

3900 0009

248  
Item #6  
65

## REPUBLIC DISTRICT

### LOCATION

The Republic district is located in the northern Royston Hills, a low northwest-trending group of hills along the western boundary of Nye County about 40 miles northwest of Tonopah. The district includes three general mining areas: the camp of Republic, near the Orizaba Mine, in the southwest quarter of Township 8 North, Range 39 East, Cole Springs Camp, about one mile to the southwest in the northeast quarter of Township 7 North, Range 39 East, and a third area about 3 miles to the south in the south central part of Township 7 North, Range 39 East.

Both Lincoln (1923) and Kral (1951) included the mines of the Republic district in the Cloverdale district. Cloverdale is north of the Royston Hills, in the southern Toiyabe Range, and the mines are in a completely different geologic setting. Kleinhampl and Ziony (1984) restricted the district to the Republic camp area of the Royston Hills but identified it as the Royston Hills Area, a name which confuses the district with the main Royston district to the south in Esmeralda County.

### HISTORY

In 1906-1907, several shallow shafts were sunk in the Republic Camp area, and a few ore shipments were sent to Millers and to Hazen for treatment. Report of a high-grade strike in the spring of 1913 caused a short-lived boom; some shallow prospecting was done at this time, but the excitement was soon over and all work ceased. In the fall of 1913, there were less than a dozen people in the entire district (Sirdevan, 1913). The principal mine in this part of the district, the Orizaba, has a recorded production of about \$127,980 produced between 1913-1918 (Kral, 1951). Mines in the Cole Springs Camp area are reported to have had minor production, but no records of this exist. A small mill is currently in operation at Cole Springs, but it receives ore from a variety of sources, mainly outside of the Republic district. Signs of recent exploration activity were in evidence in the district when it was visited in the Spring of 1986. Drilling has been done around the Orizaba Mine, and dumps at the Farris property have been removed.

### GEOLOGIC SETTING

The oldest rocks exposed in the Republic district are calcareous and dolomitic siltstone, sandstone, and conglomerate of the Late Triassic Luning Formation (Kleinhampl and Ziony, 1984). These units are folded into a major east-striking syncline and are mildly to intensely deformed. Contact metasomatization has locally bleached the formations, and hornfels has formed in some areas. Highly deformed Tertiary volcanic rocks overlie the Luning and are composed chiefly of altered and sheared welded tuff (Kleinhampl and Ziony, 1984). These older rocks are overlain by relatively undeformed volcanic flows of intermediate composition which are in turn overlain by gently dipping tuffaceous sedimentary strata, andesitic lavas, and younger andesitic and basaltic rocks. Near the Blue Gem Mine in the southern part of the district, deformed metachert, quartzite, and greenstone, assigned to the Permian Pablo Formation, crop out (Kleinhampl and Ziony, 1984).

NBMG OFA 86-14

## ORE DEPOSITS

The mines and prospects of the Republic district are grouped into three areas. Mines related to the old camp of Republic are on the north edge of the district and extend from the Orizaba Mine on the east to the Hyland and Farris properties on the west. About one mile to the south, a second group of workings is scattered in the hills surrounding Cole Springs camp. The third area includes prospects around the Blue Gem turquoise mine about 3 miles south of the Orizaba.

At the Orizaba Mine, workings followed a northwest-striking, southwest-dipping quartz vein in bleached limestone near an intrusive contact. The vein contains bunches of argentite, galena, and sphalerite in a gangue of quartz and calcite. Inclines at the Hyland property, east of the Orizaba, expose a  $N40^{\circ}W$ , southwest-dipping shear zone in a bleached, altered volcanic rock near the contact with limestone of the Luning Formation. Vein quartz along the shear zone contains streaks of a gray, wispy sulfide, possibly silver. Mineralization at the Flossie claims, northeast of the Hyland, and at the Farris property, west of the Hyland, occurs in quartz veins in andesite and meta-andesite. Veins at the Flossie strike  $N15^{\circ}E$  and  $N40^{\circ}W$  and contain pyrite and some base metal sulfides in quartz gangue. Both vein systems have been exposed by prospects and incline shafts. At the Farris property, workings follow a  $N40^{\circ}E$ , vertical quartz vein which contains minor galena.

Shafts and prospect pits near Cole Springs camp follow quartz veins which strike  $N40^{\circ}W$  and cut altered lavas and intrusive bodies of dacitic to rhyolitic composition. Vein quartz from dumps in the area displays brecciation and iron-oxide staining.

At the Blue Gem Turquoise Mine, workings follow thin turquoise veinlets in altered shear zones in a fine-grained white quartzite. The rock is almost completely argillized near the shear zones, and is silicified along the mineralized fractures.

## GEOCHEMICAL RELATIONSHIPS

Of the eleven high-grade dump samples collected in this district for geochemical analysis, only three did not contain detectable gold; values ranged from 0.45 ppm to 7.7 ppm with silver values of 3 ppm to 3000 ppm. Arsenic values were very high in samples from the Blue Gem area and were very low to the north. Antimony values were high in the south near the Blue Gem and near the northwest part of the district and low at the Orizaba Mine. Base metal values were generally high throughout the district, and cadmium was moderately high in some samples, mainly those on the northwest side of the district. Samples from the Cole Camp area were slightly high in molybdenum.

## SELECTED REFERENCES

- Kleinhampl, F. J., and Ziony, J. I. (1984) Mineral resources of northern Nye County, Nevada: NBMG Bull. 99B.
- Kral, V. E. (1951) Mineral resources of Nye County, Nevada: NBMG Bull. 50.

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

Sirdevan, W. H. (1913) Notes on the camp of Republic,  
Cloverdale mining district, Nye County, Nevada: NBMG  
files, File 221, item 2.