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Comet — COMET DIST.

(166)

Item 16

The Comet mine is on the west side of the Highland Range 9 miles southwest of Pioche, in sec. 5, T. 1 S., R. 66 E. (unsurveyed). Wolframite, accompanied galena, sphalerite, pyrite, and plumbojarosite in a steeply dipping quartz vein enclosed in Prospect Mountain quartzite. The vein is 1 to 6 feet wide, and was explored by a shaft and drifts to a depth of 500 feet and laterally for ~~1,400~~ 2,000 feet. A little

tungsten concentrate was produced in 1916, and again in 1940 and 1942. The total yield probably was about 350 units of WO_3. Three other veins nearby also contain wolframite, but they have not been explored.

Visalia, California.
December 2, 1942.

Memorandum to T. B. Nolan:

Comet Mine Lincoln County, Nevada .

Mr. David Gemmill and I visited the Comet Mine t he afternoon of November 25th. The Comet Mine may be reached by travelling 18 miles on a fair graded road North-westwar d from US highway 93 a t the Panaca Junction between Caliente and Pioche. The mine is on the west flank of the Highland Range approximately 6 miles West of Pioche. Most of the following information is from Mr. Gemmill.

Production--History

During the last war an unknown amount (a number of carloads) of tungsten concentrates were produced from the Comet Mine (Tungsten Comet Mining Co.). From 1924 to sometime in the 1930's the property was operated for Au, Ag, Pb,. In 1938 David Gemmill bought the outstanding stock for $40,000. and leased it to Owen Walker. Walker shipped 80 tons of ore to the Minerva Mill--which could not do much with the complex ore. From this 80 tons, 11 tons of concentrate containing, according to Walker, 15% of WO_3, 15-20% of Pb, 15-20% of Zn, Mn, Mb, Sb, Bi, Ba, Au,Ag were shipped to Los Angeles. Walker's lease expired in March 1942. Since that time Gemmill has shipped 10 tons of concentrate containing 11% of WO_3 to the Metals Reserve Co. in Salt Lake City.

Geology

On the West flank of the Highland range a series of Paleozoic sedimentary rocks crop out in a north-striking, gently east-dipping homoclinal series. At the bottom of the series is a quartzite, overlain by approximately 275 feet of shale, ("shale D"), 35-50 feet of gray limestone ("combined metals bed"), approximately 125 feet of shale ("shale C"), 158 feet of limestone ("susan-duster lime bed"), 100 feet of shale, x feet of sandstone, and the "Prince" limestone. Four quartz veins striking northeasterly and dipping essentially vertically occur in the quartzite, "shaleD", and the "Combined metals bed". The veins have been traced ,on the surface, by means of pits and a few outcrops for approximately 1400feet. Under ground, the main vein has been explored for 500 feet vertically and 1400 feet laterally. The veins vary from 1 to 15 feet in width; the main vein averages 6 feet.

Wolframite, scheelite, galena, sphalerite, chalcopyrite, and other minerals occur in the quartz veins.

Ralph Brown of Molybdenum Corp. of America sampled approximately 75 feet along the surface of the main vein and obtained an average of 1% of WO_3. of which 90% was wolframite, 10% scheelite. A vein 1 to 5 feet wide 600 feet north of the main vein has been explored by a 140 foot shaft (not open). Ore on the dump of this shaft contained appreciable wolframite (perhaps 2% of WO_3). Mr. Gemmill and his brother, Paul, "best -- geologist ever been in this district"-beleives the underground work on the main vein indicates that wolframite occurs invertical shoots approximately 140 feet high, 100 feet long and 6 feet wide.

Workings

Most of the under ground workings, except the 140 foot shaft noted above, are on the main vein; they are not accessable at present. On the main vein 2 shafts have been sunk to 400 feet and 500 feet respectively. From the shafts drifts extend along the vein for a distance of perhaps 1400 feet. There are also several stopes.

Reserves

Ralph Brown and David Gemmill think t here are 5000 t ons of blocked ore containing 1% of WO_3 in the old stopes on the main vein. If the veins are as persistant as believed, and if there are several ore shoots on each vein the potential reserves are large.

Plans

Mr. Gemmill is planning to start production in May 194 3. He is remodeling the old mill and plans to mill 50 tons a day. The mill will make two concentrates: 1) Pb, Au, Ag ; 2) WO_3. His test results indicate that the first concentrate may contain 20 oz of Pb, 7 oz of Au, 285 oz of Ag; the second—11.5% of WO_3. He hopes to boost the tungsten concentrate up to 20% of WO_3. He plans to sell the tungsten concentrate to the Metals Reserve Co. in Salt Lake City, the Pb, Ag concentrate to Combined Metals Co.

Summary and Recommendations

Wolframite and minor scheelite occur at the Comet Mine, Lincoln Co. Nevada in several shoots in quart z veins in a quartzite and shale, The veins may be 1500 feet long averaging 2-5 feet in width. 5000 tons of ore containing 1% of WO_3 are believed (by Mr. Gemmill) to be in sight.

A plane table map should be made of the area, maps made of the underground workings, and some samples taken by a field party of the Geological Survey some time after next May. (Mr. Gemmill has some maps but they probably are not adequate.) After whic h it would probably be advisable for the Bureau of Mines to do some trenching and sampling.

Donald C. Wyant
assistant geologist

Cc: S. C. Lasky (1)
D.M. Lemmon (1)✓
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files (1)