

# GOLD CAMPS & SILVER CITIES

Nineteenth Century Mining in Central and Southern Idaho

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## LITTLE LOST RIVER

A mining rush from Leesburg on June 15-16, 1867, created interest in Little Lost River more than a decade before T.C. Blackburn made a major lead-silver discovery there in September 1882. By the spring of 1883 Blackburn had organized a mining district, recognizing a lode that could be traced for six miles but which outcropped in only a few places. An experienced prospector from Deadwood, South Dakota, he had followed up an interesting Viola lode find that his brother, Charles F. Blackburn, had located across Diamond Peak on adjacent Birch Creek. An initial twenty-five-foot shaft provided access to a drift on a twelve-foot vein that furnished assays ranging from 6 to 1,580

ounces a ton. Early production came from ore hauled to the Viola smelter on Birch Creek at Hahn from 1886 to 1889. With closure of that smelter in the fall of 1889, Blackburn's mine had to suspend operations.

By 1906, work resumed on another property along Blackburn's lode. Only a small crew was employed for a time, although a one hundred-ton concentrator stepped up production for a decade after 1908. After the loss of a hoist, concentrator, and other equipment by fire in 1918, production ceased while a new plant was built. Work resumed in 1922, and a new mill produced continuously from 1924 to 1931. More than \$2 million worth of lead-silver finally came from Blackburn's district.

## Part IV. Late Nineteenth Century Mineral Discoveries

### INTRODUCTION

After 1884, a half dozen promising new Idaho gold camps attracted prospectors or investors from a wide area. Two of them came into production without unreasonable travail. But for one reason or another, difficult obstacles interfered with major production anticipated from four later nineteenth century discoveries. Remote locations proved a severe drawback. Lack of ore—a deficiency crucial for a mining camp—retarded several of these camps. In one area, the availability of only a limited amount of gold delayed large-scale development until another mineral, cobalt, made Blackbird into a major Idaho metal producer. Idaho's last major gold rush brought thousands of miners to Thunder Mountain, but almost all of that district's wealth came from Pittsburgh investment rather than from mineral resources available for exploitation along Monumental Creek. This slightly unfortunate approach to mineral development characterized the mining camp of Graham even more. By 1884, most of Idaho's traditional gold and silver lodes had been located, so most gold rushes after that time were somewhat misdirected. Other metals of great value remained to be found. But truly important undiscovered gold fields, however, no longer turned up to justify old-fashioned mining excitements.

### BIG CREEK

Mineral discoveries near Elk Summit high on a

ridge between Big Creek and the South Fork of the Salmon River came a decade before prospecting on Monumental Creek expanded Big Creek mining possibilities into an even more remote area around Thunder Mountain. Deep canyons and rough country delayed the development of mining anywhere on Big Creek. A gold rush early in the twentieth century finally brought a horde of prospectors into Idaho's Salmon River mountain wilderness west of Leesburg and north of Stanley and Deadwood.

Antimony had been noticed in the area years before anyone succeeded in identifying commercial gold and silver. A Thunder Mountain lode, which no one could develop, and some Chamberlain Basin placers had been investigated as early as 1866 or 1867. Nothing came from that exploration. Finally James Reardon and L.M. Johnson brought a small discovery party to Big Creek as early as they could prospect in 1884. In June, they found an 1,100-foot outcrop of a system of parallel veins about 60 feet wide. A year later, on June 15, 1885, they organized Alton mining district, and that summer 150 miners located about one hundred claims. They found silver ore described by Norman B. Willey as "refractory, but not base." In 1886, prospect cuts had reached a depth of fifty feet. A.L. Simondi, a Weiser assayer, created a lot of interest when he reported a 2,000-ounce silver sample in August. A ton of ore from these exploratory holes, packed out to a railroad at a cost of \$80, provided a favorable test yield of 267 ounces of silver later in 1886. Since an eighty-five-mile wagon road would have to be constructed at an estimated expense of \$20,000 to

reach the district, miners at Alton faced a severe obstacle. The ore, distributed in small stringers through a broad zone or lode, could yield flattering assays for selected samples, but averaged only a \$1 or \$2 a ton. A large low-grade lode of that kind eventually could be worked profitably in the twentieth century when newer methods and good transportation were available. Elk Summit offered no such attraction.

The gradual expansion of mining possibilities around Alton, both in the immediate vicinity as well as around Big Creek, came during two decades or more of prospecting. Following the pioneer work of John Osborn in 1880, a modest excitement attracted interest on Sugar Creek in 1887. James Hand located a Beaver Creek claim on August 18, 1893, which he retained for half a century. A more promising find brought more miners to Smith and Government Creeks near Alton in 1898. A Topeka firm acquired this property in 1902 and eventually drove about 2,000 feet of development tunnels in a lode 200 feet wide. Returning to Beaver Creek in the spring of 1899, James Hand

discovered and located the most extraordinary ledge on the North American continent. It is an enormous porphyry dyke of free milling quartz that stands out boldly like a huge cathedral. Measurements taken show the ledge to be 300 feet at the widest and 60 feet at the narrowest part. The ledge can be easily traced for over three miles.

Assays of the croppings of this ledge made by Mr. Tillson, of the Iola mine, show values ranging from \$18.50 to \$186.60.

Another nearby discovery of Charles Crown brought miners to Logan and Fall creeks in 1899. Crown went on to find "some remarkably rich locations in Thunder Mountain" that season. But his Logan and Fall Creek prospects proved disappointing. By 1902, about 2,000 feet of development tunnels demonstrated an absence of ore (as evaluated in such a remote area), but after some additional effort at development, George Lauffer and Joe Davis relocated this abandoned property in 1908. Not much aside from negative information came from all that effort.

North of Big Creek, Richard Hunter reported an unexpectedly successful 1899 placer operation:

In the Chamberlain basin, strikes showing phenomenal values have been made by the Briggs brothers, of Ohio, and a quartet of lucky prospectors from Utah. The Ohio boys located a placer claim on the top of a mountain and worked like Trojans for two weeks to the intense glee of the old rock smashers. The boys succeeded in getting a 12 hour run of water and washed out \$1,876 in coarse gold. In the clean-up nuggets



Big Creek (c. 1900)

worth \$10 were found. The hilarity of the 'way-backs' ended suddenly.

Copper also created excitement in 1899:

Mike Nevins, the genial, big hearted proprietor of Nevin's cosy ranch, at the mouth of Elk creek, has located a colossal ledge of copper near the fork of Elk and Smith creeks. As the ledge towers upward to a height of over 600 feet the reader can form a slight idea of the magnitude of Nevin's discovery. A representative of Marcus Daly has gone to examine Nevin's discovery.

A somewhat more successful effort attended another nearby discovery of 1903. Four years later a small three hundred-pound prospect mill turned out \$173 in a seventeen-day run. A five-stamp mill, brought there in 1911, produced a \$6,000 or \$7,000 yield by 1916. In addition, a fourth Alton lode discovery on Government and Logan creeks filled in some mining territory between the 1898 and 1899 segments. In 1911, D.C. MacRae and E.F. Goldman located claims along a ridge between Government and Logan creeks, but they had low-grade ore at best. Some may have gone as high as \$4 a ton higher up in their vein and \$2 at greater depth, but their average ran lower. Development of this series of four mining areas along a single northeast and southwest mineral zone showed that a large lode extended close to four miles in length and one hundred to three hundred feet in width. Yet almost no production could be managed at such a difficult location. During the Thunder Mountain rush, some of these properties

acquired an unenviable reputation by reason of unwarranted wildcatting operations of that period, but not a single instance of intelligent mining development was then recorded, and as a matter of fact 90% of the money raised from the sale of stock based on Big Creek properties during that period was used for promotion purposes and never reached Idaho.

Farther down Big Creek, other lodes had more of a chance for development. W.A. Edwards'

property, located in 1904 on a ridge between Logan and Government creeks (below D.C. MacRae's later discovery in 1911), justified importation of a stamp mill. Logan City (later Edwardsburg) began that summer with a saloon, store, butcher shop, and a house on Big Creek flat, and a four-stamp mill arrived in 1906. Milling finally began five years later, with a larger mill imported in 1909-1910 that produced \$1,200 in 1911. Sulfide ores, requiring a cyanide process, continued to present a problem which accounted for so long a delay and such small production. Edwards also held additional claims twelve miles farther down Big Creek, where a 2,500-foot lode was developed. A series of Ramey Ridge discoveries in 1908 led to mining expansion there. Most of Big Creek's production came from the Snowshoe mine in that area, with a yield of about \$400,000 between 1906 and 1942.

## GRAHAM

Prospectors in search of lost north Boise mines had known of large but otherwise unpromising veins in Silver Mountain for twenty years or so before Matthew Graham's careful examination of some dull red outcrops created interest in the district late in 1885. Graham, a well-known Atlanta miner, felt that, although the ledges of Silver Mountain had attracted no attention in the past, they offered great possibilities in the future for large-scale quartz mining. Assays of some good samples confirmed his expectation. Only the deep December snow held back a rush to Silver Mountain.

Matt Graham had gained long experience in promoting important Atlanta mines in New York and London, and for years had spent most of his winters in New York City, where his close resemblance to Congressman William Marcy Tweed still was noticed long after Tweed died in prison, where he had been sentenced following the exposure of the notorious Tweed ring. Now Graham set out to develop Silver Mountain. His friends in Atlanta (only sixteen miles to the southeast) responded immediately. An Atlanta newspaper correspondent foresaw on December 30 that

the North Boise mines will draw thousands of miners, prospectors and capitalists. The tin horn gamblers will be there to work the greenies. There are ledges out there looking far better than the Custer mines did in 1878, since when \$2,500,000 have been taken out.

When Graham reached Boise and reported that he had veins four to six feet wide with surface assays

of \$50 to \$2,000 of free-milling gold and largely metallic silver for which no complicated reduction process would be required, the *Idaho Statesman* concluded on January 2, 1886: "It is evident that the new discovery will eclipse any of the older quartz discoveries in Idaho." And the *Atlanta News* (quoted in the *Boise City Republican* on January 23, 1886) spoke even more enthusiastically:

The ledges in Silver district are simply enormous; they vary in width from ten to three hundred feet, cropping out like gigantic walls to protect their wealth, and can be traced for miles.

Exploration of the most promising lode on Silver Mountain commenced early in 1886. Two shifts of men drove a tunnel 240 feet to strike the vein about 200 feet below the surface, with results favorable enough that Matt Graham managed to interest London capitalists in supporting his new Idaho Gold and Silver Mining Company, Ltd. By the fall of 1887, a \$15,000 road was completed to the camp and a 500-foot exploratory tunnel (along with a 112-foot inclined shaft) was run into the lode. The lode, 30 to 40 feet wide where the vein struck it, contained what was interpreted to be ore worth \$30 to \$50 a ton, with a richer zone 6 feet wide running at \$90. Encouraged by such a development report, the company began to build an elegant twenty-stamp mill. About 150 men were employed. (Wages of \$4 a day for miners, \$3.50 for outside workers, and \$7 for carpenters and stone masons were unusually high for the time; these rates reflected the difficulty of getting skilled labor to work in the remote district.) Fifty or sixty men worked right through the extremely hard winter of 1888, and reports of rich new strikes made for great enthusiasm in the new camp.

In the summer of 1888, the Silver Mountain boom reached its height. The new town of Graham boasted of having

six saloons, one store, five boarding houses, one restaurant, two blacksmith shops, a jail, a Justice of the Peace and Deputy Sheriff, one butcher shop, two faro games, three livery stables, a fine hall, 300 men, forty-one ladies, and the controlling vote of Boise county.

George M. Parsons, the mine superintendent, decided that the jail—"a strong affair of logs, nails, planks and iron"—would have to be erected after numerous incidents of assault and battery and larceny insured that there would be "quite a number of guests" sent there by Justice James D. Agnew.

By August 12, the mill was completed. A mile-long tramway to haul ore from the mine to the mill went into service. Telephones connecting the mine and mill were installed, and in spite of its wilderness location, Graham was well supplied with the conveniences of civilization.



The substantial cabin of a miner survived many winters near Cobalt

ranged from about \$12 a ton on the surface to \$24 farther down. (These rates compared favorably with nearby Yellow Jacket.) Then at fifty feet down, their lode changed to copper which retained gold values as well. By 1896, Blackbird had been established as a promising mine with ten to thirty percent copper that had to be smelted. A Rothschild investment firm in London agreed late in 1896 to undertake development and to purchase J.O. Swift's Blackbird property for \$250,000 if their own exploration justified such an investment. After a year's investigation, gold, copper, nickel, and cobalt valued at \$2 million was identified. The isolation of Blackbird from rail transportation, the lack of a sampling works, and the difficulty in processing ore all contributed to long delays in serious production.

After additional claims were consolidated in 1899, a modest production of \$35,000 in copper was finally realized from 1913 to 1915 and in 1921. Then cobalt became more prominent after modern production got under way in 1939. Active until 1960, Blackbird accounted for fourteen million pounds of cobalt of which most was produced from 1952 to 1959 under a government contract price of \$2.30 a pound. In a ten-year span, 1949 to 1959, Blackbird became a major Idaho mining area, credited with \$47.5 million in cobalt, copper, gold, and minor amounts of nickel. Rising prices allowed Blackbird to resume production in 1967 with \$1,186,000 primarily in copper turned out that

year.

The unreliability of African sources of cobalt and dramatically increased world prices associated with the instability in foreign mining areas led to a resumption of interest in Blackbird in 1978. Activity resumed there in 1980 in order to achieve a 2,000-ton-a-year production level by 1984. With development costs projected at \$230 million—and with \$35 million already invested in mine rehabilitation, water treatment, and mill testing—operations were slowed down in November 1981 pending a government contract to guarantee an adequate price to cover production expense. A staff reduction from 105 to 80 came at that time, but a projected increase to 650 employees, including a Blackfoot smelter operation, was contemplated in 1982. But failure to gain government price support led to an additional staff reduction early in 1982 with 10 of 63 miners dismissed then. Concentrates still were milled at a rate of three tons an hour for future testing after a refinery was constructed, but even that level of activity was curtailed somewhat pending federal guarantees.

## THUNDER MOUNTAIN

Like most other western mining states, Idaho definitely needed the excitement of one or two big gold rushes at the end of the nineteenth century. People were restless. Frontier opportunity to start a small farm was limited. Although most of Idaho's farm land still awaited development, large irrigation projects, as yet only contemplated, had to be undertaken. Those who preferred mining had fewer options than were available forty years before. Occasionally some one tried to set off an Indian war, but most Indians no longer had much interest in that kind of diversion. Some Idaho miners got mixed up in the antecedents of the Boer War in South Africa but that was all remote. When the Spanish-American War came along in 1898, as a partial satisfaction for this need for excitement, only a limited number of Idaho volunteers had a chance to participate. As for gold rushes, Cripple Creek offered a good model in Colorado. Many Idaho miners also joined the Yukon gold rush to Dawson. But those places were far away, and the excitement there did not infect Idaho. Idaho did not even have a state department of gold rushes, although a state mine inspector's office met much of that need. Whenever a halfway suitable gold discovery should happen to come along, enough potential miners were ready to furnish more than the appropriate amount of excitement. As matters



Thunder Mountain and nearby mines. Numbers in circles refer to index map of mining areas, page 2.

turned out, Buffalo Hump, north of the Salmon River, and Thunder Mountain, farther south, offered a much needed opportunity for anyone predisposed to join an old-fashioned gold rush. The two areas provided a fitting climax for Idaho's nineteenth century mining history.

Locating two lode claims on Buffalo Hump on August 8, 1898, miners from Colorado set off a wild gold rush in the fall and winter to that forbidding ridge after almost four decades of prospecting had disclosed nothing of great interest. Thunder Mountain discoveries had already been reported, but Buffalo Hump diverted attention from rival prospects for two or three seasons. Finally Thunder Mountain was the object of a rush comparable to the one at Buffalo Hump. Neither district actually produced very much gold. Still, they made up for the lack of mineral wealth by entertaining fortune seekers and investors on a lavish scale. They contributed far more than their share to developing Idaho's economy, even though they failed to advance mining to any really appreciable degree.

As Idaho's final big gold rush, Thunder Mountain had antecedents which went back to another era. Earlier prospectors radiating out from Warren after 1862 were attracted by Thunder Mountain's conspicuous mineralization, and wild tales of those early investigations had wide circulation after 1899. Other accounts had greater accuracy. James W.

Poe, a prominent Lewiston pioneer of 1861, discovered a good outcrop with free-milling gold on Thunder Mountain in 1866 or 1867. That led him to search "for a placer ground that would apparently go with the rich quartz lead. But the country was then the summer stamping ground of the Sheep-eater Indians, who about this time became troublesome, and white prospectors were compelled to leave." Poe reported that Chamberlain Basin miners also had to evacuate because they could not process gravel worth less than 25 cents a pan in 1867. On a trip to Buffalo Hump in 1899, Poe returned to Thunder Mountain to find that his old discovery had been taken up during an early phase of mining development there. Poe was fortunate not to get too involved in Thunder Mountain lode properties, although some of his unpromising 1899 claims were later relocated and sold to Pittsburgh investors.



Although Poe could make no use of an almost inaccessible gold lode at Thunder Mountain in 1867, mining conditions had improved in three decades. Ben and Lou Caswell, twin brothers from Michigan who had learned something about prospecting in Colorado, had searched for Seven Devils mineral wealth with no success at all in 1894. During the Panic of 1893, gold mining was favored over copper, and they decided to hunt for gold in as remote a wilderness as they could find. By then they were broke. The way Ben reported it, all they "had was a bunch of scrawney cayuses—in fact they represented about our only possessions when we went into the Seven Devils, so we can't say we lost anything there." Finding good surface indications on Thunder Mountain in August 1894, they settled on Cabin Creek, trapped and hunted for a living, and came back the next two summers to use rockers during short two-week seasons when placering was practical. They recovered \$245 worth of gold in eight days in 1895 and another \$190 in 1896. In 1896 they spent most of their time whipsawing lumber for sluices, so as to increase future production. Then their brother Dan and his partner, Wesley Ritchie, came over from Montana to join them in producing \$900 in 1897 with sluices. Encouraged by this success, Ben and Lou came out to Boise on August 10 with a remarkable story:

That there are Klondikes yet hidden from the knowledge of men in the wilds of the Idaho mountains was demonstrated yesterday when the discoveries of A.B. and L.G. Caswell in the Salmon river country became known.

These men came into town with a large clean-up of gold. When asked about their dis-

covery they stated they mined the gold on what they called Mule creek, which heads in a mountain which they have named Thunder mountain. Mule creek flows into Monumental creek, this into Big creek and Big creek into the Middle fork of the Salmon.

The brothers discovered the claims some four years ago. The first three seasons they made expenses and this year they have secured a fine clean-up. They expressed the belief that the district will make a good camp; and from their report of the character of the discovery that belief would seem to be well founded.

They have been placer mining the surface of lode claims, working the debris on the mountain side. The entire mountain, they say, is gold-bearing and the gold they have been getting has been released by the decomposition of the formation over which it is found.

This remarkable mountain is porphyry. The prospectors describe it as being a great volcanic crater which has been filled with the gold-bearing rock. The gold is found everywhere on the mountain. The brothers have prospected the ground very thoroughly and say they have pounded up fully a ton of the porphyry. It all pans well. In addition they have had a number of assay tests. The result of their investigations is such as to convince them that the mountain is an enormously valuable deposit of gold. They do not claim the rock is high grade, but they are well satisfied with its value. They did not care to state what the average value of the rock is as determined by their investigations.

Their mountain of gold, even though low-grade in value, contained more high-grade pay streaks than they had noticed at first. Yet their massive-appearing gold deposit had geological characteristics not typical of ordinary mines. They were dealing with an unstable formation which confused more than a handful of competent mining engineers.

Slides of soft, disintegrated rhyolite which absorbs water in a wet year and begins to roll silently along slick faults, have occurred frequently on Thunder Mountain. (One in 1909 which plugged Monumental Creek and flooded the town of Roosevelt was the most recent of many in the area.) These slides are of some commercial importance, since they contain the gold. Prospectors and miners dug around in the mud flows, since gold was precipitated rather widely over the surface in a manner most extraordinary for gold mining. The remineralized mud flows had some especially rich gold deposits on the surface—gold, in fact, had even precipitated on old (thousands of years old, that is) wood chips in really a most irregular manner. Prospectors got the notion that Thunder Mountain (or at least the rhyolite mud slides on it)

was a mountain of gold; there was enough solidification of mud slides from the action of salicic acid as to give these essentially placer deposits the appearance of soft rock which might be worked by quartz methods. The gold (already precipitated by carbon through a process much like that of a ball mill) was easily recoverable, and the enriched surface concentration of the hillside mud placers gave an entirely false impression of the extent and richness of the district.

In the early phase of Thunder Mountain's mineral development, some less scrupulous promoters contributed even more in the way of artificially brilliant gold assays. Salting the samples ("salting" is the deceitful process of enriching a sample after it is dug by slipping some already mined gold into the test before assaying) was more than ordinarily common: John Oberbillig, for example, assayed there in 1904 and caught some of his clients salting their samples so thoroughly that even barren bull quartz would go \$20 a ton. Yet natural surface enrichment in the initial claims gave Ben and Lou Caswell good enough returns that they had no need to resort to fraud. They were not trying to peddle their claims, since they were gaining handsome returns for a very short mining season each spring when melting snow provided water for a few days high on the mountain. They had no way of anticipating that their mountain of gold was actually a mountain with a gold skin. Before this unusual deposition of gold could be evaluated accurately, however, they got involved in one of Idaho's wildest mining developments.



Returning to their ranch on Cabin Creek, Ben and Lou Caswell prepared for an enlarged operation in 1898. Reinforced by another brother, Dan Caswell, and his Montana partner, they obtained about \$3,000 in their two-week season and managed \$4,000 during a similar run with a small hydraulic giant in 1899. Because they could sluice only a short time while melting snow provided water on the mountain, they managed only brief annual seasons. They received publicity sufficient to attract a number of prospectors in 1899. That fall, S.W. Emerson reported in Grangeville:

The ledges are composed of talc throughout which are found kidneys of sulphide ore that goes \$3600 tr [sic] the ton. The talc is dug out and allowed to slack one year and is then run through sluices which virtually make a placer mine of a quartz proposition. The tailings after slacking from ten to twelve months are put through the sluices, giving good return for the labor

expended. In fact the tailings sluiced the third time will pay expenses. A stamp mill would save nearly all the values, it being strictly a free milling ore.

H.E. Taylor, impressed by the geological similarity between Thunder Mountain and Colorado's Cripple Creek district, where he was an experienced mining engineer, concurred with Emerson. After a Caswell recovery of thirty pounds of gold in only forty-two hours of operation with a small hydraulic giant in 1899, he anticipated that with "immense richness" and "phenomenal surface showings," Thunder Mountain was "destined to be the leading gold camp in Idaho." Efforts to interest substantial investors proved more difficult, however. Taylor organized the Thunder Mountain Consolidated Gold Mines Company with Weiser capital. His plans to bring in a twenty-five-ton Huntington mill in 1900 proved to exceed his investors' resources, and his venture collapsed.

A search for wealthy mine owners eventually produced better results. J.R. DeLamar, who had gained a fortune in developing large-scale mining near Silver City, had Thunder Mountain checked out by engineers prudent enough to keep him from going into a losing proposition. W.H. Dewey, another large Silver City operator, was less fortunate. His son, E.H. Dewey, had excessive confidence in Thunder Mountain. In 1900, after seeing a \$500 short run Caswell production, W.H. Dewey agreed to purchase the property for \$100,000 if a full investigation should warrant such an investment. Dan Caswell certainly had a good operational report:

In a run of 72 hours this season, with hydraulic power, they took out 29 pounds of gold, avoirdupois weight. The gold is worth \$13 an ounce. The 29 pounds was worth between \$5000 and \$8000. They worked this year an area of 75 feet square and to a depth of three feet. These placers are nothing more nor less than a huge porphyry belt. The material is dug out and slacks, after which it is washed. Below a depth of three feet it is too hard to work by this method, but carries as much gold as from the surface to that depth. The extent of this auriferous porphyry is not known, but the whole mountain appears to be porphyry. Three tons were crushed in a mill at Warren to test the value. The three tons yielded \$31.10, or that is the amount that was taken from the plates. The battery was not cleaned. A big mill will some day be put up on Thunder mountain which will in a not very distant day no doubt be one of the greatest camps in the state. Citizens of Boise are now talking of constructing a wagon road to Thunder mountain. The cost will be about \$15,000. The Caswell Brothers have a team and expect to drive as far as Penn basin, 25

miles from Thunder mountain. The route is by way of Bear valley, where they leave the state road. From there to Penn basin there is almost a natural road.

But, aside from a passable road through Penn Basin, more was needed than some small, yet profitable, surface placering of an outcrop which could not be identified as a vein. They had a rhyolite cliff with values exposed to a depth of two hundred feet along a length of five hundred feet. This whole surface ran an average of \$14 a ton. Some strata went as high as \$100 a ton, and some pans as high as \$10. William E. L'Hame asserted: "It is impossible to pick a sample on the face of this cliff that will not pan, and yields of fifty cents to one dollar to the pan are quite frequent." Volcanic basalt and other intrusions made for complicated geology. Yet L'Hame noticed that "mineralogically and structurally it is strongly suggestive of the famous Cripple Creek region of Colorado." Because recovery so far at Thunder Mountain had not exceeded half of what gold was processed, L'Hame foresaw a truly bright future. So was it reported about W.H. Dewey:

He [Dewey] immediately put men to work developing them and several tunnels were run a distance of eighty-four feet and the ore taken out went \$13.50 to the ton. In another much shorter tunnel the ore went \$8 to the ton. Up to this time, not including that taken from the tunnels, 460,000 tons of ore has been broken. Mr. Reed, an experienced miner, who has been at work in these mines, has reported that he fully expected to find a sixty foot vein.

Colonel Dewey has ordered two mills from Chicago, one of which will be here by the 10th of June. One is a 10-stamp mill, which will crush from 50 to 70 tons in a day, the other is a 100 stamp mill and will crush from 500 to 700 tons of ore. The wagon road at present only goes to within 50 miles of the mines and will not be built in this year, as it is thought everything needed can be packed in. The colonel thinks he now has without exception the best mines in the United States and he is going to push the work of development, and it will not astonish anyone who knows anything about this region if the greatest gold discovery of the age is made here.

Impressed with the results of his investigation in 1900, and with Thomas C. Reed's report in June 1901, Dewey decided to go ahead with the purchase. Reed had shown Thunder Mountain to F.J. Conroy of Pittsburgh, who

brought out 100 samples for assay. Each represents 100 pounds of ore, carefully sampled. Each 100 pounds was crushed, mixed and quartered. The samples were taken from the tunnel, cross-cuts, croppings, and slides. Samples were taken every five feet in the tunnel and cross-



cuts . . . Samples were not taken from all the claims, and this was not really necessary. A sample of one is virtually a sample of all. Assays will be made of samples taken from three or four of the claims.

Dewey sent out eight miners with Locke's pack train. This will make a force of eleven men. Three miners have been at work this Spring and Summer. Four were employed during the winter. The tunnel, with cross-cuts run each way, measures about 300 feet.

At this stage, the Caswells professed disappointment. With additional help from William Huntley, they had increased their total recovery to over \$20,000. While so engaged, they had come across a truly rich pay streak that they thoughtfully covered up. A five- to seven-foot vein, forty feet long, ran as high as \$9.80 a pan. An especially valuable three-foot section of the vein yielded \$3,000 a ton. "Four sacks of ore taken from a width of seven feet gave returns of \$1997.21. Another sample taken where the ledge is five feet wide, assayed \$1000.83." Sometimes they contemplated developing the property with Richey and Huntley, hoping that Dewey would reject their offer to sell. But Dewey's energetic development dashed any such hope. (Actually, they were just as well off to realize \$100,000 instead of losing a fortune that they did not have.) So they finally chose to get out as soon as possible. Using their rich new find as an incentive, they induced Dewey to complete his \$100,000 purchase immediately, rather than wait until 1902 as originally contemplated. Dewey was going ahead anyway, so their insistence did not inconvenience him much just then.

Very flattering reports continued to emanate from Thunder Mountain even though those better discoveries remained confidential. A prominent, but unidentified, Boise miner told E. W. Johnson on July 9, 1901:

After thoroughly looking over this country I am forced to believe that the greatest mining camp in Idaho will soon spring up in the Thunder Mountain region. All it will require is a little nerve and capital to open up these mammoth mineral veins. Prospectors are coming in from all sides and already vacant ground is scarce. Several parties are here waiting for their associates who are coming in with money to secure property and there is no doubt but there will be lots of development work going on here soon. Every day there are reports of rich strikes being made all around here and these reports are backed up by samples of the ores found. Never before have I seen such surface showings as in this camp. With capital to open these big ledges Thunder mountain would astonish the mining world.



Thunder Mountain mining area

Information reaching the *Lewiston Tribune* from Grangeville was equally enthusiastic:

Parties arriving from the Thunder Mountain country report that the work has been progressing all winter on the property of Col. Dewey and has shown up an extent of ore and values that is marvelous. This has always been considered one of the richest sections in any part of the State, and indeed ever struck. When the property was in the hands of Dewey's grantors and Mr. Woodruff was managing the mine, he assured his company that if they sold to Dewey he and not they would make millions out of it. But they sold and the facts so far demonstrated proved him right. The property under the management of Dewey has been worked all winter by a force of from eight to twenty-five men, and a large number of cross-cuts, tunnels and shafts have been sunk to ascertain the extent and values of the ore body. It is demonstrated, as has always been contended, that the whole mountain is practically one dyke of ore. Assays have been made nearly every day of a large number of samples from all the workings and the company claims that, making every allowance that could be asked in computing the average values, and then cutting the result in half, the ore in sight if it goes no deeper than the shafts so far sunk, which is about 110 feet, is worth \$6,500,000. Assays are taken to average about \$6 to \$8 for the whole body of ore. The enormous total is practically only the surface of eight claims. Other properties in the region are as good apparently.

S.B. Edwards, "one of the best known prospectors of Idaho," had encouraging information based upon his own experience there in 1899 and 1900.

A year ago this summer he [Edwards] discovered some float which struck him as representing something of value. Upon his return in the fall he had assays made of this float both by James A. Pack and Thos. Manning. Pack's assay gave values of \$48 in gold and 6 ounces in silver. Those of Assayer Manning were \$44 in gold and 4

ounces in silver. These most encouraging assays of the float led Mr. Edwards to return to the Thunder Mountain country early this spring and seek for the ledge from which the float had come. His efforts led to the discovery of a blind lode upon which he has made three locations all showing ore of a most excellent character.

Ores from these claims have also been assayed by Albert B. Sandford, assayer of the custom house in Denver, Colorado. Mr. Sandford's assays show considerable higher value than those of Pack and Manning, some of them going as high as \$100 in gold and 48 ounces in silver and from 60 to 70 per cent or nearly \$600 a ton.

He further declares that there is room for a thousand prospectors yet remaining. The country is not half prospected. There are probably at this time in Thunder Mountain and the section surrounding it 400 men, but new prospectors are coming in every day. These come from all quarters, from Warrens on the west, Salmon City on the east and from Boise and the southern section. The number now in there will be doubled before snow flies.

Mr. Edwards says he looks for the biggest finds to be made in Thunder Mountain that the northwest has ever seen. He has unbounded confidence in that section and says that Thunder Mountain means to Idaho what Cripple Creek and Leadville mean to Colorado and that the district is a far more extensive one than any that state ever saw. Thunder Mountain itself is nothing but a mass of ore. This has been fully demonstrated by the operations of Col. Dewey and his associates. It is ore everywhere. To be sure much of it is low grade, but the almost limitless quantities in sight will make it one of the most productive sections of the world. He prophesies that it will more than equal the celebrated ore mountain of Treadwell's Island in British Columbia.



A genuine Thunder Mountain mania was finally built up from the impact of countless reports of great mineral wealth. Thunder Mountain had a romantic name anyway: acting as a sounding board for lightning which danced off nearby Lightning Peak, that somewhat inconspicuous mountain offered legend writers a welcome opportunity to display their talents. While Thunder Mountain was gaining interest everywhere, some practical problems had to be faced. W.H. Dewey raised enough capital in Pittsburgh to assure purchase and development of his Caswell property. To get a road necessary for hauling in a large plant, he offered to put up \$10,000 of a \$20,000 estimated cost if Boise subscribers would match his share. While they

contemplated this venture, Dewey's initial ten-stamp mill - designed so that packers could get it in over a mountain trail - arrived for shipment to Thunder Mountain. Upon a very strong positive engineering recommendation, Boise's Chamber of Commerce decided on August 16, 1901, to join Dewey's road project. John Pilmer, their agent, assured them that

Thunder mountain and its vicinity was an entire revelation to him. Before going in on this trip, he was considerably prejudiced against that section but he returns firmly convinced that Thunder mountain is the greatest mining camp on earth today. He says that the entire mountain is a solid body of ore. In appearance it is very similar to some of the white, chalklike cliffs of the Snake river.

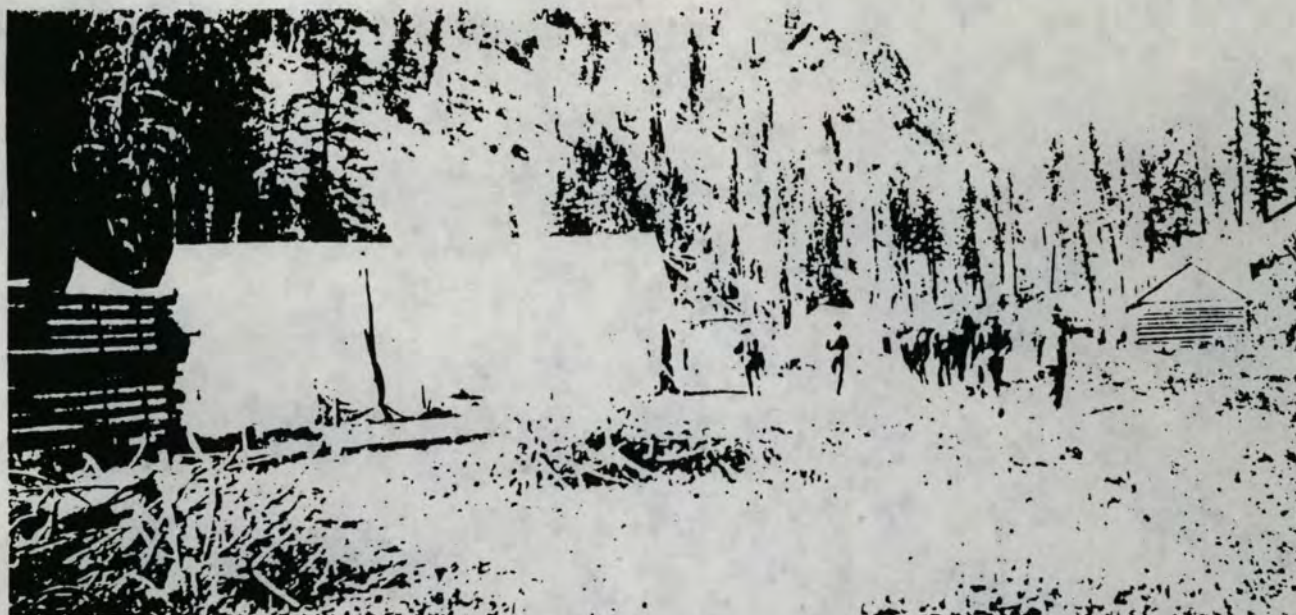
The mountain has a topping of lava, which is broken away upon all sides. The formation itself is a very soft porphyry, every part of which is ore. This decomposes very rapidly upon exposure and from this source came the gold discovery by the Caswell brothers. The whole side of the mountain disintegrates by the action of the elements and sloughs away to the lower ground. This has been washed in the placer mine with excellent results but the dumps are still nothing but quartz containing much gold.

The Dewey tunnel and all those being driven into the mountain are all in ore. There are no hanging or side walls and but little or no difference in the value of the ore at any given point.

Mr. Pilmer thinks that open cut mining, similar to the operations for many years carried out at the famous Treadwell mine in British Columbia, must be followed at Thunder Mountain. He says it is the greatest proposition he ever saw and states that a 1000-stamp mill, if started tomorrow and operated continually for a thousand years would still leave vast quantities of ore unmined.

Reassured by this enthusiastic response, and in need for early construction before another winter's delay intervened, Dewey offered to go ahead, advancing the initial costs. Then when Boise subscribers succeeded in raising only \$3,000 (less than a third of their share), Dewey became impatient. After more than a month's delay, he called his entire proposition off and decided to build his Dewey Palace Hotel in Nampa and to find a Long Valley route for his road. Meanwhile, he had his original mill packed in through Bear Valley and Penn Basin along his original route. This involved great expense. Lem York reported:

Supplies and machinery are freighted to Bear Valley, about 100 miles above Boise, where they are transferred to the big pack trains and transported 80 miles further to the mines. To one who has not been over the route no conception of the



View of Thunder Mountain

difficulties encountered can be had. Every pound of freight has cost the operators  $6\frac{1}{4}$  cents per pound, or \$125 per ton, and it is safe to say that the transportation charges have greatly exceeded the first cost of the invoices.

At the date of our visit, September 1st, the camp presented a very lively scene. Men were hurrying here and there: trails and roads were being graded; wood and timber for the mill was being 'snaked' in from the surrounding timber; carpenters were busy erecting a two-story boarding and bunk house; the mill grade was ready for the foundations and most of the machinery was piled in the yard ready for erection. Prospectors, with their pack outfits, attracted thither by the stories of vast wealth, were coming and going, quite a 'tent town' being established on the bench above the mine. It was a scene calculated to take the mind back to the pioneer days of Idaho, for Thunder Mountain certainly occupies a frontier position.

Through the courtesy of Supt. Reed, our party was taken through the now famous mine, which has been opened by cross-cuts and drifts aggregating some 550 feet; all in ore. The work has been done in the shape of a cross, thoroughly demonstrating the uniform value of the rock. No timber is required. The ground is easy drilling and breaks fairly well. Fifty-two samples, each weighing 200 pounds were taken from the property, outside and inside, a few weeks ago, the average value being a fraction over \$6 per ton in gold. When it is considered that this ore can be mined and milled for less than \$1.00 per ton, its value can be partially realized. It is calculated that seventy tons can be treated daily with a

10-stamp mill now in course of construction. The ore is very free milling, the values being readily saved on plates. Some twenty-five men were employed in and about the property at the time of our visit, but we understand that the number has now reached about 50.

Considering Thunder Mountain's potential, this effort was worthwhile:

Its formation (in the language of the prospector) is porphyry and basalt, the line of contact extending nearly east and west, the south side of the mountain being basalt and the north side porphyry. And it is a mountain of gold! Whatever its origin - whether it came up, fell down or slid in, we cannot say - but the fact remains that the whole mass of conglomerated material carries the royal metal in paying quantities. There are no veins. Not a piece of quartz, even, can be found in that marvelous monument of mineralogy.

Martin Curran, who completed Caswell sale arrangements, returned with assurances that his \$100,000 investment was purchasing two million tons of ore. Having been shown the secret Caswell discovery, Curran had interesting statistics to support his optimism:

Nature did wonders for this property, as the great vein or zone stands up from one hundred feet on the westerly end to one hundred and fifty feet on the easterly end, over the level of the surface exposing the great ore body for more than three thousand feet in length, and from one hundred to one hundred and fifty feet in width, leaving exposed one million five hundred thousand tons of pay ore at a conservative



Thunder Mountain tug-of-war and sack race shortly after 1900

estimate of ten million dollars.

The underground workings consist of about five hundred feet of cross cuts and drifts, every foot in pay ore. Main cross cut, sixty feet, samples seven dollars and eighteen cents, pay ore still in face west drift cross cut fifty-five feet, six dollars and twenty-seven cents. Face of west drift, seven dollars and eighty-two cents dark ore. On south side of west drift one hundred and forty-eight dollars and twenty-nine cents. At this point it requires a cross cut south to determine width of this high grade ore, also forty feet cross cut north to go through ore, such as the face of the west drift. At present it is unnecessary to do any more work in the mine until the mill starts, as it is easier to handle the ore from the mine than the dump.

On the surface and about the center of the great ore body and between the two underground cross cuts there is a very rich chute of ore, forty feet long and from five to seven feet wide, that assays as follows: Seven feet, \$1975.84, \$1000.93; five feet, \$199.78, \$266.20. If this rich chute carries the same values to the tunnel level, same width and length (estimate one thousand tons, average value \$860 per ton, or \$860,000.00), the property can furnish one thousand tons of ore per day, as soon as there are a few chutes put in the mine to load cars from, and can be mined for 60 cents per ton. The property requires 200 stamps, and with that number in operation the property will pay \$150,000 per month.

The property is situated near plenty of wood and water and can be worked by tunnels for a great number of years. The saw mill is all on the ground and will be sawing lumber by the 10th of the present month, also ten stamp mill in course of erection and will be in full operation about December 1st, 1901.

William E. L'Hame concurred:

I consider the formation identical with that of

Cripple Creek. It consists of royalite intersected by phonolitic intrusions. The greatest values are met with at the contact of the dyke with the overlying volcanic breccia. The position of the dyke shows that it was one of the last of a series of volcanic actions which took place at a period probably antedating the Cambrian age. At the intersection of the dyke with the other strata the same is crumpled and crushed, giving special opportunities for the mineralization of the same.

It is also proper to assert that the carbonaceous material which is found in the volcanic tufa in the form of fossil has the effect of precipitating the metal from the auriferous solutions which accompanied the dyke during the process of eruption.

I believe the ore presents special facilities for free milling on account of its chemical composition and makeups, pyrites and other base metals being almost entirely absent. Samples taken from the deposit showed values of nearly two thousand dollars per ton, ranging downward, too, of course, less in places. It shows on the surface several hundred feet of valuable ore that has been exposed by hydraulic workings a distance of maybe five or six hundred feet in length, and two or three hundred feet wide. The values so exposed will probably range all the way, as far as I am able to say, from two to three hundred dollars to as many thousands. Mr. Richie showed me a place about as large as this little corner by the door in which they took out three thousand dollars. Mr. Richie panned \$2 from one pan of dirt he took from the top of the hill. There is an immense amount of slide rocks and the dirt between it all assays very big. There is a great amount of gold in it, and all the tailings that have gone through the sluicings contain a very appreciable amount of gold. There is an immense amount of ore - a whole world of it. I think all the slide rock has gold in it, and if it is all auriferous material there is a million tons of ore

in sight there. That is a very fine mineral section in there.

Thunder Mountain is a mountain of ore; there is nothing like it; it is no hill, it is a mountain. There is all the reason in the world to believe the deposit is continuous. I have not seen any mine in the country that makes as fine as Thunder Mountain. I consider it second to none in the United States.

E. W. Burton of Murray came out with a slightly different impression of Thunder Mountain.

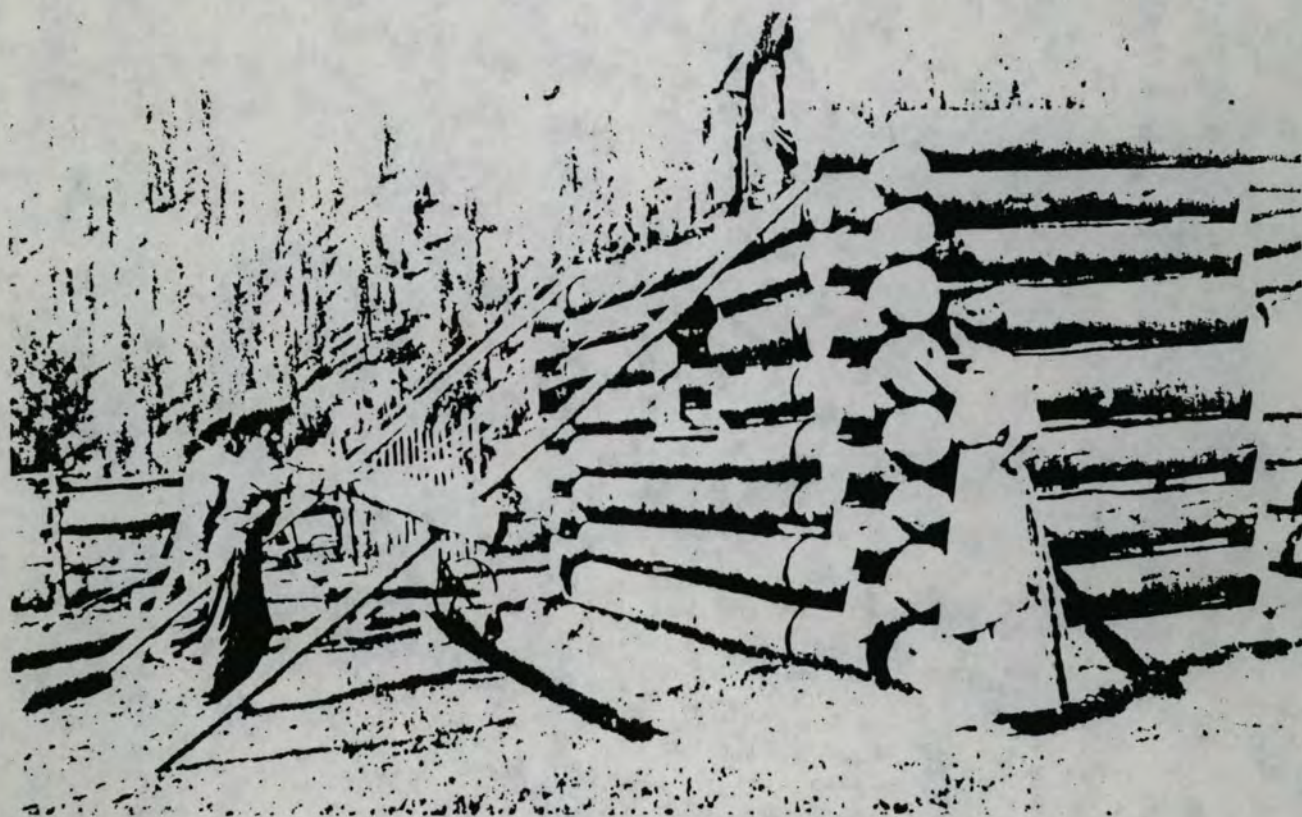
[Burton] formed a favorable opinion of the new camp, and declares it to be unlike anything ever discovered. He claims that it is simply one vast field of decomposed mineralized rock. Some call it quartz; others designated it as porphyry. Its real value as a whole had not been determined, as there were miles of it. It looked like a vast overflow of some crater, which spread as it continued to discharge. There were no doubt some rich streaks in it, but the mass was low grade, and the methods of working would have to be on a very large scale, so that thousands of tons could be reduced every 24 hours. Water is plentiful within a short distance, but fuel is scarce. It is not, in a strict sense, a poor man's camp, but many miners will be employed there in time.

An even wilder report emerged from Challis: Thunder Mountain is all the rage in this part of

the world. There is nothing peculiar about Thunder Mountain to look at in the distance. But when one gets to it there is something peculiar about it. Thunder Mountain is a big mountain, and nearly all the formations that are common to Idaho are represented except lime. The make-up of this mountain consists of nearly all the different granites, porphyry, rhyolite, sandstone and a little quartz. In the sandstone is found small seams of lignite stone coal.

While all kinds of accounts of Thunder Mountain circulated during the fall of 1901, Dewey's crew finished installing a mill engine and boiler scheduled to start processing ore in December. Freight costs from Boise ran 12 cents a pound, but once installed, the mill was expected to process free-milling ore at only \$1 a ton. They also employed a string of 120 pack mules to get in their winter supplies late in November. Important new discoveries on Monumental Creek three miles from Dewey's property added a new dimension to the mining, and accounts of other valuable finds over a broader area created still more excitement.

In preparation for a grand rush, Boise's Chamber of Commerce went ahead in constructing bridges and road segments which W. H. Dewey had backed off. The cities of Weiser, Emmett (rail



Building a cabin at Thunder Mountain

terminal for Dewey's new route), Grangeville, Dixie, Salmon, Mackay, and Ketchum also began to advertise the routes to Thunder Mountain. Other purchases of claims, mostly selling from \$5,000 to \$10,000, helped boost interest. W.H. Dewey, returning from Pittsburgh with his \$100,000 to complete his Caswell claim transaction on November 16, was reported as being boldly extravagant in announcing his expectations in Chicago:

Colonel W.H. Dewey of Idaho believes he is the richest man in the world or that he soon will be. There will be trumpet tidings from Idaho within two or three months, he says, tidings that will proclaim Idaho and American Transvaal or a United States Klondike, that will pale the fame of Cripple Creek or any other old diggings. The colonel carries in his pocket a little vaseline bottle filled with pure gold, all extracted from just three pounds of quartz. He knows a man who made a bet that a pound of rock from the new Idaho field would result in from \$60 to \$80 worth of gold.

Alvin B. and Daniel G. Caswell went out to Ogden and Denver to tell their story of sudden wealth and to explain how they had discovered more mines at Thunder Mountain.

Without waiting to see how his ten-stamp mill worked out, W.H. Dewey ordered a \$250,000 second mill with one hundred stamps so that he could process his anticipated \$200 million gold mine more quickly. Professor E.H. Mead, while not trying to estimate how much ore could be developed, assured the Union Pacific Railroad that one deposit alone, extending 250 feet in all directions, with no foot or hanging wall anywhere, equalled a 2,000-foot vein. He regarded Thunder Mountain as "the most wonderful mining country I ever expect to see." Already ore "enough shows that will keep a 100 stamp mill going indefinitely." In Minneapolis, Avery C. Moore estimated that fifteen thousand miners would head for Thunder Mountain in 1902 "as soon as the snow melts." Only twelve log cabins and a two-story building were available to accommodate that rush. Late in December, a major stampede was anticipated to Idaho's "Mountain of Gold," in which "Stone Coal, Charcoal, Petrified Wood and All Kinds of Usually Barren Mineral Yield Up Treasures." A Grangeville report on December 26 about L.A. Leland and Frank E. Johnesse outlined Thunder Mountain's attraction:

'You may say the truth about Thunder Mountain is fully up to the most extravagant stories that have been published anywhere,' said Mr. Leland. 'It is a geological revelation. The saying is almost universal that quartz is the mother of

gold. Thunder Mountain disproves this, for there is almost no quartz there, and that little is found only incidentally. But there is almost everything else, and gold in it all. One finds stone coal, charcoal, petrified wood, and all kinds of barren rock here, impregnated with flakes of gold. You can pan gold out of almost everything on Thunder Mountain proper. How it got there, no one knows. A vast primeval conflagration might have melted the gold, and driven it out either molten or in fumes, so that it filled everything. But there it is, a puzzle to all who see it.

'There is almost no stratification in the camp. It is veritably a mountain of gold. Rhyolite is the chief deposit, although almost everything is found in the most uncommon conglomeration. The mountain has been compared to the Rand reef in the Transvaal.

'There is probably not a pound of spare food in the camp today. I took in 100,000 pounds of vegetables by pack train from the Caswell ranch, last fall, but I understand they are already short. It would not be advisable to attempt going in now, as one could not take in enough supplies to last, and there is nothing in there.

'Every foot of ground for the three or four miles square of Thunder Mountain has a claimant. Fractions are eagerly sought. But there may be other districts just as good near by, only they have not yet been uncovered.'

Although more appropriate for a humor column than for an explanation of a \$30,000 mine sale, this kind of report was issued all too often as the Thunder Mountain mania built up. Late in December another Pittsburgh sale, this time for \$125,000, outclassed Dewey's purchase. By December 28, W.H. Bancroft of the Union Pacific increased his traffic estimate to twenty thousand people headed for Thunder Mountain, with passengers expected from all over the United States.



As excitement grew nationally, mining at Thunder Mountain slowed down when winter arrived. Dewey's ten-stamp mill was completed on schedule in December, and five stamps were tested. But ore could not be processed until January 3. Winter snow also halted prospecting. Close to a hundred miners worked on their claims, but they could only prepare for later production. Communication was almost cut off with Warren: three miners spent four days, from December 21 to 25, getting out on snowshoes and suffering freezing cold on the difficult trip. Aside from the thirty to forty Dewey employees, who had been taken care of adequately, provisions were scarce and prices were high for all other miners. A November pack train from Warren would have supplied Thunder

Mountain's growing market if snow had not blocked the trail. No more could come through until spring. Warnings were issued to prospective miners to stay away unless they could bring in their own supplies - a practical impossibility. Costs of claims, ranging from \$1,000 to \$15,000, were also inflated greatly. Fred Holcomb, a pioneer miner, warned:

Thunder mountain [is] not a poor man's camp, and those who go there expecting to find it one will be disappointed. The whole mountain is covered with place rock, but there is no water that could be diverted to handle it. The Caswells appropriated all the water that could be diverted so as to be used for placering. You see, the placer dirt is on the highest mountain in that part of the country, and the water is all below it. The dirt isn't rich enough to haul it to water.

Another prominent Idaho miner, A. J. McNab of Salmon, although "quite enthusiastic over the possibilities of the country" after prospecting thirty-six square miles at Thunder Mountain, also warned miners in January 1902 to wait:

It is foolish for those seeking an intelligent foothold on Thunder Mountain to undertake a trip into the region at this time as it holds out no refuge to the traveler and exposes him entirely to the chance of reaching a cabin.

Unable to get to Thunder Mountain, impatient miners began to pile up in Warren, ready to dash on in as soon as an opportunity should offer. Stage lines from Union Pacific stations in Ketchum, Mackay, and Red Rock, Montana (operating via Salmon), also prepared in January 1902 to offer service over nonexistent roads (through country in which roads still have not been completed eighty years later) when winter might break. Seventeen Concord coaches were procured for a line from Red Rock alone.

At Salmon Meadows, Charles Campbell (one of Idaho's most prominent ranchers) noticed that local packers were trying to break through to Warren to get in advance of the gold rush. Campbell was reported to have this reaction:

During his long residence in the west . . . [he had] never seen conservative men lose their heads under pressure as they have done in his section of the state for the past 90 days. 'All the people of the country have the fever,' said the visitor [Campbell], 'and if only one-quarter the stories they tell about the camp materialize, it will be the greatest mineral belt ever discovered. Scarcely a week passes but some one comes out over the trail from Thunder Mountain, and I have yet to meet the first man who says the *find* is not a wonder. When old time miners tell you it is the greatest thing they ever saw, it must have some merit.'

While the townsite of Roosevelt was being

promoted in Boise to serve Thunder Mountain, living conditions on the mountain grew critical. When Allan Stonebreaker left Thunder Mountain January 19 on his regular semimonthly mail trip, sacks of flour were selling for \$20 to \$50 each. Only a few were left. As supplies neared exhaustion, about seventy-five miners had to prepare to retreat from their isolated camp. New rich discoveries, selling for \$5,000 a claim, were reported. But right then, groceries were more in demand than gold.

In an effort to alleviate Thunder Mountain's shortage, Frank Andreas set out from Boise on February 3 with a large dog team hauling a ton of provisions. Two other packers left Grangeville with dog teams at the same time. They immediately were followed by an advance wave of the great 1902 gold rush to Thunder Mountain. Packers with horses began to break their way from Dixie through Chamberlain Basin to Thunder Mountain, and other pack outfits were assembling in Bear Valley. Even winter snow could not quite halt the rush. Extravagant testimonials about Thunder Mountain continued to fill Idaho newspapers, and impatient fortune hunters simply could not afford to wait. When Allan Stonebreaker made another postal trip to Dixie on February 6 to 8, he met thirty-five parties of gold seekers. By then the trail was in good shape for horses, with no snow depths exceeding four feet. About everyone who had stayed at Thunder Mountain was selling claims to newcomers. Those who rushed in early in 1902 thus had an unmatched opportunity to assume losses inherent in buying claims there, while those who had spent an expensive winter had a chance to recover some of their investment in time and travel cost.

Winter travel to Thunder Mountain remained somewhat hazardous on some routes. On February 10 at least three miners were lost in a snow slide near Elk Summit between Thunder Mountain and Warren. That misadventure did not slow anyone down, though. Some continued to use dog sleds, although others did their own hauling. A horse and dog sled party left Florence on February 11:

A snowshoe and rawhide outfit of horses and a large dog train passed through here today en route to Thunder mountain. They expect to be on the road from here about one week. The only trail breaking they will have to do is from the Snowshoe cabin across Salmon river bridge to the Warm Springs, about 18 miles, which they will do with a bunch of horses they have on Salmon river. From the Springs to Warrens and thence to Thunder mountain the road has been kept open all winter. This dog and rawhide train has been on the road from Grangeville to the Salmon river three days and it will take them three days more

to reach Warrens, from which point they will have good traveling. There is plenty of feed for horses along the entire route via Grangeville, Florence and Warrens, with good hotel accommodations.

On February 13, a Grangeville crew included experienced old timers who had been to Thunder Mountain years before, as well as others who had come out that winter:

A large party of argonauts left Grangeville this morning, for Thunder Mountain. They will go by way of Florence, the state bridge and Warrens, having contracted with Tom Walton to take their supplies as far as Warrens. Each of the men took about 150 pounds of supplies—50 pounds of flour, 30 of bacon, and the rest of the weight being made up of tea, sugar, beans and bedding. In the party was one 25-35 Winchester rifle, for the deer that are numerous in the Thunder Mountain country; also one 22-calibre for birds and small game. From Warrens, each man will pull his supplies on his own rawhide toboggan.

More dog teams began training in Boise, where problems such as snow slides near Thunder Mountain did not deter those who wished to leave early. Expectations that mills with 2,000 stamps could soon be hauled there made everyone eager to get in while some potential claims were still left to prospect. News of important new discoveries on February 2 arrived in time to encourage more dog trainers. Ben Caswell confirmed reports that he had declined a number of offers of \$100,000 for his new claims after selling to Dewey. Finally the Caswells sold their new property for \$125,000.



Caswell estimated from his experience in Michigan and Pennsylvania that thousands of hopeful fortune hunters would soon be headed for Thunder Mountain. Competition between the Northern Pacific and the Union Pacific promotional departments for that traffic grew intense. With a variety of Union Pacific entrances (through Red Rock, Mackay, Ketchum, Boise, Nampa-Emmett, and Weiser-Council) and two Northern Pacific options (Lewiston-Grangeville and Stites-Dixie), local communities throughout Idaho contested for favor. Telephone lines from Boise and Blackfoot via Mackay were also projected to Thunder Mountain.

More snow in March and a shortage of fuel brought additional complications to the miners on Thunder Mountain. After two months of operation, Dewey's stamp mill had to shut down on March 10 for lack of fuel. All timber within a mile had been used up, and additional supplies could not be hauled in then. Everyone wanted to locate more

claims rather than operate a mill. About 250 miners had gotten to camp, but none wanted to work. Trails to Thunder Mountain also became more difficult to negotiate. In February, only two miles were open to anyone aside from hikers who had to drag their supplies over the stretch from Warren. But conditions grew considerably worse. Flour sold at \$50 a sack, and food shortages became more troublesome. Boise traffic could get through only by equipping the horses with snow shoes—an old mountain device to facilitate packing:

The trip from Thunder Mountain to Boise can be made in five days. It took me longer because I stopped on the way. I met two pack trains going in. They were composed of several horses drawing rawhide toboggans. The animals were all heavily loaded. The lead horses of the first pack train wore snowshoes, but the rest seemed to be getting along all right without them. The trains were making about 20 miles a day. I did not know any of the men and did not talk to them. There will probably be a scarcity of horse feed, for the reason that while a horse can draw feed enough to last him along the trail, he cannot do much more, and there is no feed at the other end of the route. The problem of feeding horses will be a serious one before the grass grows in that country.

Late in March, a long train of toboggans and pack horses left Grangeville prepared to break through to Thunder Mountain with almost two tons of supplies. These certainly were needed, as too many gold hunters continued to arrive empty handed.

'Not an ounce of food is to be bought in Thunder Mountain at any price,' said Sheriff J. Dixon, who arrived here today [early April] from Warren. 'Men are coming out every day as far as Warren for food, where they can buy staple groceries in limited quantities. It is an 80-mile trip, the way most of the travel goes now, and takes about four days either way. A man who is not well equipped will eat in the eight days coming and going almost all he can carry.'

'Ten cents a pound is being paid for freight from Meadows to Warren. The freighters won't touch it for less. Seven cents is also being paid from Warren to Shaffer's, 25 miles. A party of three Colorado men came through Warren with 1000 pounds of supplies on which they had paid this rate.'

'But the rush continues. One man who came out to Warren last week met four men going in without even a cracker. He divided his last three biscuits among them, telling them that they could buy nothing further on. Still they went in. Others are going not much better prepared. . . .

'A movement is on foot to shorten the distance over the dangerous Elk creek summit. The wind blows the snow up the long slope from this side,



whipping it over an almost perpendicular descent on the other side, thus forming a comb of snow 50 to 100 feet deep. This is continually breaking off and making dangerous snowslides down into the valley, besides necessitating a long detour. The plan is to dynamite the snow crest, let the resulting avalanche clear a new short road down into the valley and save the long detour.

"Ten degrees below zero was the record all through the mountains last week. Considerable snow has fallen. There are now between five and six feet of snow at Thunder Mountain, according to all reports."

New and larger mine sales helped compensate for the extended hardship in operations at Thunder Mountain. Another \$250,000 Pittsburgh investment, made in frantic haste on March 9, set off a new round of transactions. Marshall Field, S.W. Swift (noted for his meat processing), and George H. Phillips invested \$100,000 in fifteen important claims. Another \$40,000 transaction infused yet more capital into local mines there. By April, Dewey's company had invested about \$700,000 in Thunder Mountain, and that sum by itself amounted to double the total gold production realized there prior to suspension of mining in 1908. Pittsburgh capital also more than made up for Dewey's withdrawal from Boise's Thunder Mountain road project. A total of \$20,000 from Pittsburgh was pledged to match Boise's \$10,000 goal, so Boise's road builders seemed \$10,000 better off than they would have been if they had received Dewey's original offer. Dewey, however, opposed construction through Bear Valley because of the formidable problems his packers had encountered there in hauling his ten-stamp mill. So preliminary planning became embroiled in a hopeless controversy over whether to build and approach from Idaho City-Bear Valley, Placerville-Garden Valley, or Emmett-Garden Valley. Dewey wanted to extend his rail line from Emmett toward Garden Valley, but Boise and Idaho City complained about being bypassed with such a project. Meanwhile, promoters of a half dozen other routes clamored for attention.

Insulated by winter from most exterior anguish over how future miners ought to reach their camp, miners at Thunder Mountain had more than enough excitement of their own. Thomas Johnson reported that "there is lots of ready money in Thunder Mountain. Agents representing all sorts of wealthy clients are there with cash to buy promising properties. The camp is at a fever heat of anticipation." Johnson also had some good stories to tell of skiing in camp and on his trip out to Warren:

"The average Thunder Mountain traveler isn't in it with some of the trained mountaineers who are

going in," said Tom Johnson, just out from the big camp. "Why, a fellow got caught in a snowslide the other day, and slid for half a mile, along with rocks, trees and 100 feet of snow. What did he do but pull out his pencil and location blanks, figure out the distances by computing the rate of speed and counting the seconds on his watch, and he located three claims before he reached the bottom. He missed getting the fourth one by just one second. Fact, for I saw the slide."

Tom came out from Warren on skees, a month ago, and had a notable runaway from greasing the skees with a prepared dope to make them run more smoothly. This time he stuck to plain webs. Dave Pugh, however, who came with him, was on skees, and Tom persuaded him to buy a bottle of the dope. The skees ran away from . . . [him and dumped him into a bank] of snow. Tom says that his lecture on the genealogy of skees was a masterpiece of impassioned oratory, more picturesque even than the grand mountain scenery round about. Dave keeps a bottle of 'slick-em' as a stimulant for his vocabulary, when he runs short of words.

With miners everywhere trying to find new properties, claim jumping became a problem. Snow claims (of the kind Johnson satirized) also became all too popular. Of some 2,800 snow claims filed at Thunder Mountain from December through May, less than fifteen percent had any merit. A stampede to Indian Creek, twenty miles south of Thunder Mountain where prospects had been discovered the previous fall, enlarged this difficulty: "Only snow claims are being staked, the snow being six feet deep."



With the approach of spring, a grand rush to Thunder Mountain got under way in April. Impatient prospectors from all over Idaho and many western states filled all available hotels in Boise, Weiser, Pocatello, Blackfoot, Lewiston, and Idaho City, where the Luna House began to look like old times. Early in April, fifteen to twenty were leaving Lewiston daily to get closer to Thunder Mountain. Some—as many as sixty to seventy each day from all sources—were going all the way, although the lack of supplies forced as many to leave, so that Thunder Mountain's winter population (which rose from about 200 to 800) remained at a stable level. Places such as Campbell's Salmon River crossing (between Dixie and Chamberlain Basin) became cities of tents, with 150 to 200 eager miners camped at Campbell's. Organized efforts to open several routes for horses kept packers in Warren, Dixie, and

Bear Valley more than busy. But during April, none could get through. Operators from Warren got three burros across Elk Summit trying to break a horse trail April 18, but more snow defeated their attempt. Before horses managed to get over Elk Summit on May 15, a lone packer had gotten through from Salmon on April 29. Finally on May 12, Frank Andreas of Boise came in from Bear Valley with the first pack train composed only of dogs. His problem, in common with everyone else, had been late snow that was melting, so that travel had become more difficult than ever.

Dog trains, toboggans and all other modes of taking in supplies give way to packing in on one's back. No one, however, else he may have gone in, comes out for supplies with any other thought than of carrying them in. It is hard work, but is easier, quicker and more satisfactory than any other way. A Boise man who went in with us from Warren, carried two sacks of flour. Another man carried 80 pounds, though most are content to take only 50 or 60 pounds.

We heard of only one man in from Salmon City, though he reported a number along the road. No one has as yet come in from Ketchum and Hailey. Most of the travel is by the Warren route.

Comparisons naturally were made between the obstacles in reaching Thunder Mountain and those of Chilcot Pass into British Columbia from Alaska that were faced by miners on their way to the Klondike only four years before. A far greater number of men made their way over Chilcot. But they had to overcome problems which did not begin to compare with Thunder Mountain. The ascent of Elk Summit alone—with close to a 6,000-foot grade—far surpassed anything around Skagway. And that was only one of a number of major hills encountered. Thunder Mountain did not have nearly as severe a supply problem. But difficult terrain for winter travel held back most everyone who aspired to reach Thunder Mountain before spring. Supply trains eventually began to break through from all directions shortly after Frank Andreas' dogs showed what could be done. From then on, energetic miners could reach their destination without undue trouble.

Thunder Mountain received unparalleled publicity during April 1902. Idaho was expected to profit greatly from so much attention. According to Salt Lake's *Mining Review*:

The tidal wave of prosperity that is about to engulf the Thunder Mountain region in Idaho will bear on its crest many good things for the entire intermountain region. That this wave is coming and will soon be here is indicated in many ways. Every newspaper, at home and abroad, has something to say of this new El

Dorado; of the mineral wealth that has been found within its environments, and of the thousands that will soon be headed toward this promise[d] land, which, from all accounts, will develop a number of splendid bonanzas before the close of the present year. That this will be the case seems almost a certainty, and for two good reasons, one of which is that experts have stated that a vast area of country in this portion of Idaho is heavily mineralized, the other being that a small army of experienced mining men from Colorado, Utah, Montana, Nevada, California and western mining states will thoroughly prospect this region this summer, and if they do not succeed in finding a dozen or more of Monte Cristo propositions, it will be a nine days' wonder. As a matter of fact the whole western country will receive a wonderful impetus, as far as the mining industry is concerned, because of this rush to Thunder mountain, and the entire west will be benefitted. It was a boom similar to the Thunder Mountain excitement that made Cripple Creek, and gave to Colorado one of the greatest gold mining camps upon God's footstool. This movement promises as much for Utah, Nevada, Oregon and adjoining mining stations, within whose boundary lines there are many districts, rich in their deposits of the precious metals, which only need publicity to develop into as great producers as are to be found in the west, and this publicity will naturally be drawn to them as a climax of excitement and attention attending the splendid reports emanating from Idaho's new gold camp.

Hope was also expressed that mining, as distinct from publicity, would help develop Idaho:

'Thunder mountain is going to redeem Idaho as a state,' declared Mr. [Frank] Hobbs, 'it is going to make a payroll that will radiate in every direction. The Dewey company now has 100 more stamps going into the mine, and one of the big Pittsburg [sic] companies has ordered 250 stamps for its property on Big Creek, 30 miles from the Dewey. There is none of the usual uncertainty about following the course of a ledge that drops into the earth and no mining is necessary except to quarry out the mineralized conglomerate and convey it to the mill. The life of the camp is not dependent on railway transportation as stamps are the only machinery necessary and they can be carried in by pack train. The camp will make itself without any assistance other than the opportunity it is now receiving so lavishly of being operated in a large and proper way under capable hands.

Along with mines at Thunder Mountain, rival townsites also attracted investment. Not much could be done toward development until spring access became feasible. Roosevelt was projected for habitation all during the incipient 1902 gold rush, and so was Caswell. A somewhat prophetic notice

from the *Boise Clipper* raised questions about investment in Roosevelt:

The town is situated on Monumental creek, and sandwiched between two mountains at an angle of forty-five degrees, and from 3,000 to 5,000 feet high. The creek flows from 600 to 700 inches of water at its lowest, and has a fall of from twenty-five to thirty feet to the mile. The townsite of Roosevelt is about one and a half miles long and from 150 to 300 feet wide. The land is about two feet above low water mark. The stream is noted for its changeable channels caused by snow slides and ice drifts that cause the water to back up until it rises from ten to fifteen feet in places, above low water mark. From Mule up to Coney creek, a distance of about 300 feet, the mountain sloping southeast has been swept of nearly all timber by snowslides which have taken rock and earth and deposited it in the bottom of the gulch where the townsite of Roosevelt is located. The snowslides and high water have destroyed all the timber on the creek bottom as far up as Taylor's cabin. On the northwest slope on the east side of Monumental creek the snowslides have not done so much damage, as the mountains are covered with a dense growth of heavy timber. But, if Roosevelt should make a town this timber will be used and then there will be no protection whatever against snowslides and the danger will be greater, and some day Roosevelt will be wiped from the face of the earth. This year is an exception, there being only from five to seven feet of snow, and the snow hardly ever touches the snow on this slope.

If a man should build his house on stilts out of the way of high water, a snow slide is liable to come along and knock the props out from under him, and if he protects himself against snow slides the high water will drown him. Continual displacement of about five feet a year created havoc by misaligning placer ditches.

Although more optimistic observers scoffed that no avalanches disrupted life there in 1902, a potential problem still remained.

When melting snow finally allowed impatient packers to break some final barricades which had obstructed passage to Thunder Mountain, the great 1902 gold rush finally surged into Idaho's most remote mining camp. Considerable effort was required to surmount high drifts blocking ridges such as Elk Summit:

Three hundred and fifty loaded horses, and 100 men, crossed Elk Creek summit into Thunder Mountain, Sunday, May 25, is the word given out by O.H. Benson, of Florence, who came out from that camp yesterday to bring the good news.

An army of men shoveled snow all Friday and Saturday, and opened the trail. They are pouring into Thunder Mountain now, a regular

cataract of men. Everybody goes in by way of Florence, or up the Salmon, through Warren, these being the only routes open. Thunder Mountain is fairly flooded with supplies.

Within a week, another 1,200 pack mules and horses were lined up ascending Elk Summit bound for Thunder Mountain. The completion of a Salmon River ferry helped a throng of miners and packers get between Florence and Warren on their way to Elk Summit. W.H.V. Richards, a Thunder Mountain pioneer, who came out while most people were headed in, told a reporter how the ferry service helped out:

About 50 men and 425 horses were waiting to be put across the day it was completed. The road is lined with those going to the camp and old Alaska travelers say the crossing of the Elk divide seems like a miniature of the Chilcot pass in the numbers of men and horses which are constantly pushing over. When the road was first shoveled through two weeks ago about 500 men were camped on this side and pushed on over. Mr. Richards estimated that on his way out he saw from 1000 to 1500 men on their way in, either on the road or camped along the way. He says there are probably 4000 people now in the district, and before August he looks for 20,000 people to be there. Arrivals are coming in constantly increasing numbers by Salmon City, Council, Grangeville and Dixie routes, but the majority are going in by way of Warren. He came out by Warren and Florence and says that the only snow now to be encountered is patches between Adams and Florence; that the ground is shoveled bare on the Elk divide and that at the camp itself there is fine bunch grass and good feed all the way. Mr. Richards says that the Cripple Creek men who are at the camp (and the whole world has its representatives there) are enthusiastic over the prospects and say there will be at least 8000 people come to the camp from Colorado alone.

There is a town of about 100 tents on Marble creek, and log houses are just going up. On the west fork of Monumental creek; about two miles from Roosevelt, is another town site which is controlled by the O. R. & N. railway people and is most probably the coming town as there is a 200 acre flat which affords room for building, while the other sites are too narrow and steep in the canyons to permit much of a town being built.

There are three stores and supplies are plentiful at fairly reasonable prices. Flour is \$10 per sack. Some supplies are coming in by way of Salmon City, and pack trains are scattered all along the Warren road with provisions.

More than a few unusual outfits came in. One miner approaching Thunder Mountain through Idaho City pushed his belongings in a wheelbarrow. Another packer used cows instead of horses



Cow train to Thunder Mountain in 1903

or mules:

Everybody the past two or three days has been anxiously awaiting the arrival of the cow train from Boise. News of their approach was telephoned from the office of the Dredge company. Men and women—young, old, and middle-aged—as well as children, were out on the streets in groups, awaiting the coming of the caravan. The people here have seen almost all kinds of trains, and cows are not a curiosity, but a cow train packed with provisions, camp outfit and other things, is a novelty not often seen. Of the nine animals, six cows and a red bull were packed. They jogged along with their loads as gently, leisurely and contentedly as if they had followed the business from calfhood. The owners of the train are Homer I. and A.D. Clark. The wife of the former is with the train, and was on horseback, with a child in her arms. They are on the way to Thunder.

When a small dairy operated all summer supplied by pack cows which had resumed their normal occupation, the superiority of this transportation system was demonstrated effectively.

Although estimates of 4,000 miners were made by optimistic promoters, about 1,400 actually reached Thunder Mountain early in June. Eventually around 2,000 may have gotten there in 1902. Fortunately all but about ten percent of some 20,000 expected gold hunters stayed home. If they had not, Thunder Mountain would have faced serious problems compounded by isolation and difficult access. At best, this district offered little or nothing to an ordinary prospector. Thunder Mountain was a rich man's camp—not a poor man's. Most of the 2,000 to 4,000 expectant miners who actually got there were poor men who served no function in the area. Some went out to find other mining possibilities in nearby districts, but most simply had to return home.

Large investors made out better than impecunious prospectors did—at least until they found that they had invested in unproductive

mines. Some of them exercised appropriate caution in getting expert evaluation of potential mines, and still went wrong. H.L. Hollister of Chicago came back at great expense with a party of twenty horses and ten expert appraisers and engineers. He also had William Allen White, a noted Kansas author, along to enjoy the trip. Hollister acquired a number of important properties in nearby districts as well as the Thunder Mountain district after verifying values which would "warrant me in giving support to the district. It is a low grade proposition, but a place for big men with large capital, and for big mitts with large capacity."

Lewis N. Clark, sent out by James Guffey of Pittsburgh to supervise construction of a Trade Dollar power dam at Swan Falls, also investigated Thunder Mountain properties to justify an additional \$100,000 purchase by Pittsburgh investors. This action raised Pittsburgh capital at Thunder Mountain to about \$1 million.

Other observers concurred. A Thunder Mountain correspondent of Portland's *Morning Oregonian* explained:

I have carefully weighed all the evidence for and against it, have prospected the rock, had it assayed, and seen as much of the country as was to be seen. I unhesitatingly say that up to the present time there is not a particle of evidence against the camp, absolutely none; and there is much in its favor.

The development of the Dewey group has thus far shown it good, and with every probability of its being a big property. Back of Thunder Mountain is Lightning Peak. Some men brought down surface dirt from it and rocked out over \$50 in a couple of hours. South of the Dewey, and following its general strike, values have been found all along. From the rock, from an assessment hole, a mile to the south, I got an assay of \$5.29. The owner assured me it would not carry anything, and the reason he had done his work there was because it was the easiest place where it could be done.

Across Monumental, and to the west of Thunder Mountain, porphyry dykes bearing close resemblance to that of the Dewey cut the mountains with the same general direction or strike. Along these dykes good values have been found, and reliable and disinterested men have assured me that they have found colors in panning over a considerable area of that country. The same can be said of the Sunnyside district. Surface values can be found in every direction. That they will go down development alone can tell, but it is far from a discouraging sign of value at depth to find value at the surface.

The important thing for the prospector to learn in the Thunder Mountain district is what rocks carry the values. He will find different

conditions than he has probably encountered elsewhere. There are no quartz ledges in the immediate vicinity. The value seems to be in the porphyry. Rock of this character, that I brought out, and which had 'a lean and hungry look,' and I would have pronounced valueless, assayed well. A creamy white porphyry carrying large white crystals of feldspar went \$12.85; a blackish blue rock yielded \$29.68 gold. Of course there is ore of much higher grade. I brought out a slab of rock as large as my two hands that is plastered with gold - it is a specimen, and a pretty one, but not to be taken into account in reckoning the camp's possibilities from a business standpoint.

#### Some disagreed:

The general impression among some very conservative mining men now in the district is that there is nothing whatever so far developed to justify the boom; that it is the most overestimated district that has ever been foisted on the public, and that there will be quite a string of disappointed investors, who paid fancy prices and forfeit money, when they have had a chance to examine their claims.

There has been nothing of definite value developing on any group of claims in the district so far, outside of the Dewey group, and it is considered by some that the Dewey itself has not developed a pay-ore capacity in excess of its present equipment, which consists of a 10-stamp mill.

But major claim sales continued. W.E. Pierce of Boise realized \$40,000 selling Thunder Mountain properties in the east. F.W. Holcomb of Salmon did better on a \$65,000 transaction with Thunder Mountain's largest purchasers. Boise attorneys, James H. Hawley and W.H. Puckett, made \$73,000 in a Philadelphia transaction, and late in June, another \$100,000 purchase came from New York. Smaller, yet important, sales continued to help support mining speculation at Thunder Mountain.



Townsite development also absorbed Thunder Mountain capital while gold fever ran unabated. Only two saloons and three stores served all of Thunder Mountain early in May. With a great influx of miners, Roosevelt alone gained thirty-seven saloons out of 150 licensed (but not necessarily operating) for Thunder Mountain. By July, Roosevelt, Marble City, and Thunder Mountain City had about 400 population, and another 1,200 were out prospecting in an area of ten square miles. Two other cities, Caswell (an unsuccessful promotion) and Copper Camp, had less to offer. Fourteen saloons, ten stores, two butcher shops, two drug stores, a restaurant, and a barbershop

survived in Roosevelt until mid-July. All these enterprises, along with a residential district were accommodated in forty-two tents and four log structures. By that time, Thunder Mountain City had ten cabins and forty tents to house 250 miners. A month later, Roosevelt still had ten saloons, along with three dance halls to entertain miners in their leisure hours. A population of about 2,000 remained around Thunder Mountain in August. Five major mines employed fifty, forty, twenty-five, twenty, and fifteen men each. A number of smaller mines continued to operate, but most gold hunters preferred prospecting to working in mines.

In contrast to some other western mining camps, Thunder Mountain escaped an era of crime and disorder. Some claim jumping problems created concern. Thunder Mountain, in fact, never did have to dispose of criminal cases. Mining values - or the lack of them - did not attract a criminal element. Only one mill accounted for all production of any consequence, so little of any value was around to tempt a potential robber.

The high cost of living, amounting to \$5 a day into July, continued to restrict companies from hiring miners even if they could have found any willing to work. Even Dewey's mill had to shut down until prices declined in mid-July. Then this pioneer mine and mill managed to operate three shifts a day developing a large block of \$7-a-ton ore. A crew of thirty to forty men identified an orebody 2,000 feet long, 140 feet wide, and 180 feet deep. Ore taken out during development kept Dewey's ten-stamp mill busy day and night.

Several other companies devoted the year, 1902, to essential development work. They certainly needed to. One had invested \$125,000 in a Caswell property that had been tested to a depth of only ten feet. Generally the companies reported encouraging results, although some perceptive miners anticipated the trouble in risking so much acquisition and development expense on untested properties.

Two major companies decided to ship their one hundred-stamp mills to Thunder Mountain in 1902. One came on thirty freight cars from Thomasville, North Carolina. Dewey's mill filled forty freight cars from Chicago. Both trains had advertising streamers announcing that they were headed for Thunder Mountain. Dewey's mill got as far as Emmett. Lack of a road forced him to park it there for the rest of 1902. Boise's road got as far as Penn Basin that fall, but that did not help.

Dewey still had great confidence in his venture in spite of disappointing delay. He still was looking for miners to work all winter.

'If we can get them,' says the colonel, [Dewey] 'we will keep employed in the neighborhood of



Thunder Mountain miners

50 men. Superintendent Frederic Irwin's reports are very gratifying to us, and we have every confidence in our Thunder Mountain mines. Why, if the assays show only \$4.50 a ton with the inexhaustible ore body, we will add 500 more stamps, but I am convinced from the returns we have had that the greater portion of it will go much higher. We expect to spend \$1,000,000 before we get anything in return from these mines, and we are making this outlay with the utmost confidence in the district.'



Plans to retain around 600 men at Thunder Mountain for a winter season did not materialize during 1902. (Even if this arrangement had worked out, some 400 to 500 would have had to leave for lack of provisions.) Roads from Bear Valley, Warren, and Yellow Jacket (giving access to Salmon) were stocked for winter travel. But an extremely heavy and unexpectedly early three-week snowfall in November cut off Thunder Mountain

before winter supplies were in. Only 240 miners could be accommodated, so development was restricted.

Legislative support for a Thunder Mountain road led to funding of a state wagon road from Long Valley to Roosevelt. Two seasons' work went into construction, so both of Thunder Mountain's large one hundred-stamp mills had to wait until September 1904 before transportation became available to Roosevelt. Development work continued on three significant properties, employing forty, twenty-five, and twenty miners. One small five-man operation and about fifty contractors made up Thunder Mountain's labor force for 1903. Enough was accomplished to demonstrate to George H. Williams, an experienced Idaho mine evaluator, that "there are no mountains of gold there," but that Thunder Mountain "will develop into a good camp." One property had two thousand feet of tunnels and shafts; while another had one thousand feet. With Dewey's property already in production, they showed promise.



Miners' pack train leaving Thunder City

Another purchase of ten claims for \$100,000 by Pittsburgh investors and a \$10,000 purchase by New York investors maintained optimism in Thunder Mountain.

Four hundred miners were able to remain in camp for another winter, which had fortunately held off until supplies could be brought in. Dewey's mill entered an uninterrupted run of production that returned regular monthly dividends for more than two years from 1904 through 1906. A highly efficient yet modest scale operation made this possible. Monthly production gradually declined from almost \$10,000 in 1904 to around \$6,900 late in 1906. (A four-month shut down in 1904 for lack of fuel limited that year's total to \$78,933.10 from low-grade ore. About \$67,000 followed in 1905. In 1906, almost \$62,000 was realized in twelve months from 11,784 tons of ore. But production costs of \$3.51 on a return of \$5.25 a ton allowed for a welcome profit.) However, a ten-stamp mill satisfied all of Dewey's needs, so when a wagon road finally reached Roosevelt, no effort was made to haul in another one hundred-stamp mill which had languished in Emmett for two years. Thunder Mountain's isolation, in this instance, had saved a lot of transportation costs that otherwise would have been wasted.

The completion of a state wagon road enabled 204 freight horses to haul another large mill (reduced, providently, from one hundred to forty stamps) to Roosevelt late in 1904. Winter supplies also could be brought in. But operations did not work out well from that point on. Handicapped by trying to utilize a mill which had been worn out in North Carolina, a large crew of miners (who had done more than two thousand feet of development work the year before) managed to process only 180 tons before the mill broke down on December 21, 1904. Sixty-five miners left camp immediately, and a hundred were gone before winter travel got too bad. Thirty miners tried to resume operations in May, using thirty of the forty stamps which they had available. Then they found that "ore values

disclosed in the extensive development of the mine had been shockingly overestimated and the results produced are reported not to have been sufficient to pay operating costs." Efforts to employ a cyanide process failed, and more milling attempted late in 1906 got nowhere.

Shortages of supplies afflicted Thunder Mountain miners again in 1906, when "life at Roosevelt had few charms." Attempts to improve the situation failed in 1907. Declining ore values held down Dewey's production so much that only a shortened season (April 10 to October 28) could be managed. After 8,920 tons of ore yielded \$44,967 in gold, the remaining available rock lacked enough value to pay for processing. After turning out about \$350,000 altogether, Thunder Mountain's only productive mine had to shut down. An effort to utilize new rich discoveries failed in 1908. So finally, out of several major mining properties at Thunder Mountain, none, aside from Dewey's modest operation, produced more than \$1,000 worth of gold. As a fitting climax to this early phase of mining there, a large landslide on May 30, 1909, blocked Monumental Creek and created Roosevelt Lake. Lasting for two days or so, the slide grew large enough to back up a new lake which flooded the town and forced its evacuation. For the next twenty years or more, buildings floated around in the lake; but as the years went by, they fell apart, and now there are only a lot of boards cast about in the water.



W.H. Dewey (August 1, 1823-May 9, 1903) never survived long enough to see his Thunder Mountain dream turn into a nightmare. Even his mine, although productive for several years, returned far less than half of his company's investment. Later production, after years of delay, finally increased Thunder Mountain's total to about \$500,000. But miners at Thunder Mountain could have thought of easier ways to earn that much wealth. Their experience came entirely too close to matching a Roosevelt miner's misadventure late in 1906. Thawing six sticks of dynamite in an oven proved disastrous to the miner. Blown by the explosion through his cabin roof, he lost his possessions but survived without serious injury. He had a great experience, but had also incurred severe financial loss. Many other miners and investors on Thunder Mountain shared something all too close to his fate.

In spite of failing to match unwarranted expectations, Thunder Mountain had a considerable impact upon Idaho's economy. A flood of

prospectors turned up or enlarged important new mining areas. Big Creek, Marshall Lake, and Stibnite all profited from Thunder Mountain activity. More than \$1 million sent in from Pittsburgh, augmented with funds from other eastern sources, maintained employment for a substantial Idaho mining camp which produced little aside from out-of-state capital investment. In addition, a considerable share of that outside capital contributed modest fortunes to Idaho claim salesmen, who realized just as much as they would if some of their claims had been worth selling. Many prospective miners had a great, if sometimes disagreeable, adventure.

Eastern investors looked at Thunder Mountain differently. When they made their major Thunder Mountain purchases, they were escaping from other traps which far out-classed Thunder Mountain as errors for capital allocation. When Thunder Mountain fever still ran high, as it did on July 21, 1902, H.E. Taylor explained this situation in detail:

During the past two years the investing public seems to have been on a continuous investment debauch. Dozens of concerns styling themselves 'bankers and brokers' have sprung up in a day from sources unknown. They have launched all sorts of mushroom industrial, mining and oil companies, which to the close observer plainly bear the earmarks of the 'fake.' A lot of worthless property is bought for two or three thousand dollars and turned over to a company. The 'banker and broker' then spend \$10,000 or so for printers' ink and glowing reports of alleged 'experts,' and the public does the rest.

It is the same old story. In times of great prosperity the public seems to completely lose its ability to discriminate between the counterfeit and the genuine in the share market. The operations of these stock highwaymen and financial 'jobbers' constitute the greatest burden legitimate mining enterprises have to bear.

We could have made several deals with brokers of this breed had we been willing to sell them something utterly worthless for a few thousand dollars and furnished them 'reports to order.'

It looks as if a reaction were now setting in, however, [with] the public beginning [to] scrutinize stock offerings more closely. The

forfeiture of the charters of 269 Texas 'fake' oil companies was a jolt that wakened them up a bit. It is estimated that the 'pirating' oil companies sold nearly \$20,000,000 worth of stock during the past year.

Among substantial capitalists and business men there is a healthy and growing sentiment for gold mining investments [sic]. The favor so long enjoyed by 'coppers' had been killed and the speculative manipulations of the insiders of the Amalgamated trust and the resulting decline of 20 to 50 per cent in nearly all the leading copper stocks and in the metal itself. New England, the home of the red metal shares, had been hard hit, and is now in a state of investment apathy.

New York and Pennsylvania escaped with only slight injuries and are practically confining their mining investments to gold properties.

Naturally, Taylor did not intend to have Thunder Mountain provide a similar deception for unwary eastern investors. Some mine appraisers and mining engineers were prepared to show caution in 1902. But too many were carried away in a speculative mania. So Thunder Mountain was misjudged and over-sold in a manner reminiscent of fake oil companies and copper mines whose dealings he did not want to emulate.

Thunder Mountain's early production of nearly \$350,000 prior to 1909 finally was raised to about \$500,000. Later operations from 1937 to 1941 account for almost all that addition. Then after an almost forty year lapse (aside from a minor yield in 1946), activity resumed on Dewey's old mine in 1980-1981.

Gold rush episodes comparable to Buffalo Hump and Thunder Mountain occurred somewhat rarely. Yet they can be attributed to an economic arrangement which featured profitable ventures along with gross errors. Excessive costs associated with improvident examples such as Thunder Mountain ought to be assigned to an overall balance which accounts for successes as well as failures. Information gained from colossal disasters such as Thunder Mountain constituted part of a mining heritage which continued to develop western mineral wealth on an enlarged scale for subsequent generations.