BARCELONA DISTRICT

LOCATION

The Barcelona mining district is located high in the central Toquima Range, about 6 miles northwest of the town of Belmont, Nye County. The district lies on the southeastern side of Shoshone Mountain and includes the area at the head of Silver Creek, all of Antone Canyon, and extends east to include the Corcoran Canyon area. The major workings on Silver Creek are within the northeastern part of Township 9 North, Range 44 East and the northwestern part of Township 9 North, Range 45 East. Antone Canyon extends into the southern part of Township 10 North, Range 45 East and the Corcoran Canyon prospect is in Township 10 North, Range 46 East.

HISTORY

According to Thompson and West (1881), the first silver discoveries at Barcelona were made in 1867 by Emanuel San Pedro. San Pedro led a prospecting party into the area, established a base camp at Spanish Springs in the southern Toquima Range, and explored the surrounding area for gold and silver. This group developed the Barcelona, South Barcelona, and Liguira silver mines and, in two seasons of work, mined about $60,000 from the deposits (Kleinhampl and Ziony, 1984). The mines were first included in the Philadelphia (Belmont) district but, in 1875, the separate Spanish Belt district was formed (Thompson and West, 1881). The town of Barcelona was started in 1876 but the mines ceased work and the town was deserted by 1877. Some work again started in 1879 on the Barcelona and adjacent mines and continued at least until 1889 (Kleinhampl and Ziony, 1984). The district is now commonly referred to as Barcelona rather than Spanish Belt and, again, is sometimes included in the Belmont district.

Mercury was reported to be present in mines at Spanish Belt in 1876 (Whitehill, 1877), but no production is reported from this early discovery. The Flower mercury mine in Antone Canyon was discovered in 1908 and the Van Ness mercury mine, west of the Barcelona Mine was discovered in 1928. Mercury was produced at the Van Ness Mine through 1943.

Production figures for the district are incomplete; Couch and Carpenter (1943) credit the Barcelona Mine with $165,000 through 1940. Kleinhampl and Ziony (1984) credit the district with at least $133,000 in mercury alone, giving a total of $298,000.

Very little mining has taken place in the district in recent years. Several major companies, however, have conducted exploration for both base and precious metals in the Barcelona area. In the late 1960's, Kerr-McGee Corporation drilled near the old silver properties for porphyry molybdenum. Freeport Exploration Co., in 1986, was reported to be exploring in the Antone Canyon area, presumably for precious metals. Copper Range Exploration is actively exploring a silver-gold occurrence near the mouth of Corcoran Canyon. The results of these programs are unknown.

GEOLOGIC SETTING

The major portion of the Barcelona district is within a wedge-shaped septum of metamorphosed lower Paleozoic strata between the granitic Belmont and Round Mountain plutons. The sedimentary rocks are chiefly shales, siltstones, and quartzites of the Cambrian Carrara Formation and Ordovician Palmetto Formation (Kleinhampl and Ziony, 1984). Most of the sedimentary rocks adjacent to the granitic rocks are metamorphosed to hornfels or skarn. Tertiary rhyolitic welded tuffs lap the older rocks on the east side of the district. The Corcoran Canyon area is entirely underlain by welded tuffs whose source is probably a caldera complex lying east of Meadow Creek (Boden, 1986).

ORE DEPOSITS

Silver was the main metal mined in the Barcelona district, although some lead and gold were recovered from the silver ores. The silver deposits, located at the head of Silver Creek in the central part of the district, are the historic deposits reportedly discovered in 1867 by San Pedro and his Mexican prospecting party. Mining at the Barcelona and San Pedro mines was along quartz-veined, silicified ledges confined to a northeast-trending fault zone between schist and limestone. The two mines are on separate but parallel veins and the workings are interconnected. Minerals visible in ore samples collected from the mine dumps include pyrite, tetrahedrite, galena, cinnabar, and molybdenite in a gangue of quartz. Some of the vein material is brecciated and recemented with later quartz.

In the area explored by Kerr-McGee for molybdenum, near the San Pedro workings, disseminated molybdenite, chalcopyrite, and other sulfides occur in a skarn zone.

At the Van Ness mercury mine, west of the Barcelona and San Pedro Mines, cinnabar veinlets occur with quartz and kaolinite in tabular bodies in a silicified limestone. The mineralized zone ranges from 2-30 feet wide and extends for about 1400 feet along strike (Kleinhampl and Ziony, 1984). At the Flower mercury mine, east of Barcelona, cinnabar occurs with barite and stibnite along a thrust fault cutting limestone and siltstone of the Carrara Formation.

At the Silver Reef prospect in Corcoran Canyon, silver mineralization occurs associated with quartz veins in a silicified ash-flow tuff. The host ash-flow tuff is the Upper Tuff of Corcoran Canyon which originated from a caldera lying to the southeast of Corcoran Canyon, one of a series of nested calderas of the Toquima caldera complex (Boden, 1986). Silver mineralization is in the hanging wall of the northeast-striking, northwest-dipping fault zone. The original work at the prospect was on a pyrargyrite-bearing quartz vein within the fault zone. At least four generations of hydrothermal breccias can be seen within the mineralized area. Pyrite and minor silver sulfides are present as disseminations and streaks in breccia filling and with quartz in microveinlets. An alteration sequence of propylization, sericitization, silicification is present in the mineralized zone. Exploration is presently (1986) in progress at this property for a bulk-minable silver deposit.

GEOCHEMICAL RELATIONSHIPS

Samples from the Barcelona and San Pedro Mines contained high silver values and trace gold associated with anomalous arsenic, antimony, copper, lead, zinc, and molybdenum. Similar associations were found at the Perkins prospect to the west, but samples from there also contained tungsten and higher molybdenum values. Samples from the Flower antimony and mercury prospects in Antone Canyon reported high antimony and arsenic values, very low base metals, and very high boron.

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