from NBMG OFR 83-9
See also 83-10 for geochemical results.

(54)
Item 7

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EDGEMONT DISTRICT

The Edgemont district is located in northern Elko County in the central part of the Bull Run Mountains. The district encompasses a narrow area extending north from Bull Run Reservoir to Silver Creek Canyon. Most of the major mines in the district lie on the ridgecrest area or in canyons incised on the west slope of the range. The district adjoins the Aura district on the east. Because of the many similarities between the two districts, the reader is referred to the Aura district summary for further information on the geology and mineralization of the Bull Run Mountains.

The gold ores of the Edgemont district were discovered in the 1890's, almost thirty years after the discovery of silver deposits in the Aura district (Granger, 1957). Two stamp mills and cyanidation plants were erected in 1902 at the most active and productive minesites, the Bull Run and Lucky Girl Group. More than 42,000 ounces of gold and almost 33,000 ounces of silver were produced between 1900 and 1909 (Granger, 1957). Production of gold, silver and minor lead, copper, tungsten and antimony has occurred intermittently since that time.

Like the Aura district to the east, the main mines and millsites of the Edgemont district are patented. Although no activity other than claim staking was observed in most of the southern part of the district, some drill roads (exploration cuts?) were observed near the prospect located in sections 6 and 7, T43N, R52E, south of Bull Run Canyon. Additional exploration cuts, probably one to three years old, exist at several localities along the slopes of White Rock Canyon. Also the western part of the district has been the site of exploration and some mining in recent years.

The rocks underlying the Edgemont district consist of an upfaulted block of Cambrian through Devonian-aged sediments. The lower and thickest part of the section is dominated by orthoquartzites and pebbly sandstones of the Cambrian Prospect Mountain Quartzite. These rocks are abundant in the southern part of the district where they form massive, jointed outcrops and scree slopes. Phyllites and limestones overlie the quartzites to the north and are intruded by several small, mid-Jurassic stocks. All of the sediments are regionally metamorphosed, folded and cut by high-angle normal faults. South of the district, Miocene clastic rocks, mostly shales and siltstones, are domed along an anticlinal structure. In 1922 and 1956, petroleum test wells were drilled along the crown of this structure in the southern Bull Run Basin. Both wells encountered either gas or oil, but at that time the restricted Cenozoic reservoir was not deemed worthy of further exploration (Decker, 1962).

The main gold-bearing vein deposits of the Edgemont district are described in detail by Emmons, 1910. The quartz veins at the Lucky Girl and Bull Run mines are emplaced along sheeted quartzites and minor phyllites of the Prospect Mountain Quartzite. The milky white, massive quartz veins crosscut the east-striking beds of the host. The vein edges are sharp and contain some sericite. The veins range in width from 2-7' and generally strike northeast with southeast dips. They are oxidized in their upper portions and have been mined to depths of 400' or more. Their strike lengths extend for several thousand feet but are segmented by post-mineral faults. Quartz composes almost 90% of the veins. The gold is sometimes free and usually intimately associated with galena, pyrite, arsenopyrite, and occasionally iron-oxides. The silver values are usually much less than the gold. The veins may be genetically related to the White Rock stock which outcrops a few miles north of the gold

lode deposits.

At the time of our visit, we noted that some fairly recent surface exploration had been done on previously unmined vein deposits in the district. On the Burns Group of claims, a 5-10' wide pyritized and fractured quartz vein is explored by trenching for almost 150' along strike. The exposed vein strikes N5W, is steeply east dipping and occurs in phyllitic sediments of the Ordovician Aura Formation. The prospect is wedged between two dioritic stocks and as a result, both thermal and deformational (folding) effects are displayed in the host rocks.

In addition to gold and silver, there are reported occurrences of uranium, antimony and molybdenum within or near the district. The uranium occurrence, named White Rock Canyon Prospects, is located south of the White Rock stock between Echo and White Rock Canyons. The deposit was not visited, but is described by Garside, 1973.

Seven tons of antimony were produced in 1940 from the Blue Ribbon mine located in the northern part of the district near Pennyslvania Hill. Pods, veinlets and discrete crystals of stibnite occur in quartz veins which cut argillized biotite granite of the Silver Creek stock (Lawrence, 1963).

A few miles north of the district, the Indian Creek prospects (see Hat Peak 15' quadrangle for location) are developed along molybdenite-bearing quartz stringers localized in window exposures of altered Paleozoic (?) slates. The veins also contain pyrite, chalcopyrite, galena, sphalerite and the rare mineral nicollite (Ni As) (Schilling, 1968).

North of the Bull Run and Lucky Girl Group of mines the mineralogy of the fissure veins is markedly different. Scheelite and some powellite occurs in faulted quartz veins and gossan at or near the Burns mine located northwest of Porter Peak. The vein material we collected from this site contains pyrite,

galena, gossan and dark lenses of dispersed sulfides (possibly silver chlorides?). When lamped, small flecks of scheelite and powellite were observed. A minor production of tungsten (3 units of WO_3 in 1953) and a small production of lead and zinc are recorded for the deposit (Stager, in press).

Zinc-rich veins were mined in White Rock Canyon at a location described as "a few miles east of the White Rock post office." This site is probably now known as the Nevada mine (see Bull Run 15' topographic map). An unpublished report on the deposit lists assay values of vein samples which contain between 3 and 17% zinc, in addition to some silver and minor gold and copper (unpublished report from NBMG Mining District Files, #44, Report on Zinc Mine of Nevada Zinc Corporation, 1942, Elko County, Nevada). The fissure veins occur in the dioritic White Rock stock near the contact with Ordovician limestones.

Presently there are no active mines in the district. However, during 1981, small-scale mining of lead and silver was conducted by Duck Valley Ltd. at a location which is the same as or near to the Nevada mine described above.

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