0730 0009

Item 8

BROKEN HILL MINE

Location and Access. The Broken Hill mine lies between the Fairview and Paradise Ranges in Sec. 26 (?), T. 14 N., R. 35 E. in the Broken Hills district, 2 miles west of the town of Quartz Mountain, in the northeast corner of Mineral County (see Army Map Service, Reno topographic quadrangle map).

History and Production. The mine was discovered in 1905. Most of the production was from 1913 to 1920, and totalled less than $100,000 with values mainly in silver and lead.

Previous Work. Schrader (____) described briefly the geology of the Broken Hill mining district.

The Rocks. The mineralization at the Broken Hill mine is in andesite tuff and breccia. The andesite volcanics are at least 350 feet thick. Andesite and basalt dikes and irregular bodies intrude the andesite volcanic rocks. The andesite volcanics near the andesite dikes has been extensively hydrothermally altered. A large mass of granodiorite porphyry crops out 2 miles southeast of the mine.

Veins. At least 6 silver-lead veins cut the andesite tuff breccia. Three veins strike N. 30° W. and dip steeply east or west. Other "cross" veins strike east, while others are intermediate between the two main trends. The veins are up to 9 feet wide, up to 2,000 feet long, and extend to a depth of at least 350 feet.

The mineralization replaces the andesite. The veins are oxidized to a depth of about 150 feet, and consist of gypsum, cerargyrite, cerussite, anglesite, "limonite", plumbojarosite, and jarosite. Primary sulfides—argentiferous galena, some pyrite, chalcopyrite, and sphalerite, and rare molybdenite—begin to appear in appreciable amounts at a depth of 120 feet, and increase in amount downward as the oxides decrease. Bismuth and cobalt reportedly occur in the primary ore. Proustite and pyrargyrite occur in both zones.

<u>Molybdenum Minerals</u>. Molybdenite reportedly (Schrader, _____) occurs with the other sulfide minerals.

(1968)
from John Schilling's Notes