

# History of the Idaho Gold Coin Mine (Maid of Erin and Summit Mines), Adams County, Idaho

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Staff Report 97-9  
April 1997

Idaho Geological Survey  
Morrill Hall, Third Floor  
University of Idaho  
Moscow, Idaho 83844-3014

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## INTRODUCTORY NOTE

This report was prepared under a cooperative agreement with the U.S. Forest Service, Region IV, as part of a project to identify and describe inactive and abandoned mines in the state of Idaho. Work on this project included preparing detailed histories of mines in Region IV that had significant recorded production. The information in this report is from a number of published and unpublished sources in the Idaho Geological Survey's mineral property files. Where not otherwise noted, most of the mine production data is drawn from the U.S. Geological Survey's (USGS) annual volumes on *Mineral Resources of the United States* (1882-1923) and the equivalent volumes produced by the U.S. Bureau of Mines (USBM) (*Mineral Resources of the United States*, 1924-1931, and *Minerals Yearbook*, 1932 to present). Information on underground workings and mine equipment is generally from the annual reports of the Idaho Inspector of Mines (IMIR) published from 1899 to 1979. After 1974, the Mine Inspector's office was known as the Mine Safety Bureau, a section of the Idaho Department of Labor and Industrial Services. Detailed accounts of mine operations are, for the most part, drawn from the annual reports prepared by the companies for the State Inspector of Mines; these reports were required by law and the information contained in them formed the basis of the Mine Inspector's annual reports. Reports of recent developments are taken from the Idaho Geological Survey's (IGS) annual reports on the developments in mining and minerals in Idaho (from 1984 to present) or from similar reports produced by the Survey's predecessor, the Idaho Bureau of Mines and Geology (IBMG) from 1975 to 1984. Other published sources are referenced in the text. A complete bibliography is included at the end of the report. Where direct quotations are taken from source materials, the original spelling and grammar are preserved even in cases where they do not conform to currently accepted usage.

# History of the Idaho Gold Coin Mine (Maid of Erin and Summit Mines), Adams County, Idaho

Victoria E. Mitchell<sup>1</sup>

The property of the Idaho Gold Coin Mining and Milling Company consisted of two groups of claims near Black Lake, which is at the head of a tributary of Granite Creek, a tributary of Rapid River. This area is in northwestern Adams County within the Hells Canyon National Recreational Area and just outside the eastern boundary of the Hells Canyon Wilderness Area (Figure 1). The mines are about 12 miles northeast of Landore. The Summit claims were located above Black Lake at an elevation of approximately 7,800 feet, and the Maid of Erin group was a short distance below the lake between 7,000 and 7,200 feet in elevation (Figure 2).

The deposits are gold-bearing quartz veins, with the economic concentrations of gold occurring in association with pyrite. The host rocks are granodiorite, diorite, and metagabbro of probable Triassic or Jurassic age (Figure 3; Cook, 1954). The Maid of Erin vein was exposed for about 2,500 feet. It ranged from a few inches to about 3 feet in width, with an average of 15 to 16 inches. The vein had a strike of N. 25° W. and dipped about 70° NW. The Summit vein averaged 2 feet in width, with a strike of N. 15° E. and a dip of 70° NW. By 1919, there were five patented claims on each vein. The mill was located about 2,500 feet below the portal of the lower tunnel and over a mile from the upper tunnel (Livingston and Laney, 1920).

The Summit and Maid of Erin veins were located in the early 1890s

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<sup>1</sup>Idaho Geological Survey, Main Office at Moscow, University of Idaho, Moscow.

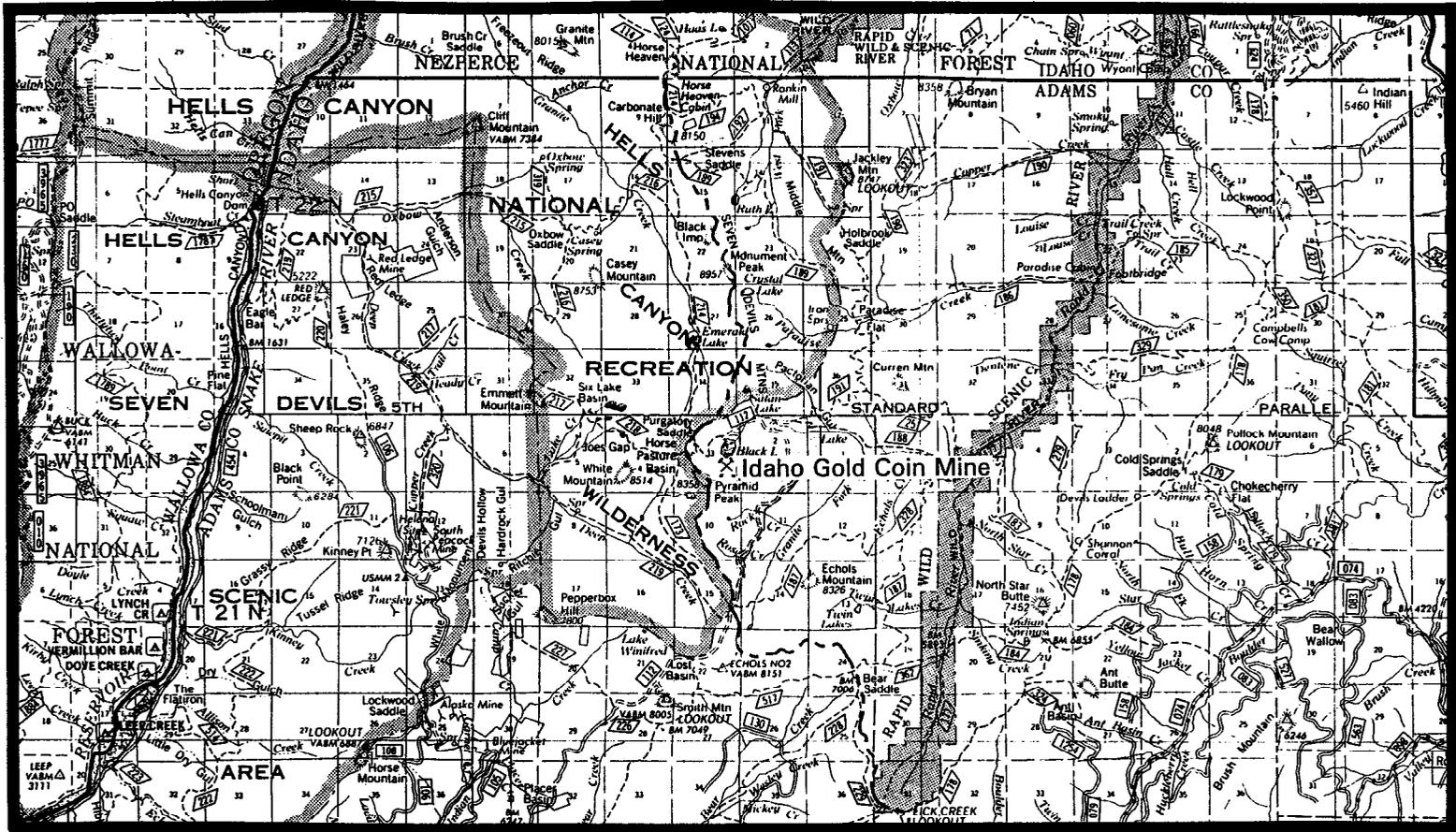


Figure 1. Map of northwestern Adams County and the Hells Canyon region, showing the location of the Idaho Gold Coin Mine (U.S. Forest Service Payette National Forest map, scale  $\frac{3}{8}$  inch = 1 mile).

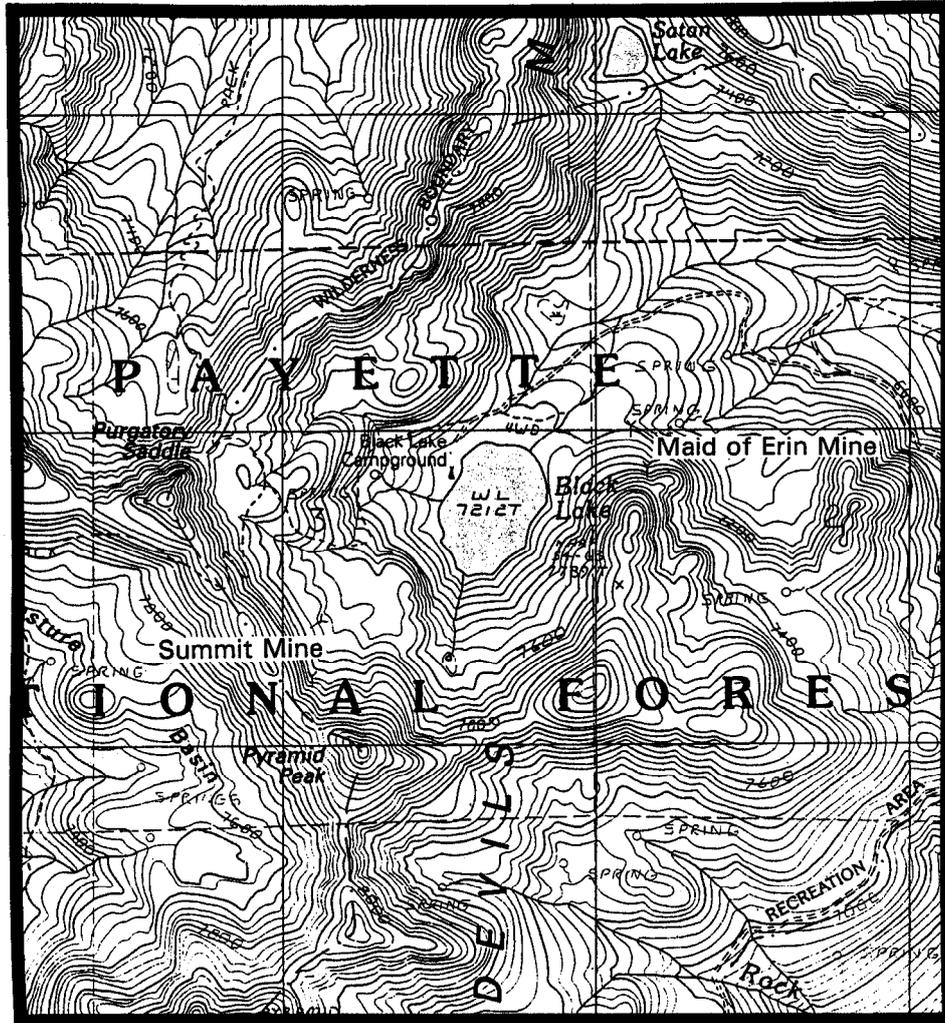


Figure 2. -Topographic map of the Idaho Gold Coin Mine (U.S. Geological Survey Purgatory Saddle 7.5-minute topographic quadrangle).

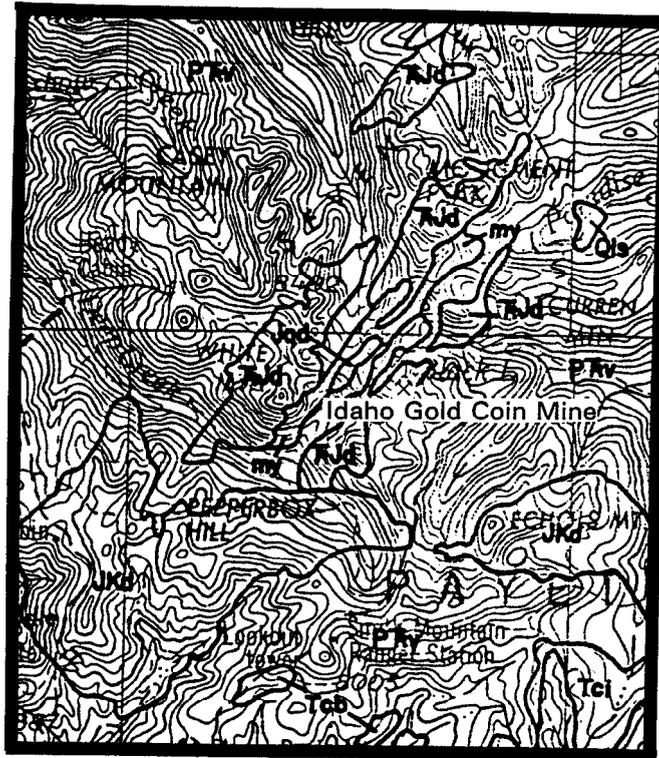


Figure 3. Geologic map of the Idaho Gold Coin Mine (scale approximately 1: 160,000). **PTr** = Permian and Triassic Seven Devils Volcanics; **Tjd** = Late Triassic through Middle Jurassic (?) gabbro, diorite, quartz diorite, norite, and albite granite; **JKd** = Late Jurassic and Cretaceous (?) intrusive rocks; **Jqd** = quartz diorite, granodiorite, and quartz monzonite of uncertain age; **my** = mylonite; **Tcb**, **Tci** = Columbia River Basalt; **Qls** = Quaternary landslide (Gaston and Bennett, 1979).

(Livingston and Laney, 1920). The 1901 IMIR noted that the Sulzer-Ford Mining Company had spent \$100,000 to install a mill on its property and that the plant would be in operation the following spring. (See Table 1 for companies operating at the mine.) According to the 1902 IMIR, the \$100,000 expenditure also included development work on the property. However, these dates may be somewhat inaccurate. The 1899 report of the Idaho Gold Coin Mining & Milling Co. to the Idaho Inspector of Mines described the operation of the mill as follows:

Method of Treatment (Cyanide). aerial Tram mine to mill 1¼ mile 100 ton 24 hrs. Rock breaker 8000 lbs two sets plane rolls + scrapers. crush 14 mesh without drying. passed direct to leaching tanks by one ton car. 5–75 ton circular redwood tanks. 2½ lbs cyanide to 1 ton water leaches 12 hours then 12 hrs with weaker solution. then wash with two wash waters during a period of 24 hours more then sluiced out to tailings pile. solution precipitated on zinc shavings. product refined with acid + melted into high grade bullion. consumption of cyanide 1/2 lb per ton of ore treated. cost of treatment \$1.30 ton.

The 1903 IMIR described the property (p. 136-137):

The predominating formations of the Black Lake gold district at the head of the different tributaries of Rapid River are diorite and diabasic igneous formations occurring in great mountain masses and including a wide belt of blue and gray crystalline limestone.

The Black Lake district is approached from Council by stage, via Bear, near the Seven Devils copper mines, then over a road built at private expense to the mine through the rugged summits of the Seven Devils range.

The principal operations at this district during the year were those of the Idaho Gold Coin Mining Company, who operated a fifty-ton cyanide mill until October, when the plant was unfortunately destroyed by fire. This plant is reported to have produced a total of \$75,000 in gold bullion during 1903.

The two principal veins opened by this company are nearly vertical fissures in diorite and greenstone; one of these fissures, known as the Summit, is developed by adit tunnels to a depth of four hundred sixty feet, exposing a good strong vein of ore for a long distance on its strike, that varies from two feet to five feet wide and carries average values ranging from ten dollars to twenty dollars per ton. The ore in this vein is completely oxidized and shattered quartz down to the lowest point opened, and in spite of its good average values rarely shows a color in the pan. A soft ash colored sintery ore contains the richest values. Selected samples run up to several hundred dollars a ton. What the original composition of the ore was before it was oxidized is not known; tellurium has been suggested, and it is thought that it may make its appearance at water level in this vein and probably afford a resource of very rich shipping ore.

The Maid of Erin vein, belonging to this company and situated a little lower down the mountain, is filled with milk white quartz quite thickly sprinkled with iron pyrites. It is five feet to ten feet wide and contains average values of eight dollars to twelve dollars per ton in gold.

These mines are situated near the head of a very rugged canyon and were connected with the mill by an overhead traveling wire rope tramway six thousand feet long, with one span across Black Lake of two thousand feet. Some detailed experiments had just been completed that would have greatly increased the capacity of the mill when it was burned down. It is reported that the mill will be rebuilt in the spring as the mines have a large reserve of ore developed.

Table 1. Companies operating at the Maid of Erin and Summit groups.

Company Name	Officer	Date Incorporated	Charter Forfeited	Year(s) at Mine
Sulzer-Ford Mining Co. <sup>1</sup>	2	2	2	1901?-1903?
Idaho Gold Coin Mining & Milling Co.	Henry A. Salzer, President; S.W. Ford, Mine Superintendent	2	2	1899-1916(?)

<sup>1</sup>This "company" may actually be an invention of the Idaho Inspector of Mines, with the company's name reflecting the principal individuals involved in operating the property.

<sup>2</sup>Information not available in IGS's files.

Livingston and Laney (1920) described the mill that burned down as a "dry process mill," and they stated that its operation was "apparently not a success." They also noted that the Idaho Gold Coin Mining and Milling Company was managed by Edwin D. Ford of Weiser, Idaho, and that most of the money for the mine was put up by Henry A. Salzer, a seedman from La Crosse, Wisconsin, and his son, B.F. Salzer, of Denver.

The company replaced its mill in 1904 with a larger, combination amalgamation-and-cyanide plant that was said to save 90 percent of the gold in the ore. The new plant began operations in October, but the company did considerable development work while the mill was being rebuilt.

In 1905, the company started a crosscut tunnel on the Summit vein which (according to the USGS) would be 1,200 feet long and tap the orebody about 500 feet below its lowest level. The 1905 IMIR described the work as follows (p. 143-144):

[T]he Gold Coin Mining Company's property is equipped with a fine, up-to-date cyanide plant of 100 tons daily capacity that was operated during the first two months of the year on ore from the Summit and Maid of Erin veins, containing an average value of about \$10.00 per ton in gold, which was very successfully treated by the straight cyanide method, showing 90 per cent of the gross value of the ore, and the largest part of the gold output of Washington County for 1905 is credited to this mine.

Owing to an accident, which put the big rock breaker out of commission temporarily, requiring a heavy piece of machinery that could not be gotten in over the deep snow, the mill was forced to suspend operations and has not since been started up, but an extensive plan of development was undertaken at the mine right after the mill shut down, which consisted of a deep cross-cut tunnel which will tap the principal vein of the group at a vertical depth of about 400 feet below its present lowest level. This cross-cut will be 1,400 feet long when completed. It was equipped with an air compressor and machine drill as soon as the plant could be gotten in after the roads opened in the spring and has been extended over half of the distance required to cut the vein, and the work is progressing at the present time with a good force of men.

This new development will cut the Summit vein of this property at an elevation of only forty feet above the level of Black Lake and is likely to find it in its unaltered sulphide condition.

This vein has been developed to a depth of 500 feet by adit tunnels and has remained in a shattered and completely oxidized condition so far. It is evidently a very pronounced fault fissure and has been subjected to recent movement since it was filled, and probably to considerable leaching of its contained values, and the prospects are promising, to say the least, that a condition of secondary enrichment will be found when the vein is encountered at the new level.

This and other tributaries of the Rapid River contain a number of handsome gold quartz prospects, at several points showing well defined fissure veins in walls of greenstone or diorite, in which spots and specimens of rich telluride ores have been found, and it is not unlikely that their continued development may reveal some sensational results in the way of high-grade ore. The district is well watered and timbered, and with the exception of its ruggedness affords some excellent advantages for economical mining development and operation. Should the new extension of the Pacific and Idaho Northern Railway be carried through the Little Salmon and main Salmon River canyons to the northern connection at Grangeville, it will pass within fifteen or sixteen miles of these properties and make them much more accessible.

The USGS stated that the new mill had a capacity of 50 tons per day (tpd). According to Livingston and Laney (1920, p. 35):

The mill as it was operated had a rated capacity of 50 tons, the principal equipment consisting of a big Blake crusher, two sets of Gates rolls, and five 80-ton tanks. No means of fine grinding were provided and no classification of the pulp was attempted, nor was any means installed for agitating the pulp in the tanks. None of the ore was crushed below 20 mesh and most of it only to 10 mesh. Extraction was, on this account, not very satisfactory.

Development work continued on the mine in 1906. The deep drainage tunnel reached 1,200 feet in length. The company's compressor plant burned during the year, seriously retarding work at the mine.

By 1908, the tunnel was completed to a length of 1,600 feet and the company was prospecting the vein from the new level, which was between 500 and 700 feet below the crest of the vein. The 1909 IMIR described the development work accomplished during the year (p. 131):

The new cross-cut tunnel taps a section of the vein where the apex is covered with debris, but it has been successful in the fact that it has encountered two important independent ore shoots in the fissure, in addition to the former ore channels on which the mine was opened. A raise is now being put up to connect with the bottom of the old workings and develop the old ore shoot. This raise will, it is anticipated, be completed by next spring, when the mine will be fully drained and the old and new ore resources will be rapidly put in shape for stoping, so there is a definite prospect at this time that the property will be again in the producing list next summer.

The Idaho Cold Coin Mining & Milling Co. shipped gold bullion in 1910 and

between 1914 and 1916. The cyanide plant was operated for about 30 days in 1915 and for "a short period" in 1916 (Table 2). Total development on the property in 1915 was about 9,150 feet of workings. (See Table 3 for development work done at the mine between 1914 and 1916.) According to Livingston and Laney (1920), the mine was abandoned shortly after this. "When the work was stopped in 1915 several thousand dollars worth of equipment and supplies which could easily have been salvaged, were abandoned on the ground, most of which have either been stolen or wantonly destroyed" (Livingston and Laney, p. 36).

Development on the Maid of Erin claims consisted of two tunnels driven on the vein, with stopes between them. The tunnels were separated by 200 feet vertically, and the deepest workings were about 400 feet below the crest of the ridge. The lower tunnel was about 800 feet long; the length of the upper tunnel is not known. There were also two tunnels on the Summit group. The lower tunnel was

Table 2. Mine output and economic data for Idaho Gold Coin Mining & Milling Co.'s property for 1915-1916

Year	Tons of ore	Average value per ton	Total mining cost per ton	Local treatment costs per ton	Gold recovered (ounces)	Silver recovered (ounces)	Gross returns
1915	930	\$6.00	\$1.50	\$1.00	156 <sup>44</sup> / <sub>51</sub>	22	\$3,211.00
1916	1,320	\$6.90	---	---	312.19	100	\$6,417

Table 3. Development work at the Idaho Gold Coin Mining & Milling Co.'s property, by year.

Year	No. of Men employed	Tunnels (feet)	Sinking and Raising (feet)	Drifting (feet)	Operator
1914	2	50 <sup>1</sup>	50	---	Idaho Gold Coin Mining & Milling Co.
1915	8	150 <sup>1</sup>	150	---	Idaho Gold Coin Mining & Milling Co.
1916	16 (for 60 days)	130 <sup>1</sup>	80	50	Idaho Gold Coin Mining & Milling Co.

<sup>1</sup>Number is for total development work done during the year.

driven 1,200 feet through country rock and then about 1,000 feet on the vein. The upper tunnel was 200 feet above the lower vein. Its length is not known, but it was said to have followed the ore shoot for 200 feet (Livingston and Laney, 1920).

Total recorded production from the mines between 1902 and 1916 was 14,037 tons of ore, which yielded 7,079 ounces of gold and 1,471 ounces of silver. According to Close and others (1982), the Maid of Erin Mine has a paramarginal resource of 245,000 tons of ore and the Summit Mine has a paramarginal resource of 83,000 tons. For both mines, the ore would run about 0.12 ounce of gold and 0.1 ounce of silver per ton.

## References

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