1580 0001

326

Item 1

DUCK CREEK DISTRICT

The Duck Creek district is located within the Duck Creek Range, a narrow, northeast-trending ridge lying east of the portion of Hwy 93 which connects Ely with McGill. The ridge extends from Gallagher Gap, in the north, to Mosier Canyon, in the south, where it adjoins the Schell Creek Range near the head waters of Duck Creek. The ranges are separated by the spring-fed lowlands of the Duck Creek Valley.

Most of the workings in the district are located in canyons incised on the steep west flank of the Duck Creek Range. A few workings, including the Brennen, Providence, and Success mines, are located on the west slope of the Schell Creek Range near the southern end of the Duck Creek Valley.

Although the district was prospected as early as 1870, the first record of production was not made until 1904-1905 for ore from the Success mine, the most productive mine in the district. Since that time, small but steady production from several intermittently worked mines continued up to 1960. In total, 5,072 tons of ore were produced from the district and processed for lead, zinc, copper, silver, and gold. The principal ore mineral mined was galena, accompanied by lesser amounts of cerussite and anglesite.

Additional activity in the district included the mining of placer deposits east of McGill, fire clay deposits in Mosier Canyon, and high-calcium limestones at the still active Limekiln Quarry.

A fairly complete sequence of Precambrian through lower Permian limestones, shale and quartzites is represented in the Duck Creek Range. The structure is

See also 83-2 for geochemical results.

83-1

J. Tingley + J. Bentz (1982) "Mineral Res. of Egan Resource Area: NBMG OFR ~~82-9~~

complicated by steep normal faults and north to northeast-striking thrust faults. Tertiary volcanics overlie Cambrian rocks on the east flank of the range. A few altered, porphyry dikes occur locally.

Many of the deposits in the district are oxidized lead-copper replacement bodies which follow northeast-striking, high-angle faults in limestones and quartzites. Some replaced horizons, characterized by abundant hematitic gossan, occur along bedding and bedding plane faults in limestone. In addition, there are occurrences of brecciated quartz veins with gossans containing galena, and malachite.

At the Lead King prospects, brecciated quartz veins one-half to one inch wide occupy a replaced shear zone in limestone. The zone is three to five feet wide and marked by abundant iron oxides. The surrounding limestones are discolored, recrystallized, and randomly veined by silica and calcite. The quartz veins are cut by siliceous hematitic veinlets and contain pods of galena, pyrite, and gossan. An argillitized porphyritic dike is exposed near the mouth of the canyon. The ridge north of the canyon was recently flagged, trenched, and sampled in the vicinity of several old shafts.

The canyons one and one-half miles north of the Lead King property have been the site of drilling activity within the last five years. Five drill holes were seen at both the Keno #3 and Steptoe drill road properties. At the Ely Gibraltar mine, preparation for drilling was to begin shortly after our visit. We observed no activity other than limited staking along the west flank of the range.

The Success and Brennen mines mines, located in the southeastern portion of the district, explore gossany, northeast-striking replaced zones in limestone. At the Brennen mine, finely crystalline pods and lenses of galena replace limestone and limestone breccia along a clearly defined, east-dipping fault. Seven miles to the south, the iron-stained ore body at the Success mine is exposed at the surface of its extensive underground workings. At this mine, lead, silver, and gold were produced from an oxidized horizon which parallels the limestone host bedding. Mineralization in this horizon was probably enriched along a prominent set of northeast-striking fissures. Gangue barite is recorded from this locality (Hill, 1916), but was not observed. No recent activity was observed at either of these mines.

Samples collected from the district which were high in lead and zinc also contain some silver. Tungsten (150 ppm) was detected in one sample (# 896).

Selected References

Hill, J. M. (1916) Notes on some mining districts in eastern Nevada: USGS Bull. 648.

Hose, R. K., Blake, M. C., and Smith, R. M. (1976) Geology and mineral resources of White Pine County, Nevada: NBM&G Bull. 85.

Lincoln, F. C. (1923) Mining districts and mineral resources of Nevada: Nevada Newsletter Publishing Company.

Young, J. C. (1960) Structure and stratigraphy in north-central Schell Creek Range: in IAPG 1960 Guidebook to geology of east-central Nevada, p. 158.