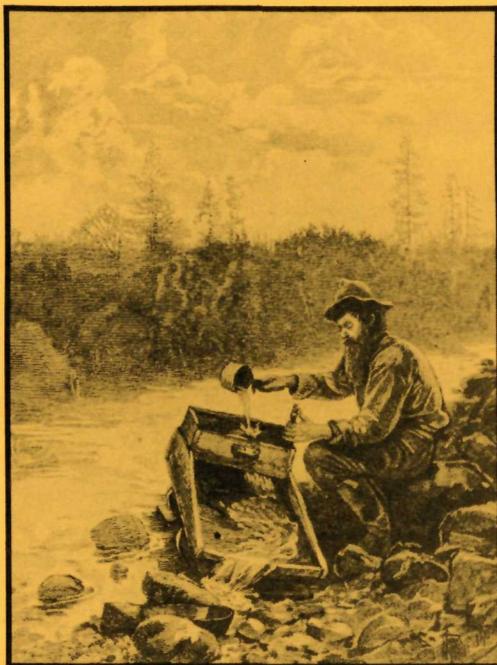




**U. S. Bureau of Land Management
Shoshone District
and the
Blaine County Centennial Commission**

Historic Mines of Blaine County, Idaho



A Self-Guided Tour

Prologue

The early mines of Blaine County were major contributors to the economy of Idaho and the nation and the settlement of the Wood River Valley can be directly attributed to them. Mines are never completely abandoned -- they merely wait for technology and economics to reach a point where they can again be viable contributors to the local and state economies.



History of the Mines

Introduction

Silver and base metals (metals other than gold and silver) played a major role in the development of the Idaho Territory. The most important early mining areas were the Wood River lead mines, discovered about 1881, and the Bunker Hill mine in the Coeur d'Alene area, discovered in 1885. Exploitation of the minerals in these areas marked the beginning of Idaho's mineral industry. In the years to follow, hundreds of mining districts would be formed to extract the precious metals (gold and silver) and base metals (lead, zinc, and copper).

During the period when most of the mines were operating, gold was valued at \$20 per ounce and silver at about \$1.10 per ounce. Comparison with the prices of today's precious metals clearly shows the extremely high values of ore found in many of the early Blaine County mines.

It would take volumes to describe the hundreds of mines in the county -- all of which played some role in the mining history. Therefore, the mines mentioned in this booklet are the larger mines, the more productive mines (in terms of the value of

minerals -- especially gold -- produced), or those that are representative of a mining district.

The visitor should be aware of the dangers that exist in and around old mines. Many of the early workings consist of vertical shafts driven into the ground to follow a vein. These shafts are especially dangerous, as they are difficult to see when walking up a hill, plus they often have brush grown up around the openings.

Other openings may invite exploration, but this should only be attempted when accompanied by someone familiar with mines and mining. Rotted timbers, mine gasses, bad ground (unsafe workings), old dynamite, and water-filled shafts are but a few of the possible hazards.

Major Mining Districts in Blaine County

Little Wood River (Muldoon) Region

The Little Wood River region is situated in Garfield Canyon and the canyon of Muldoon Creek in the Pioneer Mountains of eastern Blaine County. The area is easily accessible by car using several different routes shown on the state highway map. It is an area well worth a trip just for the views of the rugged mountain terrain.

Little is known about the early mining history of the region, but the Muldoon Mine, discovered in 1881, was the only mine with any important production. Rich veins were exposed on the surface, causing more miners to prospect the area and develop new mines. Work at the Muldoon and other properties progressed rapidly, and by late 1882, there were two 40-ton smelters handling the ore. By 1883, the mine had produced about \$345,000 worth of ore, most of which came from silver associated with lead.

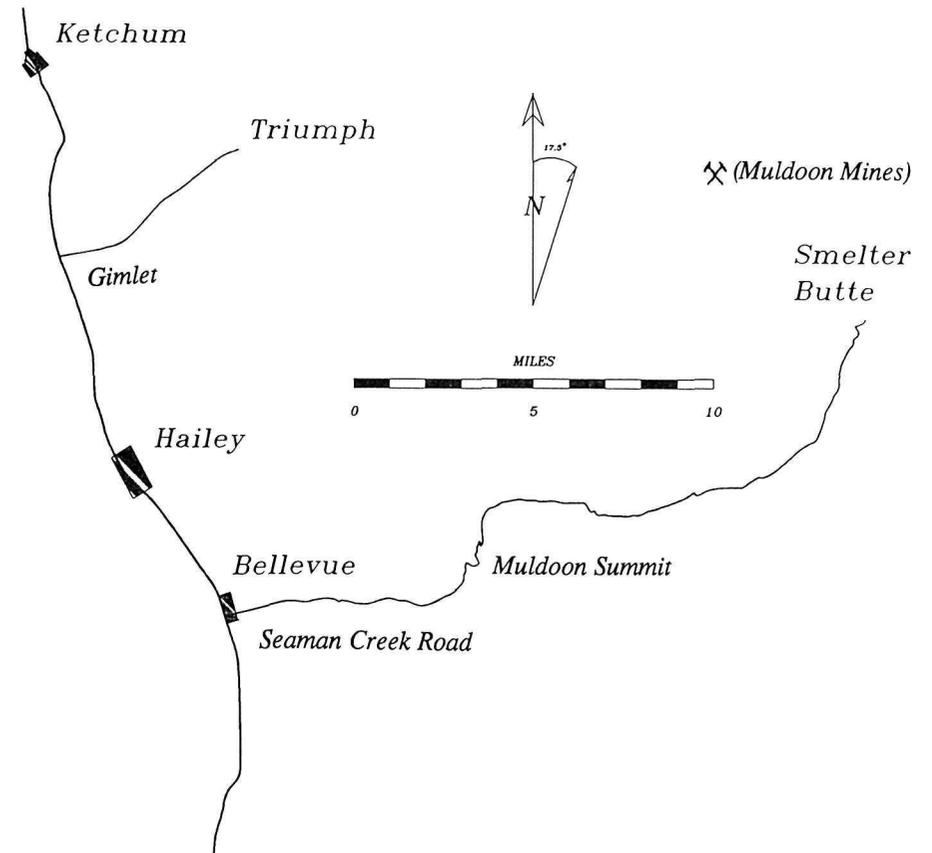
In the early 1900's, ambitious attempts were made to restart the mines, but with little success. The major problem was the 26-mile wagon haul between Muldoon and the closest smelter, which was at Bellevue. Some of the ore shipped at the time

was reported to be 42 percent lead and 48 ounces silver to the ton. In all, the mine produced about \$200,000, most of it from silver values.

Visiting the Muldoon Mines

Muldoon is located about 20 road miles east of Hailey in one of the most picturesque areas of the county. It can be reached by traveling the Seaman Creek road (graded) out of Bellevue, over Muldoon Summit and then following Muldoon Creek.

At Smelter Butte, the remains of beehive charcoal kilns (used to make charcoal for smelting the ore) can be seen. Little remains of the town of Muldoon except for the Post Office, which has been preserved. The more adventurous can drive up to some of the mines which cling to steep mountainsides above the valley. Four-wheel-drive vehicles are recommended for most of the mine roads.



Map to the Muldoon Mines

Wood River Region

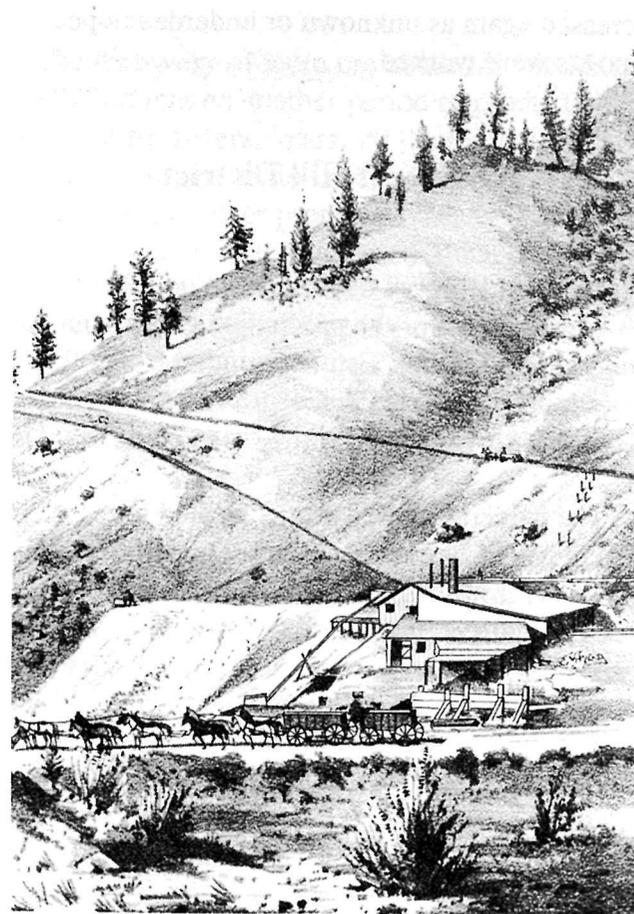
The Wood River mining region is an early designation for the area adjacent to the Big Wood River, extending from Ketchum to just south of Bellevue. The region contains the huge Warm Springs mining district and also a portion of the Mineral Hill district.

The historian Bancroft stated that the first discovery in the region was made in 1864 by the miner W.P. Callahan while on his way from the Boise Basin to Montana. Problems with the Ban-nock Indians, as well as a greater interest in gold in other parts of the state, slowed down the development of the area until 1878. By 1880, hundreds of claims were located and several towns had sprung up along the Big Wood River.

The area progressed rapidly, and by 1883, four smelting plants with a daily output of 50 tons of bullion were operating on ore containing from 50 to 80 percent lead and from 100 to 300 ounces of silver to the ton. Some of the very rich or "banner" ore ran over 1,000 ounces of silver to the ton! Between 20 and 30 mines operated successfully during this period and prosperity reigned until 1887.

As with so many mountain resorts in the West, the Ketchum-Sun Valley area began life as a mining camp dedicated to processing the ores from

nearby mines. The Philadelphia Mining and Smelting Company operated a mill and smelter at Ketchum that was a splendid operation run by water power from nearby Warm Springs Creek. The huge mill, with a capacity of 180 tons of ore per day, was located just north of Warm Springs Road about a mile west of Highway 75. The mines that furnished most of the ore were the Elkhorn, Parker, Bullion, and Mayflower Mines.



The Mayflower Mine

The early smelters located in Bellevue, Hailey, and Ketchum have completely disappeared. Other than a few old photographs, there is nothing left to remind us of their great contribution to the early growth of the area.

Around 1887, the known veins or ore shoots were almost exhausted. New discoveries were few and far-between, leading to a decline in production until the period of 1911 to 1921, when production increased again as unknown or underdeveloped deposits were worked.

Mineral Hill District

In the early boom days of the Wood River region, most of the production came from the Mineral Hill district. Estimates indicate that the gross production from this district was well over \$16 million.

The Mineral Hill district is located in the vicinity of Hailey and Bellevue, at the south end of the Wood River mining area. This district was predominantly a producer of silver, lead, and zinc with some production of associated gold. Discovery of the famous Minnie Moore Mine in 1880 marked the beginning of the most prosperous period enjoyed by the area.

The Minnie Moore Mine

Discovery of the Minnie Moore has been credited to a badger which brought fragments of galena ore to the surface of its den. Within three years after discovery of the ore fragments, the Minnie Moore shaft had been started and full-scale mining was underway. More than 217 tons of ore were shipped during this early period, averaging 102 ounces of silver per ton and 67 percent lead.

The discovery of more ore at the Minnie Moore in 1902 brought on another period of production that lasted for several years. At the same time the Minnie was in production, work was carried on at the Croesus and other properties. Many of the other mines continued production long after the Minnie Moore had mined the last of its known ore. From then on, the story was one of repeated attempts to find more ore at the Minnie Moore. Unfortunately, most of the work was unproductive and the search ceased with the coming of World War II.

After the war, the old Queen of the Hills Mine, across the gulch from the Minnie Moore, was reopened and during 1949, the Rockwell shaft of the Minnie Moore was rehabilitated to gain access to deeper levels of the Queen mine.

In 1884, the Minnie Moore was sold to an English firm which purchased the mine with an estimated 3,700 tons of ore in sight averaging 100

ounces of silver to the ton. After they mined out this ore and were reaching the end of their tenure, the company discovered a lens of massive galena 90 feet long with a thickness of 14 feet. The net smelter return for this period was \$1.4 million! They continued exploring, sinking the main shaft to 500 feet, where the ore disappeared to no avail it had pinched out and was lost.

The "pinch and swell" situation, as described by the miners, was to plague the Minnie Moore and most of the other mines in the mineral belt. The problem was not so much that the ore body varied greatly in thickness, but that, just when the going looked good, the miners would run into a wall of barren rock. The veins were broken off by faults (movement of rock masses). Relocating the displaced portion of the vein was just too expensive for many of the operators and they had to give up.

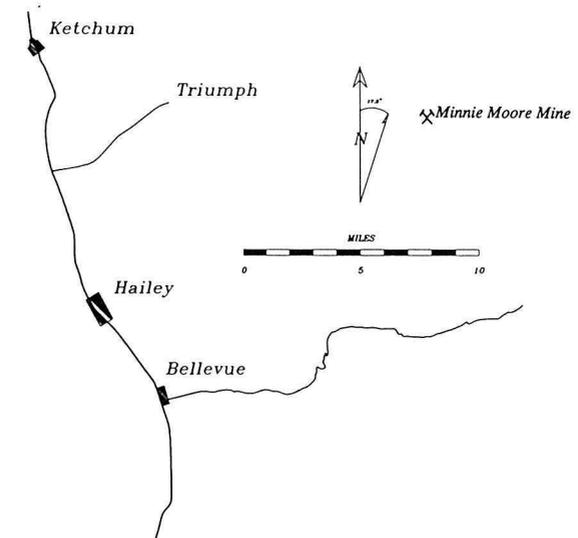
By 1886, all the ore in the Minnie had been mined down to the "pinch" and operations were suspended. The property was later leased and work resumed to the 900-foot level, where the ore body terminated against the Rockwell fault. It took the operators several years to find the ore beyond the fault but in 1902, they again began shipping ore. I.E. Rockwell, the operator during this period, estimated smelter returns at \$7,316,600. But in 1905, a new termination arose -- the Minnie fault.

It took five different operators 26 years of off-and-on work to rediscover the ore body. In 1949,

when work resumed in earnest, the mine consisted of the vertical Rockwell shaft and three inclined shafts, reaching a total depth of 1,100 feet.

Visiting the Minnie Moore Mine

The Minnie Moore is located three miles west of Bellevue off the Broadford Road. The mine is located on private land and permission should be obtained if you wish to enter the area. Little is left of this, one of the largest and deepest of the early mines. From Broadford Road, you can see the great piles of grey mill tailings ground to a fine powder so that the metals could be removed. A few old wood buildings still cling to the hillside above the mill site and prospects can be seen on the hills. The main shaft is flooded and little work has been done on the mine since the 1950's.

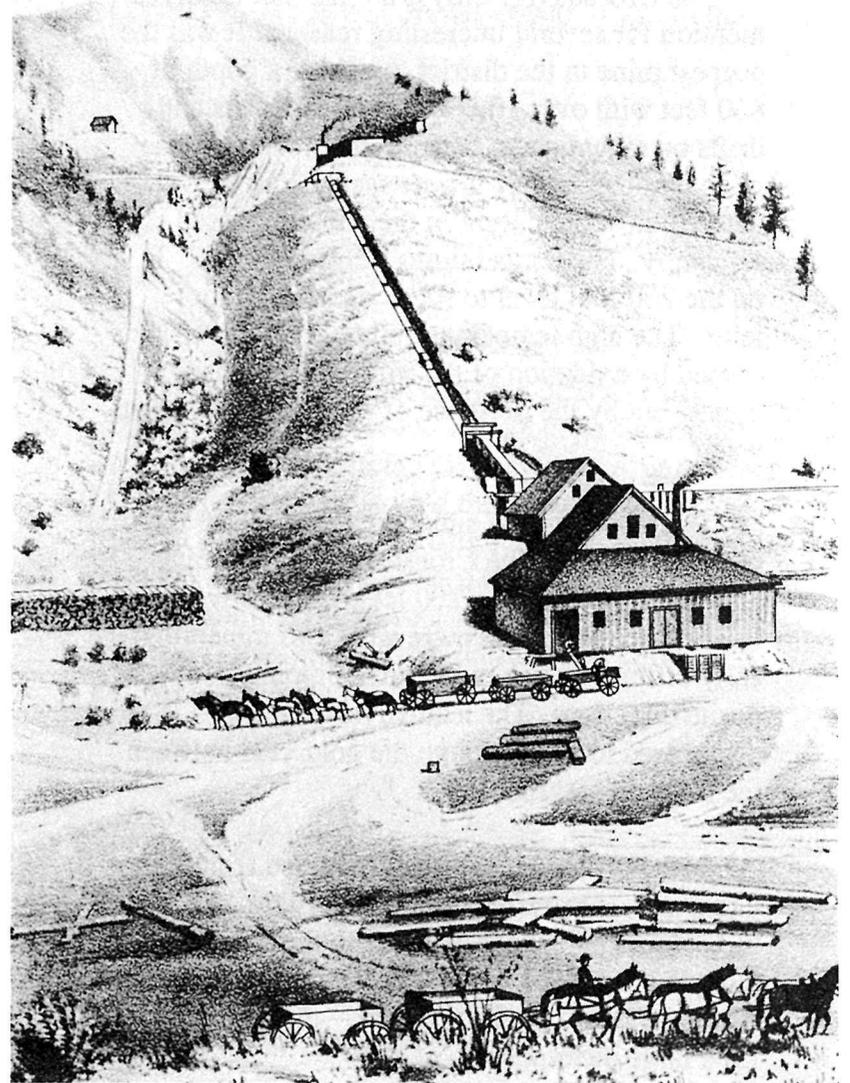


Map to the Minnie Moore Mine

Bullion District

A number of rich lodes were discovered in the district near what was to be the town of Bullion (*bull-yun*), 4.5 miles west of Hailey on the Croy Creek Road. These include the Jay Gould, Bullion, Mayflower and others. Bullion was a sizable camp in its heyday with over 500 men at work in the mines and a population estimated at 700.

If you visit the site of Bullion, you will probably wonder where all of the houses could have been situated in this very narrow canyon. Judging from old photographs and examination of the site, the houses appear to have been perched on platforms dug into the sides of the canyon. One of the more prominent buildings was a saloon sitting in the V made by the two branches of Bullion Creek. The site of this saloon can easily be found by the piles of broken bottles covering the ground.



The Bullion Mine

The Croesus Mine

The Croesus (*cre-sus*) is a mine that deserves mention for several interesting reasons. It was the deepest mine in the district, reaching a depth of 860 feet with over 10,000 feet of crosscuts and drifts on eight levels. One unusual feature of the mine was that, as the miners reached greater depths, the temperature in the mine increased significantly. The temperatures ranged from 57^o F on the 200 foot level to 92^o F on the 800 foot level. The high temperature did not appear to be caused by oxidation of the sulfides as in many mines, but by the presence of geothermally heated water.

The most unusual situation was that, for the first 600 feet in depth, the Croesus was a gold mine and, for the remaining 200 feet, a lead-silver mine. It was discovered that there were two mineralogically different veins in the mine dipping in opposite directions. The lead-silver vein was discovered to pass through the gold vein between the 500 and 600 foot level.

Some of the highgrade ore mined from the Croesus was extremely rich, containing up to \$200 in gold and 50 ounces of silver to the ton! At today's gold value of \$450 per ounce, the gold ore would be worth \$4,500 per ton -- just enough to fill a large pickup truck.

The gold vein of the Croesus Mine contained

some ore that yielded as much as \$300 (15 ounces of gold) to the ton in gold. Between 1899 and 1911, the records of the company show a return of \$133,137 from ore that *averaged* \$40 to \$50 to the ton.

Visiting the Croesus

The remains of the Croesus Mine are located in Croesus Gulch, about four miles west of Hailey, south of the Croy Creek Road. The mine is located on private land.

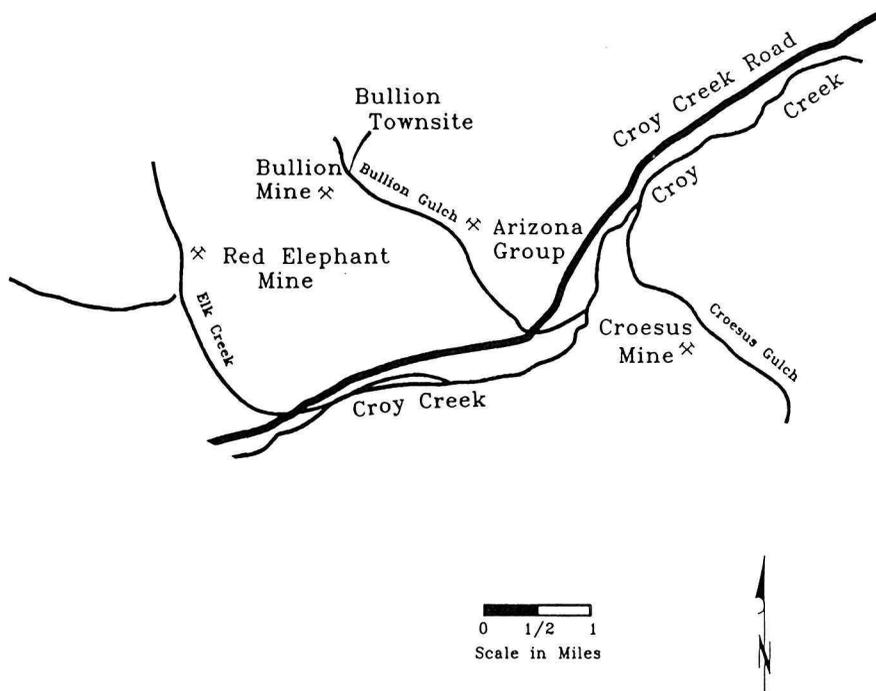
The huge wood timbers which held an early stamp mill still remain, as well as the concrete foundation of a large mill built in the early 1900's. A number of buildings once supported the mine, but these have all disappeared. The original mine shaft is caved in and can only be seen by judicious digging in the bushes. Other mines, most of which probably brought their ore to the Croesus to be milled, dot the hillsides above the Croesus.

Warm Springs District

The Warm Springs district was the largest mining district in the Wood River area. Located twelve miles north of the town of Hailey, the district was supported by three major mines: the Triumph, Independence, and North Star. The greatest producer, the Triumph Mine, eventually produced \$20 million in silver -- more than all of the early Wood River properties combined.

The Independence Mine began operation in 1883 and by 1913, it had made an estimated production of \$100,000. Acquired by Federal Mining & Smelting Company in 1917, it was operated until 1923 -- producing over 131,000 tons of ore. The mine was developed with extensive drifts and crosscuts on nine levels and was connected by means of raises (a mine shaft driven upward) with the North Star above it and the Triumph workings below it. The average grade during this period was 5.2 percent lead, 0.027 ounces of gold and 13.4 ounces of silver to the ton. The Independence was shut down in 1923 when the known ore bodies had been practically exhausted.

The North Star Mine followed the fortunes of its nearby neighbors, the Triumph and Independence, with total production by 1915 estimated at about \$800,000. The most interesting aspect of mining at the North Star is the large, high grade lenses of ore encountered.



Map to the Croesus Mine

One of these large lenses was mined near the surface between the Engine Room tunnel and the Main tunnel and was stoped (mined) for a length of nearly 700 feet and a height of 50 feet; the width averaged about 4 feet. This immensely rich lens yielded \$100,000 from ore that contained 22 % lead, 22 ounces of silver and 0.3 ounces of gold per ton. However, this was not the richest lens in the mine. The Bonanza lens was found on the 50 foot level and yielded \$127,000 from ore containing 60 % lead, 60 ounces per ton of silver and some gold. Finally, the Gold Stope, a small, isolated lens, assayed 15 ounces of gold per ton with the ore in some places containing over 40 % zinc with numerous samples of 20 % zinc.

Activity in the district gradually decreased through the 1900's, although the Triumph, which was reopened in 1927 and became the largest producer of base-metal ore in the district, continued to be productive until 1957, when the ore bodies were mined out and the mine was idled.

According to available production records, the Mineral Hill and Warm Springs mining districts, between 1880 and 1970, produced more than 828 tons of silver; 132,000 tons of lead; 95,400 tons of zinc; 135 tons of copper; and 4 tons of gold.

C.P. Ross, a geologist with the Idaho Bureau of Mines and Geology, credited the district with more than \$3 million worth of combined metals from 1880 to 1902. From 1902 through 1926, the dis-

trict produced 6,069 ounces of gold and from 1932 through 1959, a total of 70,570 ounces were produced. Almost all production was from the Triumph Mine.

Visiting the Triumph Mine

The Triumph and other mines of the district are located about five miles up the East Fork Road near the community of Triumph. As with most of the large mines, the land occupied by the Triumph and Independence Mines is private. The huge mill works can be seen to the north of the road as well as the portal (mine entrance) leading to one of the main shafts. The giant mass of grey material on the south side is mill tailings. This is rock which was ground as fine as flour to free the minerals contained in it. The minerals extracted, the ground rock was sent to a holding pond where it remains today.

Triumph Gulch Road, which turns north just below the community of Triumph, is on public land and a number of mine workings can be seen from it.

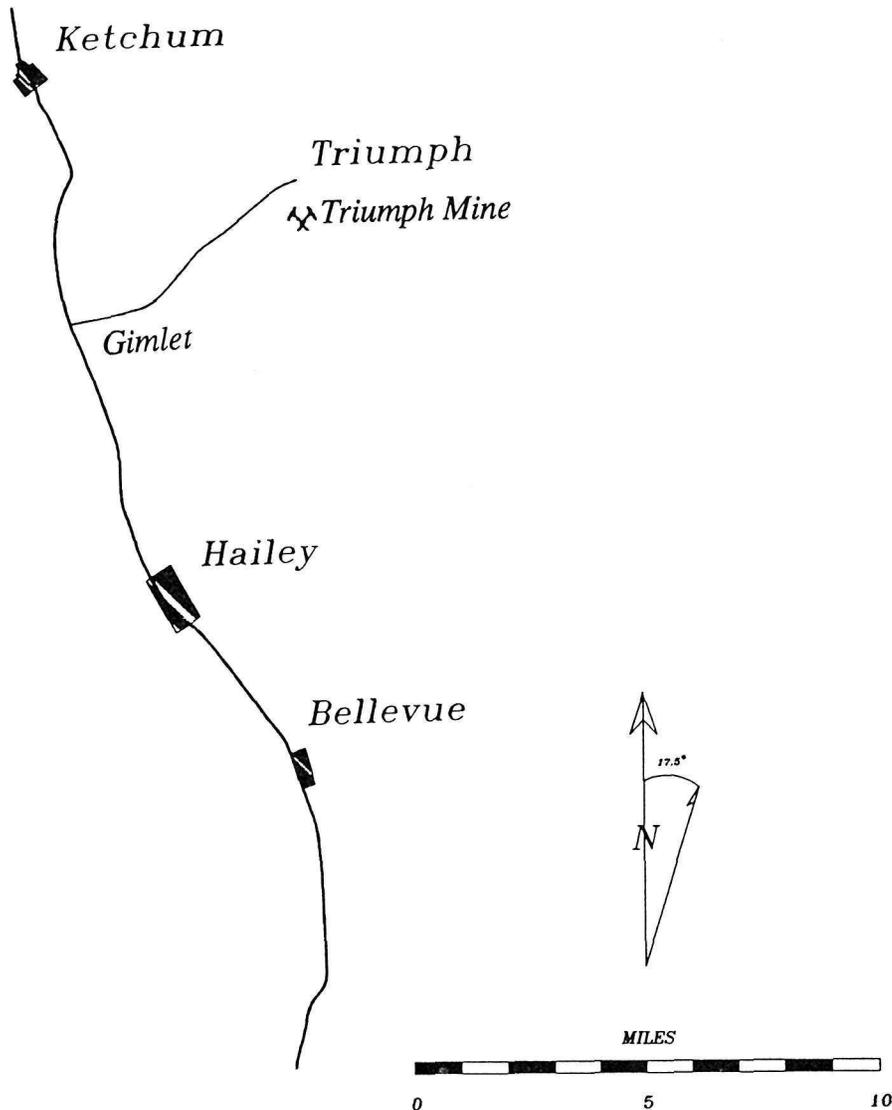
Camas District (Hailey Gold Belt)

The Camas district is located directly west of Hailey on the Croy Creek Road in the area of Richardson Summit. The ghost town of Doniphan, situated in the flat below the Camas Mine, served the Camas district and its mines. Today, nothing remains of the townsite except a point on the map. Access to many of the historic mines in the district is limited because of private land and ongoing mining operations.

The Camas 2 Mine was the first mine to be discovered in this district in about 1865. Devices known as stamp mills were installed in most of the early mines to crush the ore which was generally free-milling. This means that all the miners had to do was crush up the ore and the minerals would be freed.

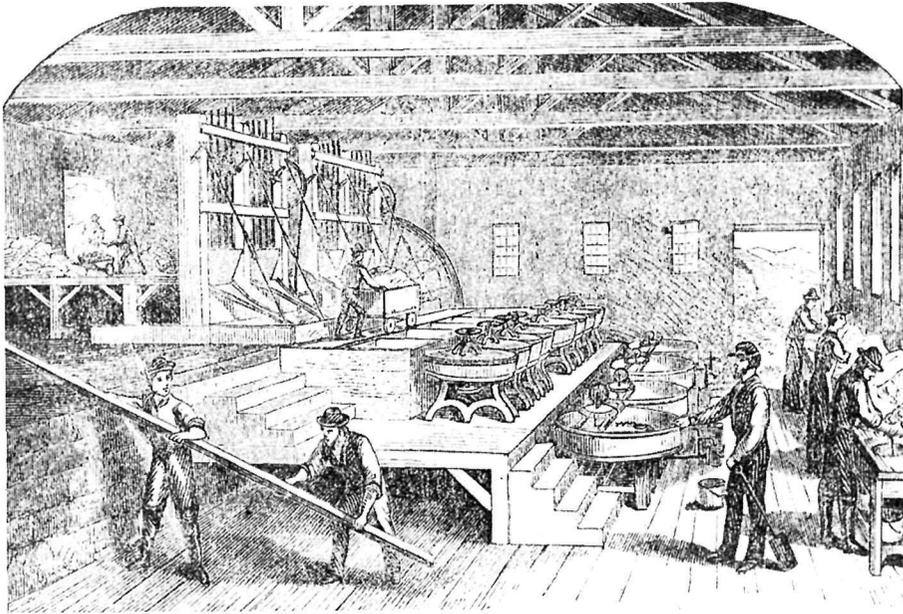
The stamps on the stamp mill consisted of a series of logs or iron shafts with metal shoes attached to them. Cams attached to a shaft revolved, lifting the stamps, which were placed vertically in the mill, and dropping them alternately. As the ore passed under the stamps, it was crushed, liberating the gold and silver which were caught on mercury-coated copper plates. The mercury would later be scraped off the plates and the gold and silver recovered.

A mill with twenty stamps, built in 1887, ex-



Map to the Triumph Mine

tracted gold from Camas ore, assaying one-half ounce of gold to the ton. The fabulous Treasure Trove vein found in the mine was reputed to have 17,000 tons of this highgrade ore. This small but productive mine produced ore valued at \$1.25 million before it closed in 1898. Today, that ore would be worth more than \$28 million!



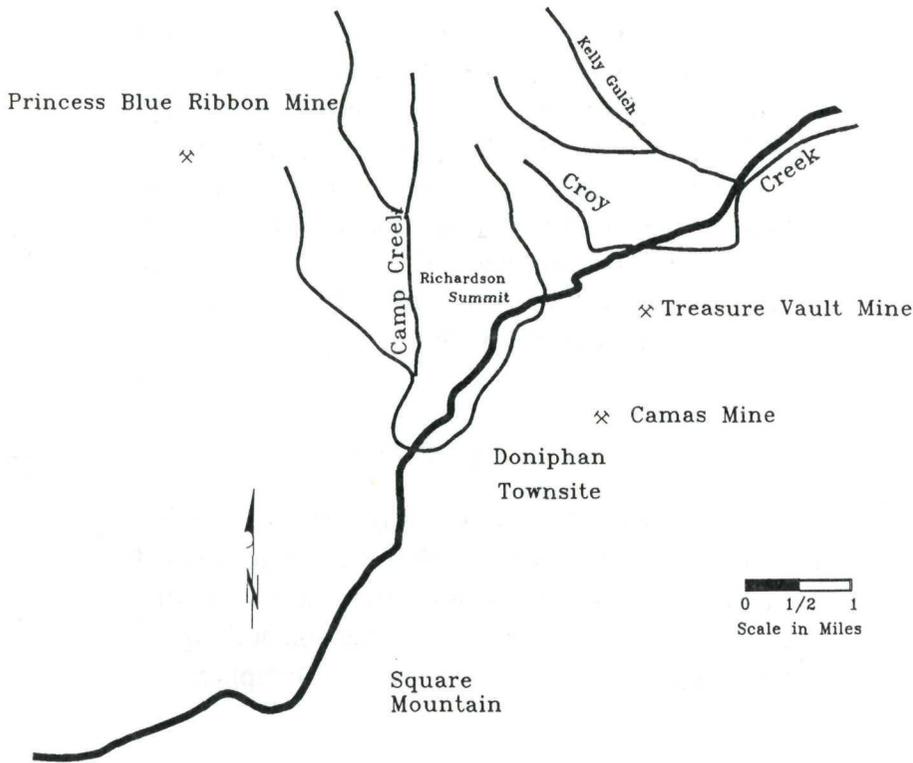
Interior of a quartz mill

Other discoveries were made in 1880 and the period from 1880 until the early 1900's was one of great prosperity. The mines soon played out, however, and most closed around the turn of the century. As with most of the big producers, the Camas and the Hattie were reopened -- but only for short periods -- in the 1930's, 1940's and 1950's.

Production records are not complete for the area mines, especially for the peak activity prior to 1900. Of the 175,770 ounces of gold produced in Blaine County from 1874 to 1900, it is estimated that more than half of it came from the Camas district. The Mineral Hill camp listed a total of 7,019 ounces between 1902 and 1926; 7,161 ounces were produced from 1932 though 1959. Much silver, lead, and zinc was also mined.

Visiting the Camas Mine

The Camas Mine is located on private land, is currently being mined, and the access road is gated for safety reasons. However, little is left to see of the workings of this once rich mine and nothing but memories remain of the town of Doniphan.



Map to the Camas Mine

Photographs courtesy of Idaho State Historical Society