

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

GANCE CREEK AREA

79-A  
Item 6

2420 0006

Gance Creek is located on the east side of the Independence Range about 40 miles north of Elko via the Mountain City Hwy. The area is actually within the boundaries of the Burns Basin district but, for simplicity, is regarded as a separate area of mining activity. A few mines and prospects are scattered within and adjacent to the Gance Creek drainage. The area lies within the Humboldt National Forest.

The rocks exposed along Gance Creek are predominately siliceous, western facies sediments. The sediments consist of interbedded argillites, siltstones, shales, cherts and mudstones. Above the creek bed to the north and west, siltstones and calcareous rocks of the Roberts Mountains and Hanson Creek Formations are exposed in windows within the upper plate sequence. A north-trending range front fault runs along the base of the range just west of Saval Ranch. East of the fault the valley is underlain by rhyolitic tuffs and flows, tuffaceous sediments and coarse clastic units all of Tertiary age.

Recent activity in the Gance Creek area is related to exploration for gold and barite. The window areas in upper plate rocks near the ridgecrest are covered by Freeport Exploration Co's extensive Cal group claim block. The claims are the site of recent exploratory drilling resulting from Freeports continued search for areas of disseminated gold mineralization like that currently being mined at their Bell Mine located about 5 miles to the north (see Burns Basin district).

Within Gance Creek there are exploration cuts and prospects developed in areas of barite mineralization. The best developed barite property in the district is the Pie Creek Mine located on the divide between Pie and Warm Creek about 1 mile

southwest of Gance Creek. At this property, two small open pits explore barite-rich intervals within argillites, siltstones and shales of the Ordovician Valmy Formation (Papke , in press). The property was active during a field exam in August, 1981, but no production had resulted.

The deposit on the Black Beauty claims deserves special mention because of its unique mineralogy and occurrence. The claims are developed by several trenches which explore a bedded-sulfide deposit hosted by black shales, cherts and mudstones of Ordovician age.

Very fine-grained, unoxidized pyrite occurs in laminated rock samples with dolomite and quartz (Papke , in press). Also, pyrite and minor chalcopyrite occur in thick lenses and masses within quartz, barite and calcite vein material (sample 1607). Some of the rocks found within the trenches contain more than 50% sulfides per volume. Fluorite vein and antimony oxides are associated with the sulfide-bearing vein material. According to Papke (in press) the bedded-sulfide zones, which occur as "conformable bodies within the cherts," are rarely found within siliceous facies rocks in Nevada. Sulphur, ilmenite and sphene are also reported for the deposit. Analyzed samples contain as much as 1.0 to 1.25% titanium dioxide (Beal, 1963). A small tonnage of sulfide-rich material was produced from the deposit and used as soil additive.

#### Selected References:

- Beal, L. H. (1963) Investigation of titanium occurrences in Nevada: NBM Report 3, p. 15.
- Hope, R. A. and Coats, R. R. (1976) Preliminary geologic map of Elko County, Nevada: USGS OF Map 76-779, sheet # Z.
- Papke , in press, Barite deposits in Nevada: NBMG Bul.