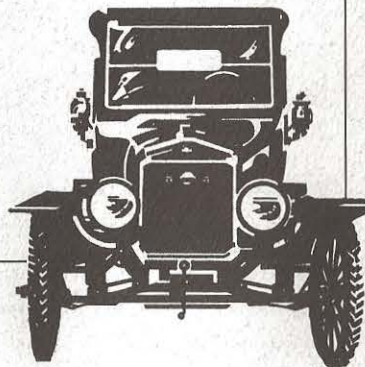


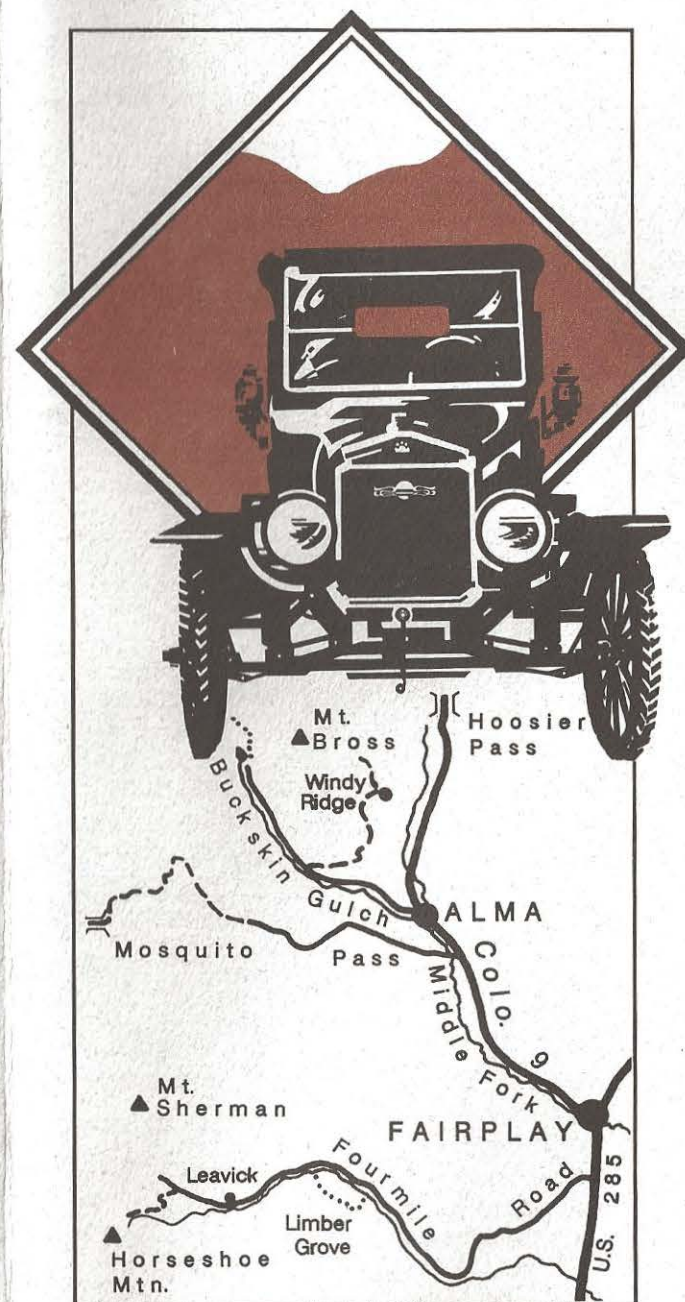
# CHRONOLOGY-HORSESHOE/FOURMILE

- |  |   |
|--|---|
| 1858-59 - Depressed economy after panic of 1857 sent gold seekers west | 1884 - Train reached Leadville over Boreas Pass                         |
| 1859 - Gold discovered in Tarryall Creek                               | 1887 - Hilltop Mine opened  |
| 1860-63 - Height of small-claim placer mining                          | 1892 - South Platte Forest Reserve created                              |
| 1861-65 - Civil War  | 1892 - Leavick founded  |
| 1870s - Corporate lode mining of silver began                          | 1893 - Sherman Act demonetized silver; Colorado hit hard                |
| 1871 - Coal mines opened near what would later become Como             | 1896 - Denver, South Park and Hilltop Railroad completed track up gulch |
| 1873 - Silver found at head of Horseshoe Gulch                         | 1900 - Horseshoe nearly deserted  |
| 1879 - Town of East Leadville laid out                                 | 1905 - U.S. Forest Service created                                      |
| 1879-89 - \$82,000,000 in silver taken from Leadville                  | 1907 - Pike National Forest created from South Platte Forest Reserve    |
| 1879 - Railroad reached South Park                                     | 1923 - Railroad to Leavick shut down                                    |
| 1880 - Mudsill Mine opened   |   |
| 1881 - Town of Horseshoe platted and incorporated                      |   |

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## HORSESHOE/FOURMILE



LODE MINING, A HARD LIVING  
FROM THE HARD ROCK



*This series of auto tours crosses through National Forest lands and private property, so please respect the rights of private landowners. Some of the historic mining sites may contain mine shafts and other dangerous mine workings, most of which are on private land. Visitors should exercise caution when leaving their vehicles.*

*Follow the route of the Denver, South Park and Hilltop Railroad up Fourmile Creek into the era of lode mining in South Park. This 11 1/2-mile tour begins 1.4 miles south of Fairplay at the junction of Highway 285 and Fourmile Road.*



### **The Pace of Change**

The peaks ahead once laid as flat as the plains of eastern Colorado. Together they formed the bottom of an expansive inland sea. During a period of geological unrest 70 million years ago, folding and uplift pressures in the earth's crust gave rise to the Rocky Mountains. Since the mountains' formation, forces of weathering and erosion have carved and reduced their surfaces. Glaciers have gouged broad, U-shaped valleys, and streams have notched in steep-walled canyons. Miners tunneling for riches also changed the face of these mountains. The massive rock walls may seem impenetrable and permanent to our eyes, but from the perspective of history and geology, they are dynamic and destined to one day return their riches to the plains.



### **From Ditches to Dollars - Mining the Meadows**

Lode mining required growing numbers of laborers and a support network of supplies and services. With more mouths to feed,

some enterprising settlers saw opportunities on the valley floor. Lush stands of native grasses hugged the tributaries of the South Platte River. The first attempt to expand the natural irrigation network and increase grass production for cattle occurred along Four Mile Creek. Ditches were dug by hand and plotted with a level. During the years of peak cattle production, from the 1880's to the turn of the century, 75% of the valley ranches irrigated their native meadows. Today, fewer cattle graze this basin, and most of the water flows to Front Range cities.

By the spring of 1860, prospectors had found gold in several South Park gulches. News of the finds spread quickly, and by fall, 20% of Colorado's 48,000 residents were either seeking their fortunes in the streams of South Park or supplying essential services to those who were. Placer, or "poor man's" mining, cost little more than the claim fee to start, but it was backbreaking work that involved running water over pans of dirt to sift the heavier gold particles from accompanying sands. On a typical day, placer miners would wash 50 pans, or approximately one half-cubic yard, of dirt for a relatively small return.

As the placer gold played out in the summer of 1863, some started to search for the veins from which the precious metal had eroded. Finding a lode, however, meant excavating tunnels and working with blasting powder. It took picks and shovels and buckets of sweat to free gold-bearing ores of iron, copper, and arsenic, not pure gold, from the mountain's grip.



### **Diversifying the Economy**

Like many of the early settlers, John Peart had diverse interests. He worked the small Crusader Mine on Horseshoe Mountain and ran cattle on this ranching operation. By 1870, 6,000 cattle and 700 horses grazed the rich grasses of South Park. Some hard grain and potato farming had been attempted with little success. Aided by ditch irrigation, ranchers produced hay, while cattle ranged through the surrounding forests and upland meadows. The 1883 agricultural census noted 50,000 cattle, 5,000 horses and 10,000 sheep in South Park. The railroad, built to transport ore to Front Range smelters, soon carried both hay and livestock to these rapidly growing population centers.



### **Horseshoe: A Cultural and Chemical Melting Pot**

The South Park Smelting and Reduction Works built a processor in 1879 at a townsite platted as East Leadville. The smelter employed 40 men and could handle about 10 tons of ore a day. By 1881, the townsite of Horseshoe, boasting 2 hotels and a year-round population of 300 residents, had swallowed the East Leadville venture. Who lived in these little towns? Many were newly arrived immigrants from Great Britain and southeastern Europe. By 1870, foreign-born immigrants made up 17% of Colorado's population.



### **Sheep Mountain Shorn**

The humped, wind-swept ridge-line to the southwest attracted sizable herds of bighorn sheep for centuries before the prospectors arrived. They named it Sheep Mountain and harvested meat from its slopes. Strict game laws and careful management have allowed bighorn populations to return to stable levels.



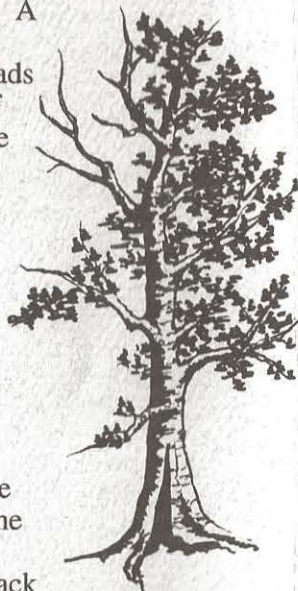


depleted the numbers of these passive grazers. Eventually the bighorns disappeared from Sheep Mountain. Strict game laws and careful management of U.S. Forest Service lands may one day enable the bighorns to return.



## The Ancient Pines

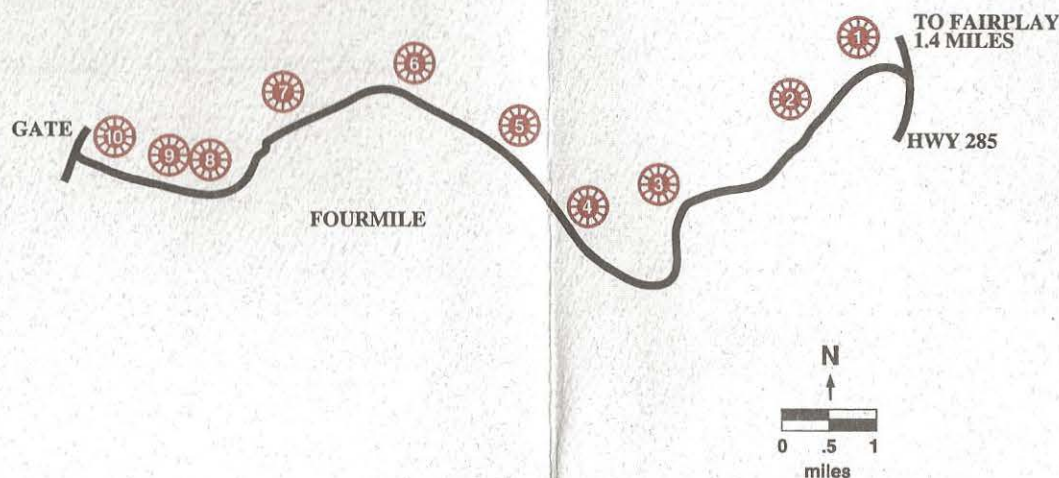
Time to stretch your legs. A half-mile walk, with a modest elevation gain, leads to an enchanting grove of limber pines. At least one living pine here is over 1,500 years old. A quick glance may not distinguish these trees from bristlecone pines. They both share dry, exposed sites and bend to the sculpting hand of constant winds. Closer investigation, however, separates the species. The branches of the limber pine bend easily (hence their name) and their needles lack resin specks of the bristlecone. The Ute Indians gathered the seeds. Lode miners found that the tight-grained, stout trunks made suitable tunnel supports.



Horseshoe Mountain, for which Horseshoe Mining District was named, has one of the most perfectly formed glacial cirques on earth. Miners were keen observers of rock formations but few knew about the geological events that shaped them. As snow collected, it compressed to ice in mountain hollows. Gravity drew the mounting mass downslope, through valleys previously cut by streams. When these glaciers melted, an amphitheater-shaped point of origin remained, often with an alpine lake at its base. The Horseshoe Cirque stands as a textbook example of this process.

By 1864 almost 200 Colorado mining companies listed stock offerings on the New York Stock Exchange. Mine productivity, however, did not keep pace with investors' expectations. The proven techniques for processing the "easy gold" found in creek beds by placer operators did not work on the complex ores taken from lode mines. Early miners used Spanish-inspired arrastras, stone grinding mills turned by mules, to crush their ore. Stamp mills added efficiency. They repeatedly hoisted and dropped heavy weights on the ore, gradually crushing it. During the California gold rush ball mills were developed. They used metal pellets in a revolving iron drum to pulverize the ore.

To maintain profitability, new processing techniques had to be developed. For the next several years, which coincided with a slump between the first gold rush and the second silver boom when silver was discovered in Georgetown and Leadville, engineers urged on by mine owners, worked feverishly to discover new ways of extracting precious metals from the worthless minerals around them. Finally in 1867, a chemistry professor from Brown University, Nathaniel Hill, developed a profitable way to smelt ore. From then on, almost as many men worked in smelters as worked inside mines.







## The Mudsill Grind

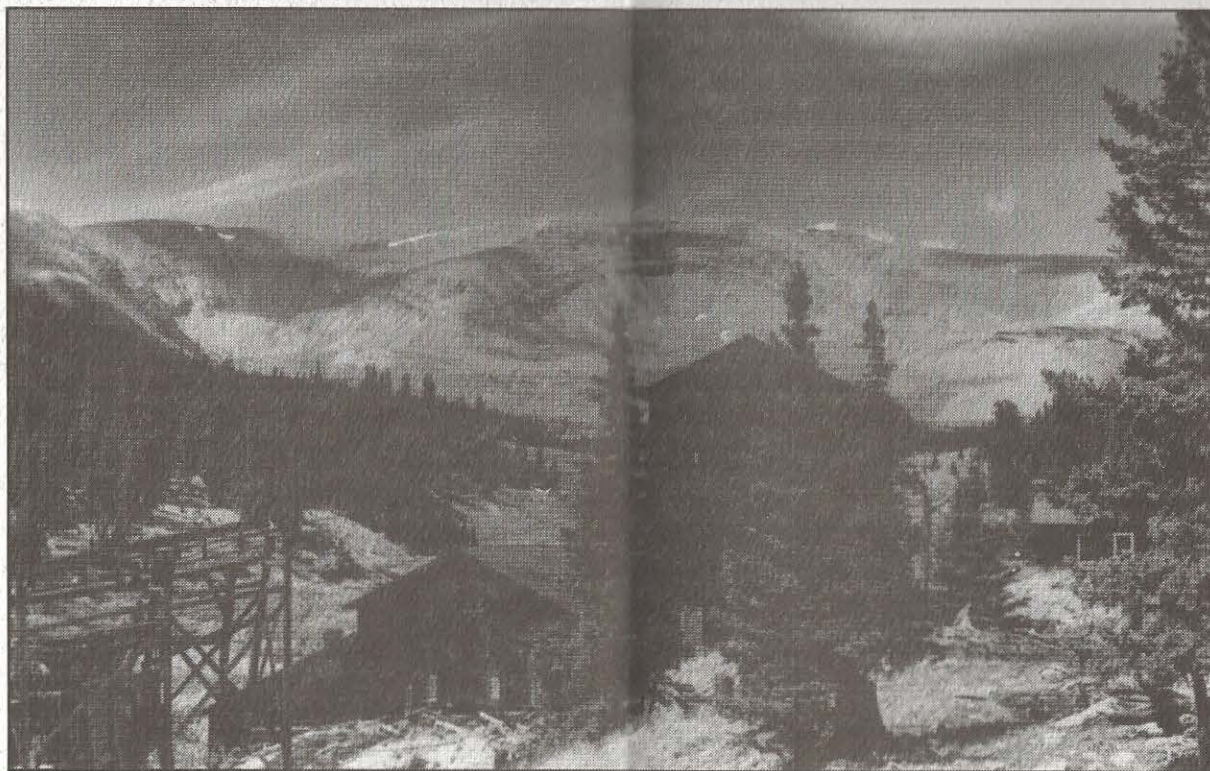
At the Mudsill Mill, ore came to a receiving platform in narrow, high-sided, three-ton wagons. There a man known as the "crusher" pounded it with a sledge into fist-sized fragments before shoveling it down to a mechanical jaw that ground it into kernels no larger than corn. Next a stamp mill reduced the ore to dust. Then it was sent to a smelter, which added salt, heat, water, mercury and some incantations to coax the metal from the compounds that held it.

The old Mudsill Mine is near the ridgetop to the north. Noted more for hopes than production, the mine did attract enough investors to finance a mill near the bottom of the slope. Reportedly, the Mudsill was "salted" (planted with high grade ore) and sold for a tidy profit by "Chicken Bill," a shady operator from Leadville.



## Developments in the Transportation of Ore

The remains of the old mill on the right are a crumbling reminder of 1890's high technology. The first buckets of promise were brought to the surface by pulleys and hand labor. Then burros hitched to winches pulled the substrate into daylight. Later, tracks and ore carts streamlined the process, but burros still provided the power. The Hilltop Mine eased the burro's burden and added efficiency by constructing an aerial tramway to move its ore to this mill. Horsedrawn wagons loaded with milled ore at one time crossed the park and descended to the plains, where their ore was transferred to trains that carried it to Boston. Here it was lifted into the holds of boats bound for Wales where smelters removed the precious metals.



Hilltop Mill, Horseshoe Mountain in the distance



## Leavick Townsite

Felix Leavick bought the Hilltop Mine in 1892 and started this town that bears his name. Four years later, the Denver, South Park and Hilltop Railroad laid tracks to the mill that anchored the town which only had one street. Along that street, a store, post office, cookhouse, school and a few cabins clustered. The Hilltop Mine operated off and on until about 1920, but the shutdown of the railroad in 1923 cemented the demise of Leavick.

*A common mine laborer could expect long hours, many dangers and low pay. For \$1-\$3/day, including board, a miner toiled in dank and dusty tunnels. He worked in constant danger from falling rocks or cave-ins, from explosions caused by the buildup of gases in unventilated tunnel shafts, and from fires or snowslides that could trap him inside the mine.*



## Dreaming of Silver

On ahead, one can see the remains of the Last Chance, Hilltop and Dauntless Mines. A single tram tower remains from the 1-3/4 mile-long tram from the Hilltop to Leavick. In the 1880's, this was a scene of bustling men and animals, puffing steam engines, and streams of ore cars. Will it sleep on, or will the glittering pockets of silver someday bring the old Hilltop back to life?

### For More Information, Contact:

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