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# Historic Trail Map of the Leadville 1°×2° Quadrangle, Central Colorado

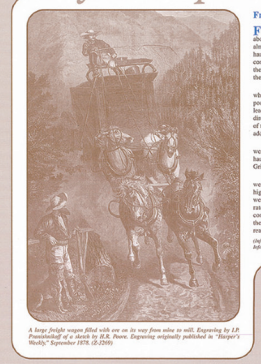
*By* Glenn R. Scott
2004

Scientific Investigations Map 2820
*Pamphlet accompanies map*

*Prepared in cooperation with*
The Denver Public Library, Western History and Genealogy Department,
*and*
The Colorado Railroad Museum

## Early Transportation

### freight wagons



*A large freight wagon filled with ore on its way from mine to mill. Engraving by J.P. Pranishnikoff of a sketch by H.R. Poore. Engraving originally published in "Harper's Weekly," September 1878. (S-2569)*

#### Freight Wagons in the Late 1870s and 1880s

Freight wagons were large and strong, and were made of durable wood. They weighed about 3,000 pounds empty. The wagon beds were about 11 feet long and 3-4 feet wide. The sides were about 19 inches high, but the addition of extra sideboards would extend the height to almost 4 feet. A chain was extended across the top middle of the bed to keep the sides from spreading too much. The ore that was being hauled was very heavy because it was composed of metallic minerals that weighed much more than an equivalent volume of quartz or common sedimentary rocks. The lead-silver ores were particularly heavy, as were the gold ores. For the most part, the driver did not sit on the wagon, but rode the nigh (left) wheeler, guiding his team by a single very strong rein which led to the bits of the leaders; he operated the brake by another strap.

The number of horses or mules and their weights varied some. Generally, four-horse teams were used. The principal team was called the wheelers. They were hitched directly ahead of the driver and on each side of the out tongue. These horses weighed about 1,400–1,600 pounds apiece. It was their job to provide most of the pulling power and to do the backing if necessary. The front pair of horses were called leaders. They were smaller and more agile and they weighed less—1,000 to 1,300 pounds apiece. Their job was to maneuver the wagon as directed by the driver. They generally were hitched to an iron rod that extended back under the wagon tongue and connected to the front axle of the wagon. If a greater weight of merchandise was to be hauled, a swing pair of horses in a six-horse hitch was used. This swing team was added between the leaders and the wheelers to add to the pulling power of the whole team.

Some freighters owned their own rigs and they made more money than those who worked for a freighting company. Almost 600 teams were hauling ore in the Leadville quadrangle by 1878. Go haulers were paid by the ton, for short hauls and lighter loads the haulage rate was about 50 cents per ton. For a long haul and heavier load the rate would be much higher. Griswold and Griswold (1996, p. 230) state that the weight of ore hauled was about 4,000 pounds per wagon.

Wagon freight from Denver usually cost $20 a ton in the summer, but much more in the winter. The rates were based on both weight and distance of haulage. For certain types of merchandise, the rate could be as high as $500 per ton. Before the railroads were built into the quadrangle, the freight rates were terribly high. The rates dropped greatly when the first railroad arrived. Indeed, the rates dropped even more after more than one railroad arrived and brought more competition. As a result, many long-haul wagon freighters had to change to hauling from the railroad depots to businesses in town or to places where the railroad could not reach. Some wagon freighting companies probably went out of business.

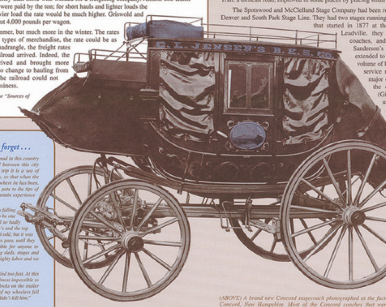
*Information from Griswold and Griswold, 1996, and other references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*

#### Routines and Perils of Stage Travel

In the Leadville area, the first strong placer gold mining activity was in California Gulch from 1859 to about 1864, but the really big boom of missing didn't happen until the late 1870's. Many stage lines had been in business for nearly 20 years before Leadville really felt the need for additional transportation services. Several existing stage lines were in business in Leadville, including the Spotswood and McClelland Stage Company, the Wall and Witter Stage Company, and the Barlow and Sanderson Line. At the peak of the rush in 1878, twelve fully loaded coaches arrived each day in Leadville (Dorsey, 1970, p. 260-261). In 1880, daily stage lines ran from Leadville to Kokomo, Breckenridge, Georgetown, Buena Vista, Fairplay, Alma, Red Cliff, Aspen City, Twin Lakes, and various smaller mining camps. The biggest problem for stage travel was that a topographic barrier was formed by the Colorado Front Range. Most of the stage lines were in business east of the mountain range, so there were only two practical solutions; either go over the mountains or go around them. If the stage lines went around the high mountains they would need to travel many extra miles. If they went over the mountains, they faced hazardous travel all year and terrible weather during the winters. Ultimately, the stage lines took both courses. During winter, stages often went southwest across Kenosha Pass, South Park, and Trout Creek Pass, then traveled northward on a shelf road along the east side of the Arkansas River to Leadville. In the summer, stages often went southwest through South Park to Fairplay and then westward over Weston Pass, on an old Indian road called the Ute Trail, a difficult road, improved in some places by placing small logs across it (a corduroy road).

The Spotswood and McClelland Stage Company had been running a stage line since 1865 on their Denver and South Park Stage Line. They had two stages running each way daily. During their contract that started in 1877 at the start of the big mining boom in Leadville, they ordered 200 horses, 12 Concord coaches, and 50 sets of harness. Barlow and Sanderson's Southern Overland Mail system was extended to Leadville in 1878. So heavy was the volume of business that the Canon City-Leadville service ran three times daily. A total of six major coach lines linked Summit County to the outside world in the early 1880's (Gilliland, 1987). The best companies used Concord coaches and charged passengers 12-15 cents per mile. The worst used rough open wagons and charged much lower rates.

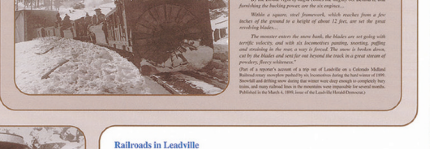
*(Information from Dorsey, 1970, and Gilliland, 1987, and other references listed in the "Sources of Information" in the pamphlet that accompanies this map).*



*(ABOVE) A brand new Concord stagecoach photographed at the factory of Abbot, Downing, and Company in Concord, New Hampshire. Most of the Concord coaches that were built saw service on the dusty trails throughout the plains and mountains in the western United States. The new stagecoach came with adjustable leather side curtains, leather boot attached to the back of the stage, top deck seat, hand-operated brakes, lamps, and fancy hand-painted ornamental sides. In this view, the dusty leather side curtains are rolled down over the front and back side windows. The "strong box," which contained valuables, was kept under the driver's seat. Passenger's luggage and mail sacks were stowed in the boot at the back of the stage. Inside, nine passengers shared three leather-covered seats, and for short distances an many as 10-12 people could ride inside. The stage was pulled by four horses. It was beautiful to look at—even though it was dusty and people were agitated, followed by two coats of clear varnish. Photographer unknown. Between 1860 and 1868. (L-2197).*

*(LEFT) Concord stagecoach "No 3" (#3 Mail), the "Cripple Creek stage," drawn by four horses in the high country of Teller County, Colorado. Concord stagecoaches similar to this one were used throughout the Old West, Between 1890 and 1910. Photographer L.C. McClure (HCC.3125).*

*(ABOVE) Winter scene on Cumbres Pass showing a Denver and Rio Grande narrow gauge train in January 1948. Photograph by R.W. Richardson. Courtesy of the Colorado Railroad Museum collection.*



*(RIGHT) Snowshed and Colorado Midland Railroad rotary snowplow locomotive and pusher locomotive on the approach to Hagerman Pass. Photographer W.H. Jackson, between 1900 and 1906. (WHJ.1013).*

*Denver Leadville and Gunnison Railway engine number 109 emerges from the Alpine tunnel, which is about 40 miles southeast of Aspen. The locomotive has a ballom stack and is concealed. The 1,805-foot-long tunnel was completed in 1881. Photographer unknown, between 1900 and 1920. (D.52)*

*Colorado-Midland Railway passenger special composed of engine No. 69, engine No. 1, a baggage car, chair car, and Pullman cars. The train has stopped at "Half Gate" to allow passengers to look over the rocky cliffs. Photograph by H.H. Buckwalter, about 1900. Courtesy of the Colorado Railroad Museum collection.*

#### Railroads in Leadville

Railroads were requested by the people of Leadville for a long time before they finally got one. Then, within a matter of a few years, they obtained three railroads. On July 22, 1880, the Denver and Rio Grande was the first railroad to reach Leadville. The Denver South Park and Pacific Railroad (narrow gauge) was approaching Leadville by 1884, and the final part of the track was laid in the south of the eight in February of that year. The Colorado Midland Railway (standard gauge) did not run lines into Leadville until August 31, 1887. The Colorado Midland had the most difficult time running their rails into the Leadville quadrangle. One problem was that the routes that were the easiest places to lay rails had already been taken by the other railroads. The second problem was that the Colorado Midland was a standard gauge train, so it needed more space to run the tracks. Curves were broader, bridges and tunnels had to be largest, and the total expense was considerably greater.

The most complicated part of the Colorado Midland Railway line was the section westward from Leadville across the Continental Divide to Aspen. To cross the high mountains of the Continental Divide, a major tunnel, the 2,061-foot-long Hagerman Tunnel at 11,528 feet altitude, was constructed in 1887 just south of Hagerman Pass. In addition, a very long curved wood trestle, the most elaborate and spectacular in Colorado, called the Hagerman Trestle, was built along the eastern approach to Hagerman Pass and Hagerman Tunnel; it was 1,084 feet long, 84 feet high, and 200 degrees in curvature. Snowfall in 1899 was so great that the Hagerman Tunnel could not operate and was shut down. It was replaced in October 1899 by the newly acquired Busk-Ivanhoe Tunnel, which was 375 feet lower (at 10,553 feet). It saved 375 feet of climbing by the trains, as well as 13 snowsheds and 12 bridges and trestles. The Busk-Ivanhoe Tunnel was called the Carbon Tunnel after 1921.

Immediately after the railroads became available for passenger and freight service into Leadville, prices on many sales items dropped, some items formerly unavailable became easy to obtain, travel became convenient and reasonable, and the cost of shipping freight decreased markedly.

*(Information from Ormes, 1963, and other references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*

#### A mountain experience the travelers will never forget . . .

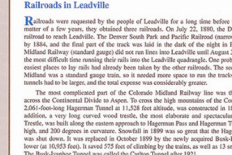
*"No student of geology ever learn the varieties and species of road in this country until they have peered at the topography of the present day road between this city [Leadville] and Aspen. From the beginning to the terminus of the trip it is a ray of fathomless mud and terra firma is encountered in every consistency, so that when the traveler alights from the coach upon his return there is no mistaking where he has been. He is coated with the article from the centre of his hair and shining pate to the tips of his boots, and he will not soon forget the impression of his first mountain experience that the travelers will never forget in their sojourn here on earth."*

*"Once, it was during the dead of winter, and the snow had been falling until it was as much as ten feet deep, who would trip to Aspen proved to be one of my worst experiences. Although traffic was heavy, the snow drifted so badly that the road was not kept open. We were at a place, between Brooklyn's and the top of the range for three days and nights in a traffic jam. That may sound mild, but it was true. Tomorrow got stuck in the snow; teams began to line up, unable to pass, until they reached in both directions for a great distance, and it was impossible for anyone to advance in either direction. We finally cleared up the jam by carrying sacks, stages and wagons over their loads out of the road and to new positions. It was mighty labor and we were all exhausted from our efforts."*

*"Then at other places, where the way down was steep, we traveled too fast. At this time I was driving a four-horse team, and I found it necessary to put on two brakes to hold the heavy load. At times I found it necessary to put four snubbers on the trailer and two on the wagon to keep them under control. Even then one of my wheelers fell and was dragged at least 100 feet before we could get stopped but it didn't kill him."*

(Accounts of the trials of making a trip by stagecoach or freight wagon over Independence Pass from Leadville to Aspen, from Griswold and Griswold, 1996, p. 1500)





*(RIGHT) Snowshed and Colorado Midland Railroad rotary snowplow locomotive and pusher locomotive on the approach to Hagerman Pass. Photographer W.H. Jackson, between 1900 and 1906. (WHJ.1013).*

#### By the Divine right of night comes the mighty 68 . . .

*"Out from the roundhouse slowly steam six of the largest type of engines. Huge, black, puffing monsters which form in a single file with military regularity and precision. They are the escort for Rotary 98, the latest and best triumph of inventive skill for the purpose of clearing a way through the barriers of snow.*

*By the Divine right of night comes the mighty 68. Behind it, and furnishing the backing power are the six engines…*

*Within a square, steel framework, which reaches from a few inches of the ground to a height of about 12 feet, are set the great revolving blades…*

*The monster enters the snow bank, the blades are set going with terrific velocity, and with six locomotive panting, snorting, puffing and smoking in the rear, a way is forced. The snow is broken down, cut by the blades and sent far out beyond the track in a great stream of powdery, flurry whiteness."*

Part of a memo's account of a trip out of Leadville on a Colorado Midland Railroad rotary snowplow pushed by six locomotives during the hard winter of 1898. The rotary snowplow was developed to keep the railroads open in the mountains, and many railroad lines in the mountains were impossible for several months. Published in the March 4, 1898, issue of the Leadville Herald Democrat.)



*Horses carry of the Aspen City Railway, sometime between 1889 and 1893. Photographer unknown. Courtesy of the Colorado Railroad Museum collection.*

#### Aspen Street Railway

In September 1889, the Aspen city council granted a charter to the Aspen City Railway to build a municipal streetcar line. "The first horse car arrived in early December 1889 and three weeks later a second car arrived and service began. The completed system eventually totaled somewhat over 2 miles, stretching from the fairgrounds, through neighborhoods and downtown, to the railroad stations. The horse cars started their route at the Roaring Fork River and near the Colorado Midland Railroad tracks, then went west on Durant Avenue to Original Street, then north one block, then west four blocks on Cooper Avenue to Mill Street, then three blocks north to Main Street, then west to 3rd Street and about eight blocks to Maroon Avenue, then west to 8th Street, and ended their tour near the Pallgrounds. It was not uncommon for a burgeoning community to point with pride to the fact that it had public transport. Aspen was no different. Fletcher (1995) believes that the horse-car system was abandoned during the time of the 1893 depression and the closing of most of the Aspen mines.

*(Information from Fletcher, 1995, and other references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*

## Towns in the Region

### Aspen

*Horses carry of the Aspen City Railway, sometime between 1889 and 1893. Photographer unknown. Courtesy of the Colorado Railroad Museum collection.*

*Gold-mining dredge on Box Creek, near Leadville, 1920. The huge dredge floated along on the scum as the mining buckets excavated hundreds of tons of gravel each hour. It is said that while the dredge was in operation, the noise was deafening, due to the tumbling gravel and boulders and the squeal of the moving steel and iron machinery. Such dredges could produce almost 50 pounds of gold each 8-4 days. Gold dredges similar to this one were also used throughout the Blue River Valley near Breckenridge. Photographer unknown. (A-00130)*

### Breckenridge

#### Breckenridge

The first prospectors in the Blue River valley built a fort (Fort Meribeth or Fort Mary B.) as protection from the Ute Indians; the area of the first later became a part of Breckenridge. The first stagecoach entered the town in 1860. Breckenridge was one of the richest gold mining areas in Colorado. In the early years it was a gold placer mining camp. By 1863, miners had worked most of the shallow gravel deposits in the valleys, removing the placer gold using sluice boxes, rockers, and gold pans. Eventually, hard-rock lode mines were located and worked. For example, rich gold veins were discovered on Farncomb Hill. In 1907, giant dredges started operating in most of the valleys, earning as much as $20,000 worth of gold per week. The dredges could work large areas of gravel that were too deep or unprofitable to work by other methods. After the dredging was stopped, the dredges were salvaged for the World War II scrap iron drive. In the early years of the United States during the purchase of land is the western United States, a 1,300-square-mile area from Breckenridge north to Grand Lake was not officially entered as a part of the U.S.A. The omission was discovered in 1926t by a Breckenridge women's club member and was corrected by Colorado Governor Ed Johnson.

*(Information from references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*



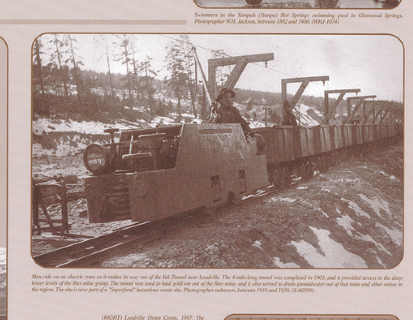
*Vere were across Leadville with 14,421-foot Mount Massive and the Continental Divide in the background. Photographer H.H. Buckwalter, between 1900 and 1905. (A-0147)*

### Leadville

#### Leadville

Leadville had several successful boom times over the years. The first was in 1800 with the discovery and exploitation of very rich placer-gold deposits along California Gulch just southwest and southeast of present Leadville. About 10,000 prospectors arrived in the gulch and recovered a great amount of gold. Within about two years the recovery rate decreased markedly partly because of heavy black sand mixed with the gold. It had to separate the gold particles and partly because there was too little water flowing in California Gulch to do the panning. Tests in about 1875 of the black sand showed that it was carbonate of lead that contained about 60 ounces of silver per ton. In 1878, the word spread about the high concentration of silver, and prospectors flooded into the Leadville area. The silver was coming from veins in the bedrock, but mess veins were not visible at the ground surface, because they went covered by surficial deposits. Excavation was necessary. Successful miners found rich silver claims in the hilly areas west of California Gulch and east of Lead-ille. Millions of dollars were made from many of the claims (Eberhart, 1959; Donet, 1970). However, Leadville soon became overcrowded. Exorbitant prices were charged for sleeping places. Many people died of exposure and starvation. Crime became very common, and lawmen were unable to cope with the problems. The occupiee area grew and many small communities were started, including Oro City, Poverty Flats, Agassiz, Slabtown, and Boughtown. The name "Boughtown" referred to the dense grove of coniferous trees that was growing in the Leadville area when miners first arrived. It also referred to the summer lodgings composed of four poles and a covering of evergreen boughs. However, very soon most of the trees were cut for buildings and mine timbers. The name Lead-ille probably was chosen for the town because lead was the major mineral in both the placers and in the lode mines. In the late 1880s, the population rose to 25,000-30,000. In Colorado in the 1880s, Leadville was second only to Denver is population. Many kinds of businesses lined the streets. One street had banks, hotels, and restaurants, and another street had saloons, gambling halls, and parlor houses. Lead-ille is the highest incorporated city in the world (10,000 feet, Eberhart, 1979), and so high that the ground is frozen most of the year. In 1893, the repeal of the Sherman Silver Purchase Act caused a panic in Lead-ille and in all of Colorado's silver camps. The price of silver fell rapidly and eventually many of the silver mines closed.

*(Information from Eberhart, 1959, and Dorsey, 1970, and other references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*



*Men ride on an electric train as it makes its way out of the Yak Tunnel near Leadville. The 4-mile-long tunnel was completed in 1903, and it provided access to the deep-lever levels of the Iker mine group. The tunnel was used to haul ore out of the Iker mine, and it also served to drain groundwater out of that mine and other mines in the region. The ore is now part of a "Superfund" hazardous waste site. Photographer unknown, between 1910 and 1920. (S-00250)*



*(RIGHT) Leadville Drum Corps, 1897. The men wore tailormade white jigging outfits with embroidery decoration, flattop military caps, trousers with side stripes, and gaiters. Photographer unknown. (S-0262.)*




### Glenwood Springs

#### Glenwood Springs

Glenwood Springs is world famous as a wonderful hot-springs resort. The springs were originally called Yampah Hot Springs. Before 1885, Glenwood Springs had been called Boiling Springs, Fort Defiance, Grand Springs, and Grand River Hot Springs. In 1885, Isaac and Sarah Cooper, who had both lived in the ueru since 1882, and had wanted to establish a hot-springs resort, renamed the town "Glenwood Springs" after their hometown of Glenwood, Iowa. Before the railroad arrived, Glenwood Springs was reached by stagecoach from Leadville and Aspen. Before a bridge was built across the Colorado River there was a ferry to link both sides of the valley. People on foot and horseback and in wagons and stagecoaches had to board the ferry to cross the river. In 1887, the Denver and Rio Grande Railroad reached Glenwood Springs through scenic Glenwood Canyon, and later the same year the Colorado Midland Railroad also reached Glenwood Springs.

*(Information from references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*



*Swimmers in the Yampah (Vapor) Hot Springs swimming pool in Glenwood Springs. Photographer W.H. Jackson, between 1882 and 1906. (WHJ.1034)*



*Leadville's Winter Crystal Carnival Ice Palace of 1896—the work of more than 200 craftsmen . . .*

*Exterior views of the main entrance of Leadville's Ice Palace, built for the 1896 Winter Crystal Carnival in Colorado. A 10-pound ice sculpture of a maiden in a gown and crown stands at the entrance, and her right arm points toward the mines east of town. The statue sits on a 22-foot-high pedestal and a scroll that has "$200,000,000" in gold lettering, which represents mining revenue produced through 1894. The Norman-style medieval castle covered an area of about 320 by 450 feet, and it was constructed of ice blocks about 20 to 30 inches thick that were cut from local lakes and rivers. More than 200 craftsmen worked for two months to build the structure. The entrance was flanked by two towers and turrets flanked by Wilson-style octagonal turrets with imitation battlements. The interior of the structure contained a skating rink, ballrooms, restaurant, reception rooms, and museum exhibits. By mid-June 1896, the Ice Palace had melted away. Photographer unknown, 1896. (L-6350 and K-251)*



*(ABOVE) Miners pose near the shaftmouse of the Smuggler mine near Aspen. In 1894, the Smuggler mine produced a silver nugget that weighed 2,054 pounds. Photographer unknown, about 1900-1908. (K-0214)*



*(LEFT) Gold bars smelted from ore from mines at Leadville and Breckenridge. Value of the gold is about $120,000 at the prevailing gold prices between 1880 and 1900. Photographer O'Leafe and Buckford. (S-00060)*



*Businesses on Harrison Avenue in Leadville in 1902. Photographer unknown. (S-259)*

## Leadville Miners Strike

#### The Leadville Miners Strike of 1896–1897

In June 1896, the miners in the Leadville mines were receiving wages of only $2.50-3.00 per day. The miners held that they could not support their families or buy food on only $2.50 per day, and that even $3.00 was too meager to be a living wage. Many of the miners then joined the Cloud City Miners Union. A union request to the mine owners for a uniform $3.00 wage was refused because the owners said that they were already losing money on the mines in Leadville. During a union meeting on June 15, 1896, by an almost unanimous vote the miners chose to stop the work. of all employees receiving less than $3.00 per day. Negotiations became impossible and by June 23 almost 2,300 miners were unemployed. The second general strike started on the 26th of June, when 968 miners went on strike. Pumpmen, firemen, and engineers were the only people working in some mines. However, despite the strike, the mine owners decided to reopen the mines. First to open were the mines paying less than $3 a day, followed by those paying $3. The miners objected to the reopening of the mines. To counteract this, the mine owners called in non-union strikebreakers. Trouble erupted, so the mine owners asked the Colorado Governor to intervene.

The Colorado State militia was alerted to the tension, and on September 21, 1896, soldiers of the militia from the Denver area began to arrive by train in Leadville. There was no place available to lodge the soldiers, so they began to set up a tent camp on a baseball field on the north side of Leadville, then called Camp McIntire. The soldiers in the militia had come to town without adequate clothing or tents, and it took quite a while to get them clothing and tents to survive in snowy Leadville. On September 25, 1896, 65 miners arrived from Missouri to become strike breakers. They were marched toward the Emmet and Coronado mines surrounded by the militia, who were protectors of the mines and the miners. The arrival of the Missouri miners made the operation of some mines possible and partly negated the effect of the strike on the mine owners. The strike continued until the first week of March 1897. Then a meeting of the union was held, and 900 miners voted to end it. The militia campaign had lasted 172 days. The strike cost the Colorado taxpayers a total of $194,010. The flooding of the mines due to inoperation during the strike was so bad that some mines took two years to reopen, and other mines never reopened. The striking miners never did receive a uniform wage of $3.00 a day. The cost of the strike in lives, property, and human suffering could never be measured.

*(Information from references listed in the "Sources of Information" in the pamphlet that accompanies this map.)*



*(ABOVE) Winter scene on Cumbres Pass showing a Denver and Rio Grande narrow gauge train in January 1948. Photograph by R.W. Richardson. Courtesy of the Colorado Railroad Museum collection.*



*(ABOVE) Colorado National Guard soldiers (the Colorado State militia) in front of canvas tents in Leadville during the mining labor strike of 1896-1897. The soldiers have U.S. Springfield rifles with bayonets. Photographer unknown. (896 or 1897. (S-00268)*



*(RIFLE TO LEFT) U.S. Springfield rifle with bayonet attached. The Springfield was a tried and true, long-bore (.45 caliber), single-shot rifle that was very accurate. It was the standard issue rifle for U.S. soldiers at this time. Soldiers referred to the rifle as the "Trapdoor" or "Trapdoor Springfield," because of the way the breech block flipped up similar to a trapdoor. Photograph courtesy of Dixie Gun Works, Inc., Union City, Tennessee.*

*(LEFT) Guarding the Emmett mine near Leadville during the mining labor dispute of 1896-1897. The soldier is carrying a U.S. Springfield rifle with bayonet. Photographer O'Keefe and Stockford, 1896 or 1897. (S-00249).*

Base from U.S. Geological Survey
Leadville quadrangle, 1957; revised 1977
Transverse Mercator projection
10,000-meter Universal Transverse Mercator grid, zone 13
100,000-foot grid based on Colorado coordinate system, central and north zones

SCALE 1:250 000
CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOUR INTERVALS AT 100 FEET
North American Vertical Datum of 1929

1977 magnetic declination from true north varies from 14° easterly for the center of the west edge of the map to 13° easterly for the center of the east edge

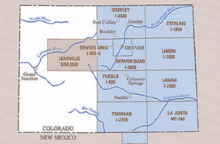
#### EXPLANATION

TRAIL OR ROAD—Names and dates of use shown for some trails and roads. Routes plotted from General Land Office (GLO) land plats, early maps, or aerial photographs. Most trail or road names are from original sources, such as land plats. To prevent clutter on the map, some trails and roads are not shown in solid black. (At the scale of this map, some of the old trails and roads, if shown, would appear to closely follow or coincide with later modern roads, which are shown in brown.) See the accompanying pamphlet for descriptions of roads. In addition, some shorter trails and trail segments are shown in red. Some trails are discontinuous due to erosion and map inconsistency. Some trails are terminated or their routes are unmarked in areas where their destinations were not shown on original sources. Locally, parts of the early trails are adjusted to better fit modern courses of streams. Most trails date from 1840's to early 1900's

Holy Cross City — TOWN OR OTHER CULTURAL FEATURE—Approximately located; alternate town names and dates are in parentheses. Most newer town names are shown in brown. Locations of towns shown on previously published maps vary widely, and some locations shown here may be inaccurate

Half Moon Pass — TOPOGRAPHIC FEATURE

RAILROAD—Some railroads show beginning or duration of operation. Currently operating railroads are shown in brown. Abbreviations of railroad names, full names, and years of operation are shown in the accompanying pamphlet. For more details about railroads, see books about railroads listed in the "Sources of Information" in the pamphlet. Abbreviations used: R.R. = Railroad, RY. = Railway, Sta. = Station, Jct. = Junction, CO. = Company, n.g. = narrow gauge




Index Map Showing Location of the Leadville Quadrangle (Brown) and other Published Historic Trail Maps (Blue)

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