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Item 4

# CURRANT CREEK DISTRICT

The Currant Creek district encompasses the southern White Pine Range, the Horse Range, and the northernmost part of the Grant Range in northeastern Nye County. Mining in the Currant Creek district is diffused over a large area and explores a variety of mineral occurrences. Kleinhampl (in press) includes the Railroad Valley oil fields south of Currant within the district, but we discuss these deposits in a separate section of this report.

The central part of the district, located about 35 miles southwest of Ely near the White Pine/Nye County line, is bisected by Hwy 6. The small town of Currant lies in the southwest part of the district, marking the junction between Hwy 6 and Hwy 20. Dirt roads connect with the highway and lead to the mine sites. Most of the workings are situated in the low foothills bordering the major ranges. A few workings occupy steep canyons on the west flank of the southern White Pine Range.

The geology of this region was mapped by Wire (1961) and Moores and others (1968). Their studies show that the region is underlain by a thick (20,000') sequence of eastern assemblage, Paleozoic carbonate, and minor clastic rocks. This package is unconformably overlain by up to 15,000' of Eocene through Pliocene siliceous to intermediate volcanic rocks and fluviolacustrine sediments. Mesozoic rocks are absent from the section here as, during Mesozoic time, uplift, minor deformation, and erosion of the upper Paleozoic section was taking place.

Two small quartz monzonite stocks, the Railroad and Silver Springs stocks,

See also 83-10 for geochemical results.

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

intrude Cambrian sediments along the southwest flank of the White Pine Range. Swarms of northeast-trending dikes radiate outward from both bodies. Biotite and hornblende from the intrusives yield an age date of about 32 m.y. (Moores et al., 1968).

Moores (1968) concludes that the major deformation in the White Pine, Horse, and Grant Range area is post-Oligocene in age. Folding, low-angle thrusting, high-angle faulting, and gravity sliding characterize th· complicated Tertiary tectonic history of the region. Different intensities and styles of deformation displayed in the major ranges indicate they were formed independently of one another.

Within the Currant Creek district there are several examples of thrusting and high-angle, normal faulting. The high-angle faults are generally north striking, and cut older, less extensive east-west structures. The major structural feature of the area is the west-striking Currant Creek fault, which crosses Hwy 6 in the southeast quarter of section 17, T 11 N, R 59 E. Small jasperoid bodies are found along the probable west extension of this fault in the vicinity of the Gold Point mine.

The commodities of the district are classified into two groups: metallics and non-metallics. The metallic group includes gold, silver, lead, copper, tungsten, and uranium. The non-metallic group includes fluorite, magnesite, zeolite, dimension stone, limestone, clay, and phosphate. (For a list of the major mines and their commodities refer to Table 1.)

The district is best known for its magnesite deposits. These deposits have been described in detail by several authors (refer to selected reference list). Exploration and mining of the small but high-grade magnesite deposits occurred intermittently from 1940 through 1964. The Ala-Mar and Windous deposits were the only significant producers. Only one of the deposits, the Rigsby claims, was actually visited during our field examination of the district. All of the magnesite claims, including the Rigsby, appear to have been inactive for some time.

Uranium and zeolite occurrences were prospected in the 1950's and 1960's, although no production is recorded for either commodity. Several workings southeast of Currant in the southern part of the district explore deposits of these types which are hosted by Tertiary volcanic rocks. Not far from these deposits, ornamental building stone is quarried at the El Padre mine from water lain tuffs of the Mio-Pliocene Horse Camp formation. None of these workings showed signs of recent activity and no activity was observed in the surrounding areas.

The earliest recorded production from the district is for gold and lead, mined from unknown localities in 1914 and 1916. The Gold Point mine , the best developed gold mine in the district, may have been worked in the thirties, but its only recorded production is for 590 tons of ore in 1940. Very small amounts of silver and gold-bearing ore were produced in 1949 and 1951, but the source of this ore is not known. Confusion also exists over the source of a small amount

of tungsten produced in 1954 and 1964. It is likely that it was derived from the Silver Springs workings in the White Pine Range.

The Gold Point mine is located one-half mile north of Hwy 6 in the central part of the district. The mine area is developed by a northern and southern group of workings, presently named the Gold Crown and Blue Jay claims, respectively. Each group consists of several west-trending adits. The main adit on the property is located in the northern group and estends for a distance of 496' (Wire, 1961). The present owners have held the property since 1961.

The host rock for the Gold Point deposit is a quartz cemented jasperoid breccia which replaces Mississippian Joana limestones. Siliceous replacement of the unit occurs along bedding, but the main mineralization appears to follow a north-striking, high-angle zone of fracturing and faulting marked by abundant gouge and surface coatings of limonite and hematite. The breccia contains thoroughly silicified, angular limestone and siltstone fragments. Vuggy, milky white to vitreous grey, radiating quartz crystals cement the fragments. Calcite occurs in small quantities as vug fillings, veinlets and masses of "tooth-spar." Small flecks of gold were observed in several breccia samples and in outcrop at the southern workings. The gold occurs in the late stage, grey quartz which later infilled and cemented the breccia. Arsenopyrite and manganese are reportedly associated with the gold mineralization. Several stages of quartz veining and hydrothermal brecciation are recorded in the outcrops near this mine.

The intrusive stocks and dikes on the southwest flank of the White Pine Range have produced weakly mineralized, contact metasomatic (skarn) deposits near their margins. The White Pine prospects at the head of Broom Canyon explore fluorite-bearing, calc-silicate rocks composed of vesuvianite, calcite, diopside, quartz, and minor pyrite. Fluorite occurs in varying quantities in the metamorphosed rock and associated with minor tungsten mineralization. Quartz veins emplaced along northeast-striking fractures crosscut the bedding preserved in the silicated host rock. These veins contain some galena and pyrite. We observed no activity within the canyon, but the entire alluvial slope west of the canyon was staked by Amselco during June, 1981.

The Silver Springs prospect is located about three miles south of Broom Canyon and consists of three adits in the contact zone between the Silver Springs stock and adjacent limestones. The compositionally banded calc-silicate rocks contain minor pyrite and scattered crystals of low-molybdenum scheelite.

A few unnamed workings (sample localities 834-836) are located in the northern part of the district within the southwest quarter of section 32, T 13 N, R 61 E. Three shallow prospects explore northeast-striking shear zones in altered rhyo-dacitic volcanic rocks. Near the workings, an outcrop of water lain tuffs displays effects of hydrothermal brecciation. Ridges of jasperoid and jasperoid breccia cap the hill south of the workings and continue to outcrop to the south and east. The jasperoid replaces limestones of the Devonian Guilmette formation. A sample of sulfide-bearing jasperoid (sample 836) collected

in a drainage south of the prospects shows anomalous values of arsenic and antimony. No activity was noted in the area at the time of our examination, although since then the area has been staked.

TABLE 1

CURRANT CREEK DISTRICT

| Mine Name | Major Commodity | Location |
|---|---|---|
| Ala-Mar | Magnesite | T12N,R59-61E |
| Chester | Magnesite | T12N,R59-61E |
| Rex-Pine | Magnesite | T12N,R59-61E |
| Rigsby | Magnesite | T12N,R59-61E |
| Snowball | Magnesite | T12N,R59-61E |
| White Knolls | Magnesite | T12N,R59-61E |
| Windous | Magnesite | T12N,R59-61E |
| El Padre Mine | Building stone | S23,T10N,R58E |
| Gold Point Mine | Gold, silver | S8&17,T11N,R59E |
| Silver Springs Prospect | Tungsten, gold? | S5,T11N,R88E |
| Stone Cabin Zeolite | Zeolite minerals | Within T9N,R59E |
| Thor U Prospect | Uranium | S9,T10N,R58E |
| White Pine Prospect | Fluorite, lead | S21?,T12N,R58E |

## Selected References

Faust, G. T. (1948) Mineralogy and petrology of the Currant Creek magnesite deposits and associated rocks: GSA Bull. V. 59, no. 1, p. 11-74.

Garside, L. J. (1973) Radioactive mineral occurrences in Nevada: NBM&G Bull. 81, p. 93.

Holmes, G. H., and Matson, E. J. (1950) Investigation of the Ala-Mar and Nevada Magnesite Company: USB Mines RI 4608.

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

Kleinhampl, F. J., and Ziony, J. I. (in press) Geology and mineral deposits of northern Nye County: NBM&G Bull. (in press).

Lumsden, W. W., Jr. (1964) Geology of the southern White Pine Range and northern Horse Range, Nye and White Pine Counties, Nevada: UCLA, PhD thesis.

Moores, E. M., et al. (1968) Tertiary tectonics of the White Pine - Grant Range region, east-central Nevada, and some regional implications: GSA Bull., V. 79, no. 12, p. 1703-1726.

Papke, K. (1979) Fluorspar in Nevada: NBM&G Bull. 93.

Scott, R. B. (1965) The Tertiary geology and ignimbrite petrology of the Grant Range, east-central Nevada: Rice Univ., PhD thesis.

USGS & NBM&G (1964) Mineral and water resources of Nevada: NBM&G Bull. 65, p. 222-254.

Vitaliano, C. J. (1951) Magnesium mineral resources of the Currant Creek district: USGS Bull. 978 - A.

Wire, J. C. (1961) Geology of the Currant Creek district, Nye and White Pine Counties: UCLA, MA thesis, p. 154.