

# History of the Spring Mountain Mine, Lemhi County, Idaho

Victoria E. Mitchell

Staff Report 99-5  
August 1999

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 The information in this report is taken from published and unpublished sources in the Idaho Geological Survey's mineral property files. Unless otherwise noted, most mine production data are 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 the 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 mostly 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 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.

# History of the Spring Mountain Mine, Lemhi County, Idaho

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

The Spring Mountain Mine, also known as the Big Windy, is the consolidation of the Elizabeth and the Teddy mines, located at an elevation of 10,000 feet on the Lost River side of Spring Mountain in the Lemhi Range (Figure 1). Technically, the mines are just outside the Spring Mountain mining district, the boundary of which runs along the crest of the mountains (Figure 2). The Teddy mine is about 1,000 feet north of the Elizabeth. Even though the early literature distinguishes between the two mines, they were most often described as a unit. The mineralization occurs as northerly trending veins in flat-lying limestone and quartzite, probably of the Saturday Mountain Formation (Figure 3). Ore minerals include cerussite, anglesite, and smithsonite (McHugh and others, 1991).

The mines were probably discovered about 1880 (Ruppel and Lopez, 1988), but no ore was shipped until 1908. At that time, both properties were operated by the Lemhi Mining Co., which was owned by some of the people who controlled the Lemhi Smelting Company.

In 1908, the Lemhi Smelting Co. built a smelter at Hahn, at the mouth of Spring Mountain Canyon, about 8 miles south of Gilmore. The size of this smelter was variously reported as 50 tons per day (Umpleby, 1913) and 80 tons per day (IMIR and USGS). A test run was made in October, and the smelter was then closed for the winter. It ran for 17 days in the summer of 1909 and 21 days in 1910. Lack of funds seemed to be the biggest obstacle to the smelter's success; the operators could neither afford to explore their own properties nor buy ore from other sources (Umpleby, 1913).

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

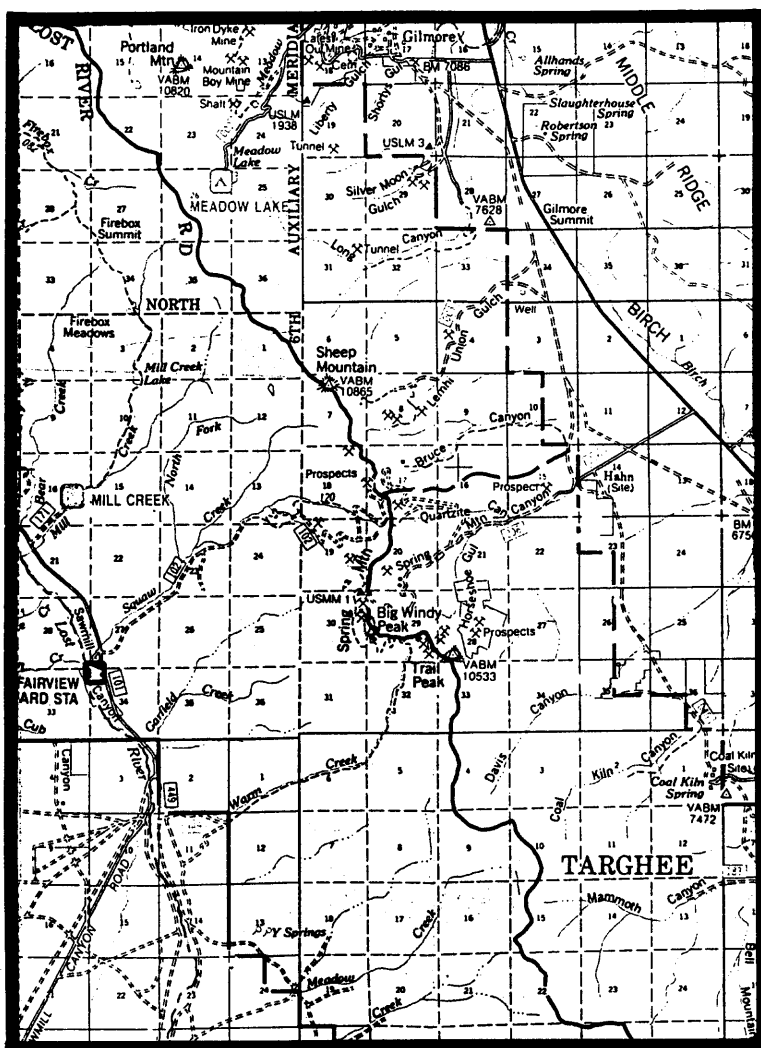


Figure 1. Location of the Spring Mountain Mine and vicinity, Lemhi County, Idaho (U.S. Forest Service Challis National Forest map, scale  $\frac{3}{8}$  inch = 1 mile).

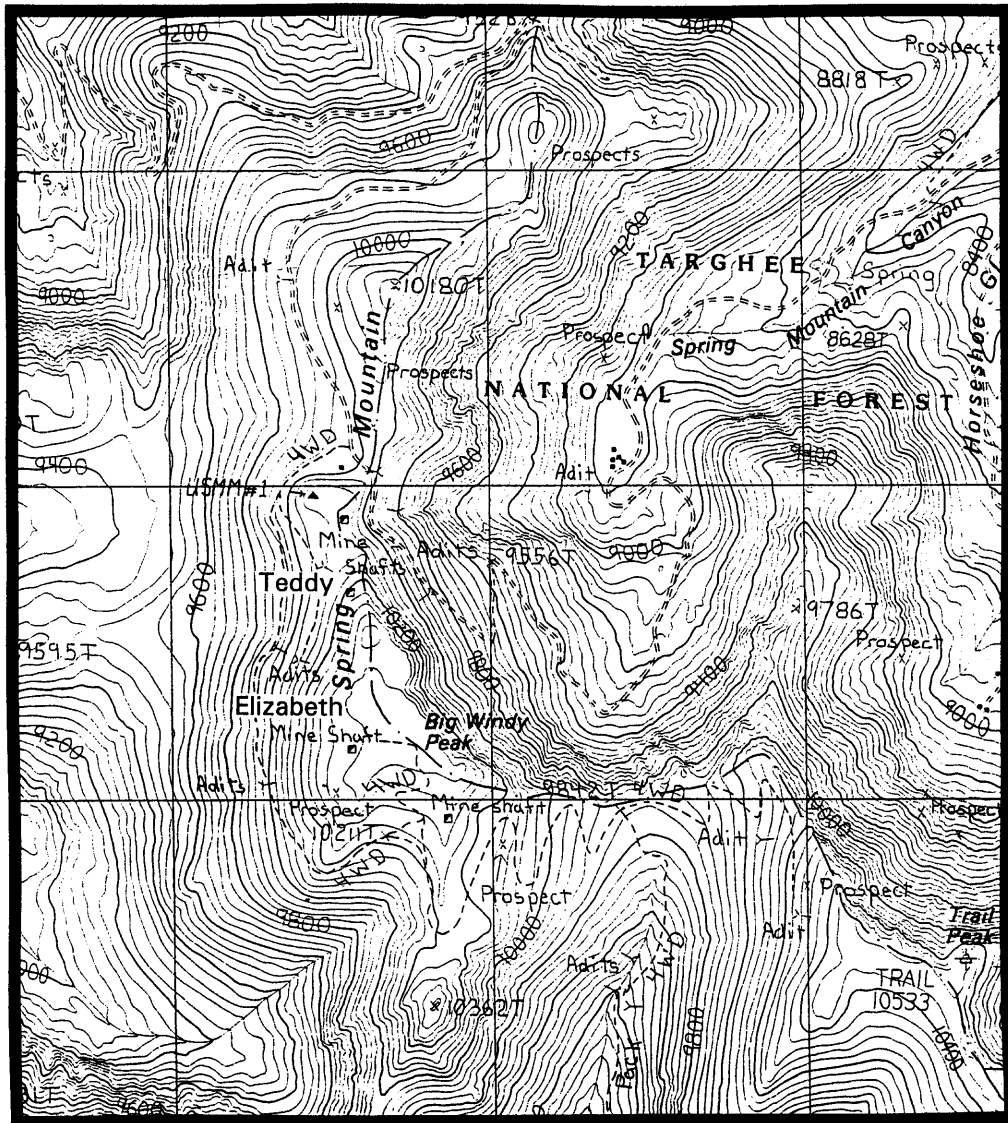


Figure 2. Topographic map of the Spring Mountain Mine and vicinity (U.S. Geological Survey Big Windy Peak 7.5-minute topographic map).



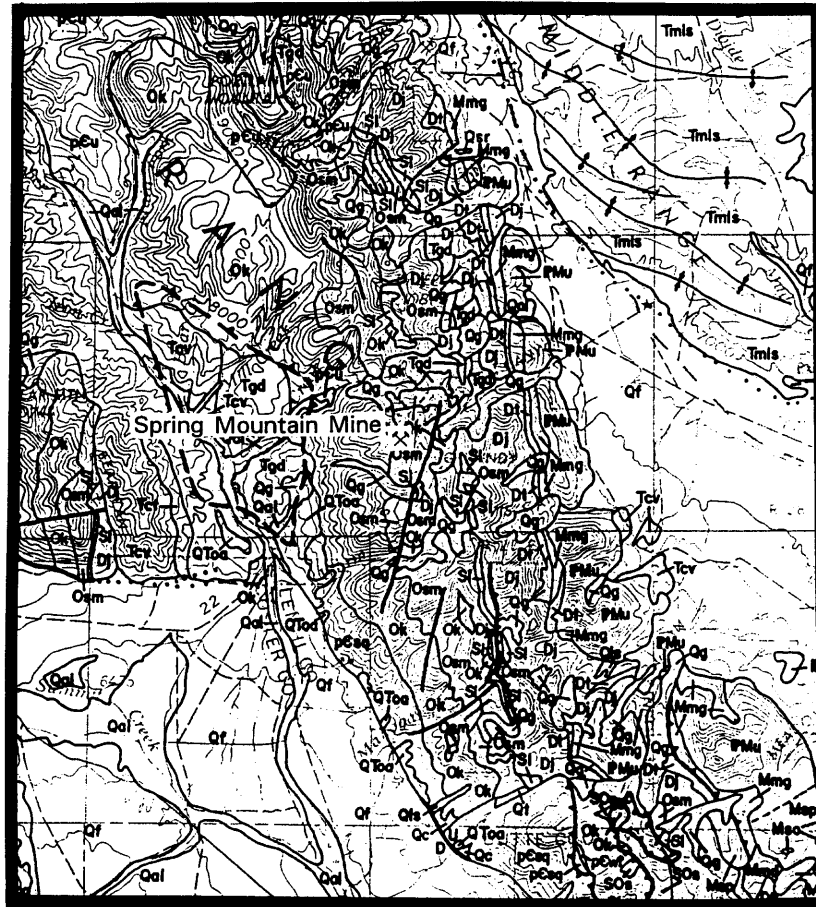


Figure 3. Geology of the Spring Mountain mining district and vicinity, Lemhi County, Idaho. pCu = undifferentiated metasedimentary rocks of Precambrian Y age; pCsq = Precambrian Swauger Quartzite; Ok = Ordovician Kinnikinick Quartzite; Osm = Ordovician Saturday Mountain Formation; Sl = Silurian Laketown Dolomite; Dj = Devonian Jefferson Formation; Dt = Devonian Three Forks Limestone; Mmg = Mississippian McGowan Creek Formation; PMu = undifferentiated Upper Mississippian and Pennsylvanian rocks; Tcv, Tct = Eocene Challis Volcanics; Tgd = Tertiary quartz diorite and granodiorite; Tmls = Tertiary Medicine Lodge sedimentary deposits (lines with double arrowheads are axes of folds); QToa = older alluvium (Pliocene and Pleistocene); Qf = Pleistocene alluvial fans; Qg = Pleistocene glacial deposits; Qsr = Quaternary Snake River Basalt, undivided; Qal = Quaternary alluvium. Heavy lines are faults; sawteeth mark the upper plates on thrust faults (Rember and Bennett, 1979).

When Umpleby (1913) visited the area in 1910, the Elizabeth and the Teddy mines each had a few hundred feet of workings. Ore from the mines was hauled half a mile to the rim of the cirque at the head of Spring Mountain Canyon. From there, the ore was trammed to the bottom of the mountain and hauled to the smelter at Hahn, 2½ to 3 miles to the east.

The Teddy produced ore in 1916, and in 1917 lessees shipped five cars of ore. Several lots of oxidized lead ore were shipped from the Big Windy mine to Midvale, Utah, in 1922.

The Spring Mountain Mining Company was organized on December 19, 1927. During 1928, the company repaired the mine buildings, did a small amount of development work, and shipped two cars of oxidized lead ore to the Midvale smelter. Mine equipment included a 9x8<sup>2</sup> Sullivan compressor, one 36-horsepower Scandia Pacific semi-diesel engine, one team of horses and a wagon for haulage, and a 2,900-foot aerial tramway. Work done during the year included constructing 500 feet of new road and cutting 260 feet of tunnels and crosscuts in the mine. Total workings were about 885 feet, consisting of 210 feet of shafts and 675 feet of tunnels, crosscuts, and drifts. The mine had four tunnels, two shafts, two raises, three crosscuts, and three drifts. The lengths of the tunnels were as follows: No. 1, 400 feet; No. 2, 150 feet; No. 3, 75 feet; and No. 4, 50 feet. According to Ruppel and Lopez (1988), the vertical shaft on the Teddy was 300 feet deep, and an east-trending adit on the Elizabeth explored the same ore zone.

The company was active during the summer months of 1929 and completed 300 feet of tunneling. Development work for 1930 was variously reported as 316 feet of tunneling (USBM) and 85 feet of tunneling (company report to the Idaho Mines Inspector). The Spring Mountain Mining Company forfeited its corporate charter in 1931.

In 1988, Clinton Snook (current owner of the Elizabeth) opened up several adits in the Spring Mountain area and shipped some ore to the East Helena smelter. It is not known whether any work was done on the Elizabeth.

These mines were visited by an Idaho Geological Survey Geologist in the summer of 1994 as part of a program to evaluate inactive and abandoned mines in southern Idaho. Figure 4 shows the mine as it appeared at that time.

Total recorded production between 1908 and 1928 is 1,084 tons of ore. From this material, 34 ounces of gold, 16,405 ounces of silver, 13,622 pounds of copper, and 602,323 pounds of lead were recovered. Although zinc was present in the ore, the records indicate that it was either not recovered or that the company was penalized for its presence in the shipped ore. Ruppel and Lopez (1988) value the production from the two mines at about \$30,000, or one-third of the total value of ore produced from the district.

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<sup>2</sup>The diameter of the compressor's cylinder and the length of the piston's stroke, in inches.



Figure 4. Open adit at the Elizabeth Mine, 1994 (photograph by Falma J. Moye, Idaho Geological Survey).

## References

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