts for the number of independent installations. No refining was attempted, so the rich lead bullion was shipped to eastern refineries. With few exceptions blast furnace process prevailed. Before the advent of the railroads, charcoal made in beehive brick kilns was the only fuel. Wood for these kilns was obtained from the surrounding hills. Many of these old kilns can still be seen near Tennessee Pass, Mitchel on the western slope, and several other locations in the neighborhood.

I am intebted to Mr. John Harvey of Leadville for the list of smelting units which operated at one time in Leadville.

One is amazed at the number of these plants, comparatively inexpensive to erect, which were abandoned when the Denver and Pueblo plants were erected. The list follows with the principal owners:

Malta Smelting Works, J. B. Dickenson and Company; the Lizzie Furnace, J. B. Dickenson; Abbey Smelter, Abbey sole proprietor; the Chicago Reduction Works, A. J. Jaechke, G. W. Bittinger and G. M. Girrish; the Billings and Eilers Smelter, owned by Gustave Billings and Anton Eilers; the American Smelter, Chicago capitalists; the Berdell, Witherell and Co. Works; the Leadville Smelting Company; Grant's Smelter, J. B. Grant and Company; the Adelaide Smelter, Manners, Moore and Company of St. Louis; Little Chief Smelter; Ohio and Missouri Smelter; Cumming and

Finn Smelter, Chicago and New York capitalists; the Gage and Hagerman Smelter; the Raymond Sherman McKay Smelter, Chicago men; the Elgin Smelter, Elgin, Illinois, men; Harrison Reduction Works; La Plata Mining and Smelting Company; American Mining and Smelting Company; Bunsen and Fohr's Smelter; Chicago Reduction Works, M. E. Smith and Company; Ohio and St. Louis Smelting Company; Arkansas Valley Smelting Company; Manville Smelting Company; Omaha and Grant Smelting and Refining Company; Bimetallic Smelting Company; Franklin Ballou Union Smelting Company; Boston Gold and Copper Smelting Company; Union Smelting Company; Republic Smelting and Refining Company; and the Western Zinc Mining and Reduction Works.

Quite a number of these last mentioned plants took the place of older ones which had discontinued operating. They were scattered from Malta up California Gulch, Leadville proper and at mines on the surrounding hills.

At Pueblo the following plants were in operation until the organization of the American Smelting and Refining Company, when they were all absorbed by this company.

The Pueblo plant was erected in 1882 by Mather and Geist and dismantled in 1921. The Philadelphia plant operated and owned by the Guggenheims was erected in 1888 and dismantled in 1907. The Colorado Smelter, owned and operated by Anton Eilers, was erected in 1883 and dismantled in 1907.

These three plants employed hundreds of men and treated ores from every camp in the surrounding states as well as Old Mexico—reverbatory and blast furnace process. Colorado at the height of the mining industry led all the states in the production and reduction of the precious metals. Would that we had such an industry today to help swell the prosperity of our state.

# Hunting Buffalo in the Seventies

. A. R. Ross\*

History tells us of buffalo taking the right of way from the railroads in Colorado in the early days and holding up the trains until they passed. This story will tell you how they surrounded a wagon train and held it captive for hours.

In the fall of 1873, the buffalo visited Colorado in large numbers. They were wise in selecting the Fort Morgan Flats and the adjoining Arickaree River region for their winter feed. From Fort

\*Mr. Ross now lives in Fort Collins.-Ed.

Morgan on the Platte River to the Arickaree River south, a distance of about thirty-five miles, the dry grass was rank and high for many miles, the sand grass was as high as the range riders' stirrups. This fire trap was not overlooked by the revengeful Indians and was to be their aid in driving the buffalo to the Indians' range farther north, and was also to be the buffaloes' doom.

A band of warriors was hot on the trail of the buffalo, armed with bows and arrows and a few rifles. They made some show of hunting, but their real purpose was to see that the buffalo were driven away from the white man's deadly weapons. These visits to the white man's country were becoming too frequent and the Sioux warriors were here to see that their cattle returned. "White man shoot too much, kill all Indians' cattle," was their complaint, and a prairie fire of race horse speed was the result.

The settlers along the lower Platte River were almost as jittery as the Indians, expecting and fearing trouble. My brother-in-law, Johnny Frazier, was very anxious to secure his winter's supply of meat before the crack-up came and asked me how I would like to go on a buffalo hunt with him. "I'll take you where you don't need to hunt them, just kill what you want and chase the rest away," he said. I was but fifteen, with plenty of red blood in my veins and eager for adventure, and replied at once, "I would like to go." A few days' preparation was all we needed to make us ready for the trip.

On a beautiful, crisp, November morning we were on our way with two four-horse teams and a saddle horse, "Wild Bill," noted for his speed. When we arrived at Fort Morgan Flats, we didn't need to hunt buffalo any farther, the whole face of the country was covered with them. I will not attempt to describe the scene before me. Thousands of them were moving to and fro regardless of our presence. We drove through this vast herd of peaceable buffalo until we could find room and a suitable place to camp, and get ready for the hunt.

We started out the next day to do a little still hunting, but soon met up with a band of Indians chasing a bunch of buffalo. The twang of the bow and swish of the arrow as it sped on its mission sounded distinctly in our ears above the confusion and noise of pounding hoofs. Johnny leaped on the back of our saddle horse with a Navy 6 revolver in his hand and took part in the chase. When we counted the crippled buffalo lying along the line of chase, five were shot in the "coupling," or the small of the back, and had no arrows in them. Therefore, our claim to them could not be disputed. Johnny had shot six times and had downed five buffaloes.

The real work came now when these crippled buffalo were dressed and the meat loaded. Johnny's display of shooting and "Wild Bill's" speed had caused the Indians to gather about our wagons. This was the land of buffalo and beaver, and the Indian did not count in dollars and cents but in hides and skins, and were anxious to get possession of "heap fast horse." "White man heap shoot 'um buffalo quick." "White man trade 'um horse." The Indians offered to give 12 squaw-tanned buffalo robes, valued at \$12.00 each or \$144.00, for our saddle horse, but "Wild Bill" looked good to us and we refused the offer.

When we had finished our hunt and had our two loads of meat ready to start back to our ranch house on the Platte, we took a long breath and heaved a sigh of relief, not knowing the worst was yet to come. We started west on the old Denver stage road, the old Overland Trail. When we reached the Fort Morgan Flats, the whole country was still alive with buffalo grazing along the roadside and not interested in our outfit in the least. They were coming in to the flats from all directions. We became interested as we watched them browsing leisurely over this vast tract of land. Nothing but the crumbling wall of the Old Fort was visible on the entire flat.

Johnny called to me and asked me if I saw that two-year-old out there with the black shiny hide. "I'm going to take that hide home with me," he said. I answered, "Maybe." In a few seconds I heard the report of his gun and saw the buffalo fall in its tracks. He had shot it from his wagon seat. The buffalo's dropping suddenly caused a stand on several thousand buffalo that were quiet. I said, "Now, Johnny, we have landed in the hot place, sure enough." We soon removed the hide and as the meat looked inviting we threw the hindquarters on the wagon. When we returned to load the hide, we found buffalo in possession. They had been closing in on us from all directions and were pawing and hooking the bloody hide. We were being surrounded by the furious animals and were fortunate to get to the wagons. We watched them for some time and decided to move on, since the buffalo claimed the hide and had possession of it, and we were not disputing the ownership just then.

All this time we were delayed, Johnny's mind had been working out a scheme to put some fear in the buffalo so they would move away and allow us to get out of the squeeze in which they held us. He called for me to come over to his wagon. "Yes," I answered, be glad to, but with buffalo on both sides of the wagons, it would be suicide to step out." We decided I should walk between the

teams to his wagon and take a chance of a kick from a horse. That I proceeded to do. When I reached his wagon, I tied my lead team tightly to the back of it and climbed over to where he sat. He handed me the lines of his four spirited horses and said, "You are a game kid all right." "Now I am going to run the gauntlet of my teams as you did, and I hope I may get through as well. I'm going to try to make those buffalo in front give way for my lead horses, and if I succeed, you move the teams up slowly and hold the space."

I watched him closely as he passed with extreme caution between those nervous, high-strung horses until he reached the two that stood directly in front of the wall of buffalo. He placed hishat on the muzzle of his gun and stuck it beyond the horses' heads. Much depended on him at this moment, whether his scheme was a success or failure. The buffalo feared nothing that they could understand, but a hat stuck out in front of them caused them to move aside until a space wide enough was opened for the teams to pass, rearing and plunging as they went. Slowly we moved through the narrow space, stopping often for more to pass. Finally the herd seemed to quiet down and we began to have easier going, and soon got to a safe distance from the fighting, milling herd. Johnny stepped out from between his lead horses, took his hat from the end of the rifle, and waved it over his head and cried out, "Pretty work, kid, pretty work. We out-generaled them."

We stopped a few minutes to get our breath before starting out on the home stretch and looked back over the buffalo we had just passed through. The dust was still rising above the crazed animals as they continued hooking and tromping the bloody hide which had been the cause of all our trouble.

"Let's head for home, kid," Johnny said. "Haven't you forgotten something?" I asked. "You were going to take home that black shiny hide." "Cut it out, kid," he replied. "We are plenty lucky that we can take home our own hides this time."

Not even the crumbling wall of the Old Fort are in evidence today. The tread of the American bison is a thing of the past. Modern homes and highly cultivated fields now occupy the historic old hunting grounds, and airplanes dart over the trails where oxen crept in frontier days. Pioneer incidents are fading away into the mist of the past with the pioneers who lived them; but the memory of the self-discipline, sacrifices, and hardships of the men and women who helped to build an empire for future generations to enjoy will live forever in the hearts and minds of the American people.

# The Colorado Sheriffs' and Peace Officers' Association

FRED FANGER\*

Under the monarchial system of England centuries ago, the High Sheriff was truly the right-hand man of the king. In each shire, or county, he was the "reeve" or steward over his fellow men, as overseer, policeman, and administrator of the peace. From the words "shire reeve" we get the present-day term "sheriff."

Inasmuch as our forefathers on the eastern coast of this country were largely Englishmen, it was only natural that they brought with them all the traditions of government of Old England. As the states were formed, government patterned after the laws of England was set up. Counties were organized and in each the sheriff occupied a prominent place.

Colorado, admitted to the Union in 1876, followed the same plan, so that we now have sixty-three counties, each of which has an elected sheriff to maintain the peace and dignity of the community.

Prior to the advent of modern transportation, with county seats often a hundred or more miles apart, the sheriff of one county frequently was not acquainted with officials in adjoining counties. It can therefore readily be seen that there was not much co-operation—each sheriff was on his own, and he did not take much interest in the doings of his neighbors. He had all he could handle managing the problems in his own county.

In September, 1920, a serious group of sheriffs, representing several counties, got together. There were twenty-seven men in the original group. The purpose in calling the meeting was to discuss ways and means of combating the inroads of criminals in Colorado. The automobile was rapidly becoming a new and menacing problem. The average citizen did not realize the significance of the situation as did these guardians of the peace. Crooks from faraway places, driving fast cars, were striking in outlying districts. State and county lines meant nothing to them, but their depredations did have the effect of causing sheriffs to think, and formulate plans to circumvent their operations.

The little handful of sheriffs discussing the problems confronting them keenly realized that if law enforcement officers could become personally acquainted with each other and meet together from time to time to discuss matters, a friendly bond would be established, so that a long distance call from "Tom" or "Bill" would mean something. Before the end of the year 1920 the infant association began to function.

R. George Woods, at that time captain of the State Auto Theft Department, who constantly toured the state, teaching law enforcement officers methods of tracing missing cars, never lost an opportunity to bring a sheriff, or under-sheriff, into the ranks of the growing Colorado Sheriffs' Association.

In 1921 the first members other than sheriffs and under-sheriffs were admitted. Due to the peculiar nature of the work of officers of the Bureau of Child and Animal Protection, peace officers had come to look upon them as "belonging," and the first humane officer admitted that year was Fred B. Fanger, a veteran of the Bureau.

The first secretary of the Association was John Haines, sheriff of Arapahoe County. In 1921, John Weir, sheriff of El Paso County, was elected president and his under-sheriff, Merle Gilbert, became secretary. Later, Robert Van Deusen, a member of the Federal Alcoholic Tax Unit, was elected secretary, followed in turn by R. George Woods, present incumbent.

To go back a moment, it is fitting to say that the original band which was responsible for the present-day importance of the Association consisted of Pat Hanlon, sheriff of Gunnison County; John Dunleavy, then sheriff of Las Animas County; John Haines, R. George Woods, and Carl Milliken, then ex-officio sheriff and Manager of Safety of Denver.

Ed Gormley, then sheriff of Adams County, and now president of the Texas Police Association, was instrumental in formulating the Association's first by-laws. This was in 1922, and at the annual meeting that year, after much discussion, the members were in accord that any law enforcement officer who wished might become a member, and it was not long until part-time deputies, policemen, federal, state and city law enforcement officials were added to the growing roll of membership.

In 1926 a step was taken which was of substantial benefit to the members, when it was decided to establish a death benefit plan on an assessment basis of \$200.00. Prior to that time the organization was purely fraternal. Upon the death of a member, an assessment of \$2.00 per capita was levied against all participating members, thus replenishing the fund. Whenever this assessment showed a surplus, this surplus was placed in the Association's savings account. In 1932 the death benefit was increased to \$250.00, and in 1937 to \$300.00. The wisdom of placing surplus moneys in the savings account is obvious for, if for any reason assessments do not meet the amount to be paid a beneficiary, the savings fund makes up the deficiency, thus avoiding delay and embarrassment when a member passes on. This is in keeping with the spirit that instantly,

<sup>\*</sup>Mr. Fanger, an officer of the association of which he writes, lives in Denver.—Ed.

when word is received that one of the fraternity has passed on, a check is mailed to the bereaved dependents by first post.

In keeping with the fact that members other than sheriffs and under-sheriffs were admitted, the name of the organization was changed to the Colorado Sheriffs' and Peace Officers' Association, which it now bears.

At every annual meeting, questions of city, state and national importance arise. Noted members of law enforcement bodies appear as speakers, sheriffs are invited to, and do, attend the FBI school and, out of all, it is impossible to estimate the good thereby derived. Sufficient to say, however, the entire law enforcement personnel of the state has been welded into a formidable and willing army of men, ready to cope at all times with criminals entering the borders of the state.

In 1931 occurred an event which, although the blood of officers had to be shed before it was brought about, serves as an outstanding picture of how members of the Association are constantly on the lookout to do something for the betterment of their brother officers.

At Manter, Kansas, three bandits held up the bank in that community. Fleeing westward into Colorado, they were pursued by a deputy sheriff of Kiowa County. After brutally slaying the officer, the thugs sped on. Meanwhile, the alarm had been sent out and on a tip that the robbers were coming toward his county, Sheriff Duncan Coe, and the police constable of Cheyenne Wells, drove out on the highway. They met the criminals, and in the ensuing gun battle the city marshal was slightly wounded, and Sheriff Coe received injuries which incapacitated him, and, after a few years were the proximate cause of his death.

Fred Fanger, in his desire to aid Coe, a short time later sought to secure workmen's compensation for his afflicted brother officer, only to learn, to his surprise, that no elected official of any kind whatsoever in Colorado came under the provisions of the state compensation laws. Thereupon a bill, calculated to change the existing law, was drawn up, and in January, 1932, through the efforts of State Senator Teller Ammons, the measure was enacted into law.

The first sheriff to meet death at the hands of an outlaw was Adolfo Rodriguez, of Costilla County. He and his under-sheriff, J. P. Maestas, undertook to apprehend two robbers, and in the exchange of gunfire Rodriguez was slain and his deputy injured. Automatically, of course, Maestes standing in the light of a "hired man," received compensation for his injuries. Rodriguez's case was taken up and thus the first precedent under the amended statute was set. It is of interest to note, in this connection, that neither Rodriguez nor Maestes were members of the Association. The widow of the slain officer received the full award of \$4,375.00.

Later, Fanger was appointed Compensation Officer of the Association, without remuneration of any kind, and since 1934, when Rodriguez was slain, numerous disability and death claims have been handled without expense to the dependents of sheriffs.

Under the guidance of R. George Woods, now a major in the U. S. Army, detailed to the office of Civilian Defense as U. S. Commander, but still Secretary and Treasurer of the Association, the organization has steadily grown, and its success is the result of his steady and unselfish efforts.

Major Woods was also responsible for the method of electing officers of the Association, and over a period of years the same method has been followed. These officers consist of president; first, second, third and fourth vice presidents. The president is elected for one term, after which the vice presidents move upward one step, each eventually serving as president; but the important point is that the elected officers each represent a section of the state, i. e., northern, eastern, southern and western Colorado, so that no group in one section serves to the exclusion of officers from other parts of the state. In this connection it must be noted that every one of the elective officers mentioned must be a sheriff.

In addition to the parent organization, there are four peace officers' associations in the state: the Northeast Peace Officers' Association, covering about fifteen counties; the Southeast Peace Officers' Association, taking care of about eighteen counties; the Southwest Peace Officers' Association, with about fifteen counties; and the San Luis Valley Peace Officers' Association, consisting of some fifteen counties. Meetings of all these organizations are generally presided over by one of the vice presidents of the Colorado Sheriffs' and Peace Officers' Association of that particular district. All the organizations named report directly to the parent body, and all problems arising are taken care of at the annual meetings of the entire body.

In matters for the benefit of the entire personnel of the Association, various committees are appointed annually. As an example, the Legislative Committee is active in its efforts to secure passage of laws beneficial to law enforcement bodies, while many other committees work actively along the same lines.

At the present time the Association has a membership of approximately five hundred, consisting of foundation memberships which carry the death benefit provisions, and associate members, who belong for the benefits derived in their calling.

It is with pride that the Association boasts that of its roster, seventy-eight members are now in some branch of the service of the United States, giving their all as freely as they have been doing in the past.