SIERRA DISTRICT

LOCATION

The Sierra mining district is a large district that occupies much of the northern end of the East Range, between the Rose Creek district on the north and the Willow Creek district on the south. The district is also called the Dun Glen or Chafey district, and is a combination of that district and the Sunshine and Oro Fino districts. The district extends from near Dun Glen Peak on the north to Rockhill Canyon on the south. Johnson (1977, p.89) reports that the mines and placers of the Willow Creek district on the south were probably once considered part of the Sierra district.

HISTORY

Silver ore was discovered in the Sierra district in 1862, and numerous mines and prospects were worked during the following 20 years. There are no records concerning this early silver mining; Johnson (1977) believes that the deposits worked during this period were located on the east flank of the range. Gold mines in the district were apparently developed after the silver mines, and were more productive. The principal lode gold mines were the Black Hole - Monroe Mines (subsequently worked by the White Bear Syndicate and known as the White Bear or Mayflower Mines), the Auld Lang Syne, and the Auburn. These mines are located along Dun Glen Canyon, east of the townsite of Dun Glen (later called Chafey for the period 1908-1911). The production from the lode deposits is not well known. Couch and Carpenter (1943) report production of gold, silver, lead, and copper from 1879 to 1933 of $297,589. Vanderburg (1936b, p. 39) reports that production from 1908 to 1921 was $314,441; this does not include the period of greatest activity, from 1862-1880. Vanderburg (1936b, p. 39) estimates that the total lode production exceeds $1,000,000.

Placer gold deposists were discovered in the 1860's, a short time after the lode discoveries (Vanderburg, 1936a, p. 156). The deposits are reported to be among the most productive in Nevada, with estimated production of $4 million before 1900. Because of inaccuracies in early records, there is some doubt that the production during that period was this high (Johnson, 1977, p. 89). Chinese miners worked most of the placers; many of the canyons on the west side of the East Range south of Dun Glen Canyon were worked and explored along most of their length. The placers were also worked and explored in the 1930's in part by power shovel, land dredge, and hydralicking (Vanderburg, 1936a, p. 156). Several small placer operations were in operation in McCann and Dun Glen Canyon in 1983 (Jones, 1984, p. 37-38) and 1984.

ORE DEPOSITS

The major gold lode deposits in the district are those along Dun Glen Canyon. The Black Hole and Monroe Mine are along a N50°E, 45°-50°SE quartz vein which is up to 2 m wide and extends for nearly 1.5 km between the two mines. The vein quartz is massive and saccharoidal, and contains galena,

pyrite, tetrahedrite, and reportedly sphalerite and native gold (Ransome, 1909, p. 51). At the Monroe Mine, the wallrock is felsic volcanic and volcaniclastic rocks of the Koipato Group. The rocks are silicified near the veins.

At the Auburn Mine (S6,T33N,R37E) Triassic phyllite and conglomerate are cut by a due N, 0^{o}-35^{o}E quartz vein. Workings are apparently in the oxide zone, as no sulfide minerals were observed on dumps. The vein matter remaining is approximately 30 cm wide, but stopes are up to 1.5 m. Sparse sericite is present in the milky vein quartz. Panning of near-surface samples obtained in bulldozer cuts in limestone and shale occasionally reveals a few grains of cinnabar (Oscar Adkins, as reported in Bailey and others, 1984).

At the Auld Lang Syne (Lang Syne) Mine (S12,T33N,R36E), a due N, 65^{o}-70^{o}E quartz vein cuts Triassic Koipato Group metarhyolite(?). The milky vein quartz noted on dumps does not contain any sulfide minerals; however, Ransome reports pyrite and arsenopyrite from dump samples.

A second group of vein deposits is located southeast of the Dun Glen Canyon Mines, on the east flank of the range. These mines may include those worked for silver during the 1860's and 70's. The massive, milky quartz veins cut Koipato Group metarhyolite and Prida Formation limestone. Probable tetrahedrite and jamesonite occur at mines in S9,T33N,R37E; sphalerite and galena are present at the Little Jupiter Mine. Oxide copper minerals at the Four Sisters Mine suggest the presence of primary sulfide copper minerals at depth. The volcanic wallrocks are locally somewhat argillized, but no obvious jasperoid is developed in the carbonate units. The Little Jupiter Mine is being operated as a gold mine. Values reported from northerly-trending quartz veins and stockworks at the Little Jupiter can be several tenths to several ounces of gold per ton and 5-7 ounces silver per ton (Nevada Bureau of Mines files).

Extensive placer gold deposits have been worked in several canyons which drain the west flank of the East Range. The gravels in these canyons are 6-12 m in thickness. The gold is usually concentrated on bedrock and in some benches on canyon sides (Johnson, 1977, p. 90; Vanderburg, 1936a, p. 156-158). The gold in the deposits was derived by erosion throughout the region of numerous gold veins similar to those mined in Dun Glen Canyon.

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