

Keiper (Kieper, Keipers, Valentine, Lime Canyon, Green Gold Mine) Ag-Pb Mine, Clark Mountains

17N 13E Sec. 30 SBM 35.53689999980 -115.62474000000
17N 12.5E Sec.25 SBM 35°31'31.750" -115°37'52,236"

The Keiper-Valentine Group, consisting of 14 claims, is located on the western slope of Clark Mountain, in T. 17 N., R. 13 E., S. B. M., 5 miles northeast of Valley Wells and 23 miles north of Cima, a station on the Union Pacific Railroad. Elevation 6,500 feet. Owner in 1930 was Louis E. Keiper, Cima, California. Under option to Pacific Foundation; Corporation; T. J. Howard, president; Albert Whittle, secretary, San Diego, California. (Tucker and Sampson, 1930, p. 286; See also Wright and others, 1953, no. 26, p. 79; Eric 1948, p. 307 307; Tucker 1924, p. :92-93; Tucker and Sampson, 1930, p. 268; Tucker and Sampson, 1931:p. 341; Tucker and Sampson, 1943, p. 484, pl. 7, California State Mineralogist's Report XX, p. 95).

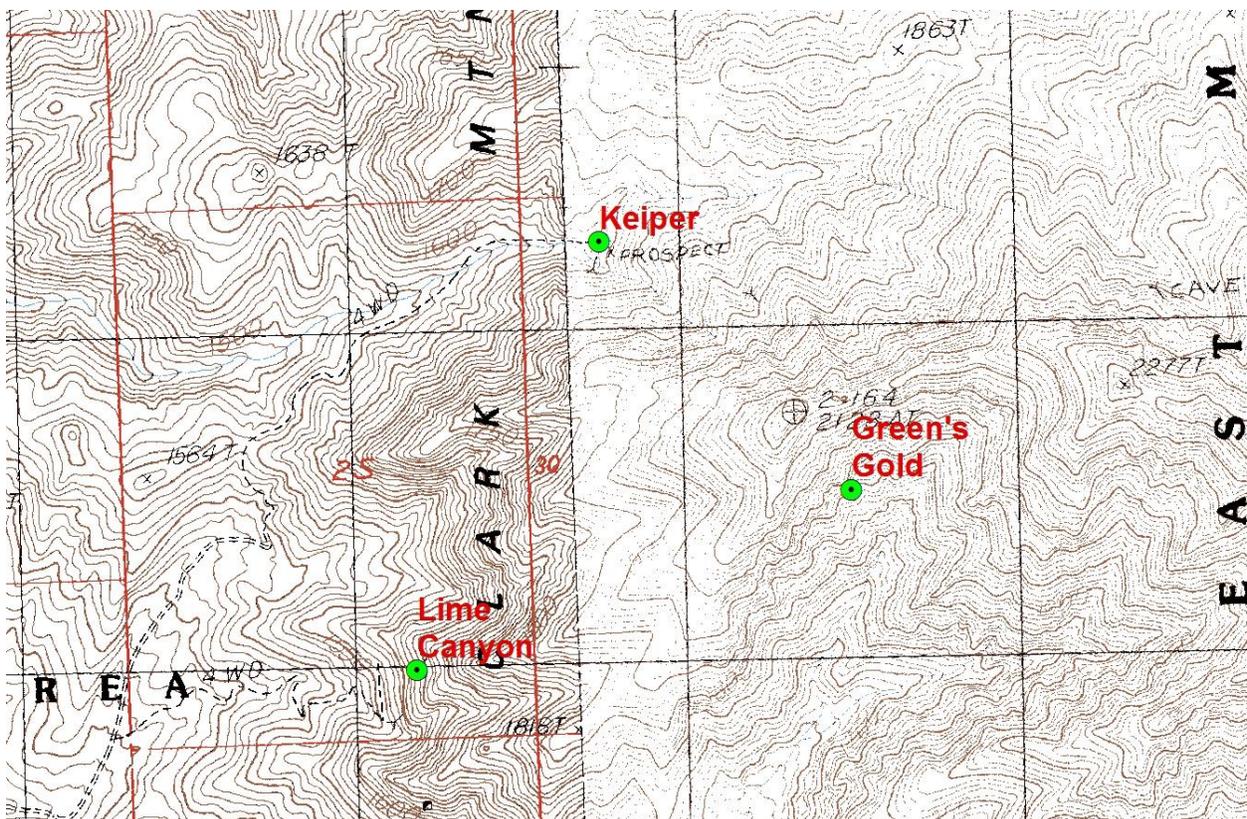


Figure 1. Topographic map of Green Gold, Lime Canyon and Keiper mines. USGS Ivahpah quadrangle, 1:24K.

The Keipers mine, successor to the Valentine (Tucker and Sampson, 1931; Hewett, 1957, no. 69, pl. 2) lies about 7 miles northeast of Valley Wells on the west slope of Clark Mountain. The area includes a small body of dark-gray monzonite that resembles the dikes in the Copper World and Dewey mines. The monzonite intrudes dolomite beds of the Goodsprings dolomite. Quartz veins containing galena, sphalerite, and chalcopryite have been explored in the monzonite and the zone of altered dolomite. The longest tunnel is about 285 feet. (From Hewett,1956, p. 144-145).

Recorded production of the Keipers mine (No. 69, pl. 2)

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Year	Crude ore (tons)	Recoverable metals				
		Gold (ounces)	Silver (ounces)	Copper (pounds)	Lead (pounds)	Zinc (pounds)
1926.....	29	86	14,796
1927.....	13	1.09	88	74	9,242

Figure 2. Recorded production from the Keipers mine. 25.9% Pb average grade. From Hewett, 1956, p. 145.

Although worked at various times, the Keiper mine has not been extensively developed. Small tonnages of high-grade lead-zinc-silver ore were shipped in the 1920 's and early 1930 's by a former owner. (From Wright and others, 1953, p. 109).

Benzore and Joseph included the Lime Canyon mine with Keipers mine. They observed that they are both skarn-related hydrothermal deposits. Both contain lead, silver, and copper along with zinc and minor amounts of gold. The mines are hosted by Cambrian age dolomitic limestone (Bonanza King Formation) and quartz monzonite. Mineralization consists of veins up to 4 feet thick which contain galena, sphalerite, chalcopyrite, pyrite, malachite, zinc oxides, hematite, and limonite along with minor epidote, sericite, and garnet. The Keiper mine produced lead, copper, and silver between 1926 and 1927 from veins in both the quartz monzonite and the altered dolomite. At the Lime Canyon mine the quartz monzonite near the mine has been sericitized, chloritized and contains epidote and garnet but has little sulfide mineralization. The sulfide mineralization appears to be confined to veins within the dolomitic limestone (From Benzore and Joseph, 1985, p. 45).

The host rocks for the Keiper mine, at the surface are Precambrian Pioche Shale (Hewett, 1956, Plate 1).

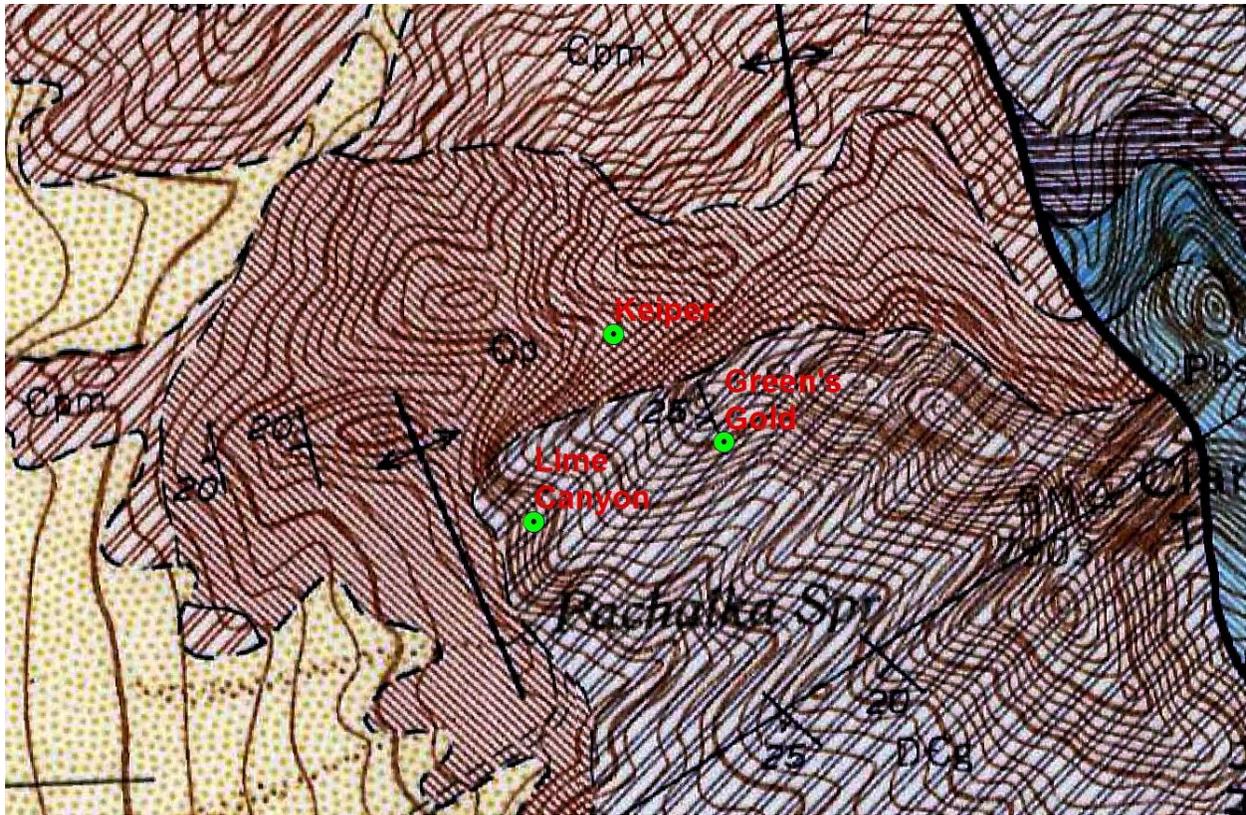


Figure 3. Geology of the Keiper, Lime Canyon and Green Gold Mines and surrounding areas. From Hewett, 1956, Plate 1.

The mine workings are clustered in several areas along a belt, more than a mile long, at or near a contact between quartz monzonite and a Paleozoic unit of limestone and shale. The ore bodies, in general, are discontinuous lenses and veinlets containing galena, sphalerite, chalcopryite and various secondary minerals. Gold and silver are also present. Some of the bodies lie along- fractures and bedding planes in the limestone; others follow fractures in the [Teutonia} quartz monzonite. At the north end of the belt, the Glory Hole workings, as described by Trucker and Sampson (1943) have developed mineralized, siliceous lenses in the quartz monzonite. A fracture striking S. 60° E. and dipping 70°NE. has been followed by a 285-foot southeast-trending adit and a winze 150 feet from the portal. Cross fractures trending S. 30° W. have been followed southwestward from the adit by two drifts; one 30 feet long near the winze, and another 150 feet long from the adit face. About 1,500 feet northeast of the Glory Hole workings, an ore body, 6.0 inches to 5.5 feet wide at the limestone-quartz monzonite contact, has been explored by, a 30-foot adit and 40-foot shaft. In the southern part of the mine area prospect adits, totaling over 400 feet in length, have been driven eastward through the limestone by various lessees during the last ten years (1943-1953). Shallow openings along a zone about 350 yards long mark the removal of high grade pockets near the surface in the past. Recent activities were confined to a mineralized area along bedding planes at a contact between calcareous shale and massive limestone. The zone strikes northward and dips 20-30° E. The ore bodies are lenticular and range from one inch to 5 feet in thickness. They contain showings of galena, but the ore minerals are mostly oxidized minerals of lead and zinc. In several places faults terminate the ore zones. (From Wright and others, 1953, p. 109).