

VIOLA DISTRICT

LOCATION

The Viola district extends along the southern flank of the Clover Mountains from Meadow Valley Wash near Cottonwood Canyon on the west to the Blue Nose Peak area on the east. The mines and prospects of the district are in the east half of T8S, R68E and the west half of T8S, R69E.

HISTORY

According to Tschanz and Pampeyan, 1970, the Cherokee vein in the western part of the Viola district was discovered in the 1800's. A carload of silver ore was reportedly shipped from the Viola (Cherokee) Mine early in the history of the district, but no records of this production have survived. It is possible that early production was credited to either the Pennsylvania or Caliente districts. Claims were first staked on the fluorite deposits on the edge of the Tule Desert southeast of Blue Nose Peak in 1942 (Papke, 1979). Apparently no production was made from these deposits until 1958-1968 when they were intermittently mined by Wells Cargo Co. Some additional fluorite was mined during 1968-71 and extensive exploration was done on the property during the early 1970's (Papke, 1979). Total fluorite production through 1971 is recorded at 44,900 tons of 69% (ave. grade) CaF_2 . There has been not activity in the Viola district for several years. At the time of our examination (1984), there were new claims covering the fluorite (Carp mine) area, and there was evidence of recent sampling at several of the silver prospects in the north part of the district.

GEOLOGIC SETTING

The Viola district lies just to the south of the southern margin of the Caliente caldron complex. Rocks in the district are composed of three isolated outcrops of Paleozoic carbonates surrounded by Miocene ash flow tuffs which originated from within the caldron. The large masses of limestone and dolomite crop out along a northwest-trending band extending from the Tule Desert on the southeast to the Cottonwood Canyon area on the northwest. The southeastern outcrop, near the Carp mine, and the central block, near the Pittsberg and other mines around Blue Nose Peak, are composed of Mississippian and Pennsylvanian-Permian dolomite and limestone. The third block, to the northwest in the Cherokee mine area, is composed of Permian and Triassic limestones. The structure within the carbonate blocks is complex, and relationships do not correlate from block to block; the older Paleozoic rocks may be part of the regional thrust plate which in nearby areas, has placed older Paleozoic rocks over younger Paleozoic rocks and Triassic rocks. The area could also be reflecting sturctural complications related to the margin of the Caliente caldron.

ORE DEPOSITS

At the Carp (Wells Cargo) mine, large replacement bodies of fluorite were mined

from a wide zone of brecciation along a northwest-trending fault zone in dolomite and dolomitic limestone. Barite and chalcedonic silica are also present and some areas show iron and manganese oxide staining. Both fluorite and barite cement breccias along the wide structure. To the north of the main Carp pit, fluorite-cemented breccia occurs along a north-south trending porphyry dike which cuts silicified tuff.

The many prospects in the Blue Nose Peak area explore small replacement zones and silicified breccias which formed along steep structures cutting carbonate rocks. Clots of galena and tetrahedrite occur with quartz, fluorite, calcite, and barite along these northwest and northeast striking fault zones. A large area of alteration just west of the saddle north of Blue Nose Peak resembles an area of hot springs leaching.

At the Cherokee mine, the largest metal mine in the Viola district, galena, tetrahedrite, pyrite, and copper, iron, and manganese oxides occur in a wide quartz-calcite vein which cuts Permian Kiabab limestone. The vein fills a N45°W fault zone and has been explored for about 200 feet along strike. The structure at the Cherokee has been traced for 2 miles (Tschanz and Pampeyan, 1970) and is parallel to mineralized structures seen at Blue Nose Peak and at the Carp mine area to the southeast.

GEOCHEMICAL RELATIONSHIPS

Samples taken from the southeastern part of the district, the Pittsburg and Carp areas, were all high in barium. The Pittsburg (Blue Nose Peak) sample were generally high in lead, antimony, zinc, cadmium and contained some silver. One sample in this area was also high in arsenic. Low to moderate molybdenum values were obtained from several Blue Nose Peak samples also. To the northwest, samples from the Cherokee area were high in copper, low in barium, contained moderate lead-zinc, and did not report antimony or arsenic. Low molybdenum was reported from two samples in this area.

SELECTED REFERENCES

- Ekren, E. B., Orkild, P. P., Sargent, K., A., and Dixon, G. L., 1977, Geologic Map of Tertiary Rocks, Lincoln County, Nevada: USGS Map I-1041.
- Lincoln, F. C., 1923, Mining Districts and Mineral Resources of Nevada: Nevada Newsletter Publishing Co.
- Papke, K. G., 1979, Fluorspar in Nevada: NBMG Bull. 93.
- Papke, K. G., 1984, Barite in Nevada: NBMG Bull. 98.
- Tschanz, C. M., and Pampeyan, E. H., 1970, Geology and Mineral Deposits of Lincoln County, Nevada: NBMG Bull. 73.