

3550 0004

174
Item 4

PATTERSON PASS

The Patterson Pass mining district is located in northern Lincoln County about fifty miles south of Ely. The district occupies the southern Schell Creek Range north of Patterson Pass and the northern portion of Cave Valley, which borders the range on the west.

The geology of the district is similar to that described in this report for the nearby Geyser Ranch area except that north of Patterson Pass slices of the Cambrian section are repeated along a few north to northwest-striking faults. These faults are truncated(?) by a major, east-west fault traced by the Patterson Pass drainage. Slide blocks of Cambrian rocks rest on the lower portion of the range near the Cinch mine and form the low eroded hills in the northern part of Cave Valley.

Rich, oxidized silver ores were discovered in the district in 1869. Some silver was produced in the 1920's, but exact quantity and source of the ore is not known. During World War II, one thousand tons of tungsten ore were shipped from the Cinch and Pip mines located in the eastern part of the district.

The workings north of the road which crosses the range at Patterson Pass explore silver and copper-bearing quartz veins and lode deposits emplaced along generally north-striking, high-angle faults. Quartz and calcite are abundant as gangue minerals, breccia cement and as veins in the host rock, which is commonly limestone of the Pole Canyon formation. Silicification of the wall rocks is common. Pyrite and ghosts after pyrite are ubiquitous and are usually accompanied

See also 83-2 for geochemical results.

83-1

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

by tetrahedrite and copper oxides.

Tungsten mineralization within the district occurs in skarns developed in carbonate rocks along faults and in quartz veins. The ridge crest workings near Schwartz Tunnel Springs explore an extensive replaced horizon in the basal limestone units of the Pioche shale. Scheelite occurs as disseminated flakes in skarn with chalcopyrite, sphalerite, and occasionally fluorite. The horizon is capped by an iron-rich gossan which can be traced from the upper Schwartz Tunnel workings southwest toward the Jerry claims. The ore zone is adjacent to a major, northwest-striking fault which offsets the Cambrian section in this part of the range. The dike at the "head of Schwartz Canyon" (Hill, 1916) was never located, but a piece of altered intrusive rock was found at the Jerry claims. Minor excavation has occurred in the area since it was last staked in 1979. Skarn samples taken from the ridgecrest workings contain anomalous beryllium, tungsten, and tin in addition to lead-zinc mineralization.

In the low hills of the Cave Valley portion of the district, lead and copper replacement deposits and quartz veins follow narrow, north-striking fractured zones in limestone beds of the basal Pioche formation. An interesting texture seen in this deposit and elsewhere in the district is the complete replacement of ovoid-shaped *Girvanella* algae by finely crystalline galena. Similarities between the deposits at Cave Valley and the Schell Creek Range support the idea that the sliding of Paleozoic blocks into Cave Valley took place after the main period of mineralization in the southern Schell Creek Range.

Recent activity in the district was observed at the Cinch mine (Owen Walker property) east of Patterson Pass. Union Carbide was sampling, mapping, and drilling an area approximately one-quarter mile north of the exposed thrust at the Cinch mine. We were informed by their project geologist that intrusive rocks outcrop in the area and had been penetrated by their drills 450' below the surface. There is some confusion on this point, however, as the "intrusive" rocks have also been described as "Tertiary volcanics" by Gemmill (in Tschanz and Pampeyan, p. 167).

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.
- Kellogg, H. E. (1960) Geology of the southern Egan Range: in IAPG Guidebook to the geology of east-central Nevada, p. 189.
- Papke, K. (1979) Fluorspar in Nevada: NBM&G Bull. 93.
- Schrader, F. C. (1931) Notes on ore deposits at Cave Valley, Patterson district, Lincoln County, Nevada: Univ. of Nevada Bull., v. 25, no. 3, p. 5-16.
- Tschanz, C. M. (1960) Geology of northern Lincoln County, Nevada: in IAPG Guidebook to the geology of east-central Nevada, p. 198.
- Tschanz, C. M., and Pampeyan, E. H. (1970) Geology and mineral deposits of Lincoln County, Nevada: NBM&G Bull. 73.