NBMG OFR 83-11
See also 83-12 for
geochemical results.

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JOHNNIE DISTRICT

The Johnnie (Montgomery) mining district is located on the west flank of the northeast end of the Spring Mountain range in the southeast end of Nye County in T17S, R52, and 53E. The district straddles Nevada Highway 16, approximately 3 miles north of the townsite of Johnnie and 9 miles south of U.S. Highway 95. Most of the properties are easily accessible from Nevada Highway 16 along excellent dirt roads. While the townsite of Johnnie is uninhabited, year round residents live near the Johnnie Mine and the community of Pahrump is less than 15 miles to the south.

The earliest recorded discovery in the district is thought to have been made around 1890 by the Montgomery party from Indian Springs, and additional lode discoveries were made about 1903 (Vanderburg, 1936; Kral, 1951). The prominently outcropping quartz veins in the district were alleged to have been noted as early as 1860 by Mormon pioneers, but the inaccessibility of the area made prospecting difficult if not impossible. The district was originally named the Montgomery, but between 1900-1910, gradually it became known as the Johnnie district, possibly alluding to the Indian known as Indian Johnnie who led the first recorded prospecting party to the area (Ivosevic, 1976). The town of Johnnie was inhabited from 1905 to the 1930's, with its heyday around 1907 (Labbe, 1960), after which the population shifted to the Johnnie Mine. The districts was reported active in 1905, with several mines and stamp mills in operation until the 1920's. The district's greatest period of recorded production was prior to 1920 with the district yielding up to that time well over a million dollars in both lode and placer gold.

While much lode ore was produced, the area is also known for its placer gold. Placer gold was discovered in 1921 by Walter Dryer and resulted in a second short boom for the district (Vanderburg, 1936). Placer operations were again in effect

in 1935 below the Johnnie and Congress Mines and in 1949 (Kral, 1951) and the early 1960's (Cornwall, 1972), below the Johnnie and Overfield Mines.

Most of the workings in the district follow massive, prominent, white quartz veins, some of which range up to 3 feet wide and are traceable for long distances on the surface. The veins follow branching, high angle faults and bedding plane faults in the Precambrian through Middle Cambrian, clastic and carbonate rocks. The beds are generally horizontal with gentle dips east or southeast, with attitudes steepening near the vicinity of the veins (Ivosevic, 1976). Overlying the older sediments are Cenozoic fanglomerates, which contain megabreccia deposits, and Quaternary alluvium.

The bedded sediments experienced tectonic deformation, folding, low and high angle faulting with subsequent rotation by eastward tilting of the district during the Sevier Orogeny in the Late Cretaceous. At the end of the Sevier Orogeny, longitudinal faulting and additional thrust faulting occurred. The district was dropped down to the west during the Basin-and-Range faulting during the Miocene. (Ivosevic, 1976).

The high angle quartz veins were emplaced during hydrothermal activity of unknown origin, probably between the Paleocene and early Miocene epochs. These easterly trending veins are hosts for the mesothermal mineralization, carrying the mineralogical suites: gold-chalcopyrite-pyrite, chalcopyrite-galena, and galena (-calcite). Chalcopyrite which has oxidized to low-grade malachite, also occurs with specularite in hydrothermal stratabound quartz-poor lodes (Ivosevic, 1976).

Wall rock alteration in the hypogene deposits include sericite and pyrite in clastics and sericite in dolomite, while the alteration minerals chlorite, calcite, and specularite occur locally.

The gold mineralization is localized in the Zabriskie Quartzite and in the dolomites found near the top of the Wood Canyon Formation, where these rocks are partially capped by the shaly basal member of the Carrara Formation.

The placer deposits are classified as part hillside and part stream placers, and Kral (1951) suggests that, in some instances, they mightbe residual, resulting from the dissentigration of veins and the release of gold in place.

At the time the district wasexamined, the Congress Mine area was being staked by Earth Resources Co. from Ohio.

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