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BANNACK DISTRICT, BEAVERHEAD COUNTY, MONTANA

References:

- 1) Wisser notes in this file
- 2) USGS Bulletin 574 1914
- 3) Montana Bureau of Mines Bull. 85 1972
- 4) TOPO USGS 1:24,000 Bannack, Montana Quadrangle
- 5) Montana Bureau of Mines Bull. 6

J.K. Jones visited district on July 11 and on July 15, 1973. Inspected surface exposures at Priscilla and Golden Leaf Mines in NW 1/4 of Section 8, T.8S. R.11W., then took road leading east then north through north portion of Section 8, Northwest portion of Section 9, then through Sections 4, 33, and 28 past Bob Ingersoll, Iron Mask Mine, Road Agents Rock, and back to Bannack.

The district, one of the earliest in Montana, has produced approximately 40,000 ounces of gold, 114,000 ounces of silver, 93,000 pounds of copper, and 138,000 pounds of lead. The area seemed worth investigation because of its geologic setting even though past production is quite small.

Two granodiorite stocks, the largest of which is about 1 mile long and 1/3 mile wide, intrude the Madison limestone exposed along the north trending ridge immediately east of Bannack. Adjacent to the stocks the west dipping limestone beds have been recrystallized to marble and local patches of epidote-garnet-calcite tactite have developed. Although specularite, pyrite, and some copper oxide and sulfides occur in the tactite, these zones are too small to have potential for large scale copper orebodies.

According to the most recent geologic mapping as published in Montana Bureau of Mines Bull. 85, April 1972, the gravodiorite intrusives are middle Tertiary in age. This is somewhat younger than the Laramide age intrusives at Butte. The occurrence of a large area of early Tertiary volcanic rocks east of Bannack with at least a few peripheral intrusives indicates the type of broad scale locus in which a porphyry copper deposit could occur. Although the Bannack district appears to hold little promise additional reconnaissance in and adjacent to the large volcanic field to the east would be justified.

J.K. Jones
August 15, 1973

Bannack, Montana. This gold camp lies in the shadow area E of the Idaho batholith, where thrusting is at a minimum and simple uplift prevails. Here Miss. Madison ls. is intruded by fine-grained diorite, exposed in small

patches only. It lies of course on the E flank of the Mesocordilleran geanticline. The dome composed mainly of ls but with an igneous core is overturned and thrust over Triassic red beds on the E. While time relations are not stated (Phil Shenon, Gold at Bannack, Montana, EMJ vol. 123, Feb, 19, 1927, 326) it seems likely that the fg grained diorite invaded the overturned fold and accentuated it by doming; it is hard to figure overturned folding of a diorite plug. Ore deposits are so-called CM, at or near ls-dio. contact. Heavy garnet zones near contact, ls. marmorized for a greater distance away. OBs on the ls. side of the garnet zones (Yerington); some of best deposits along apices of diorite apophyses. Gold as tellurides along fractures in py, ccpy.

Here the channelway up which the sulphide and gold solutions ascended was with little doubt the plug periphery.

Gold at Bannack, Montana*

By P. J. Shenon
University of Minnesota,
Minneapolis, Minn.



... in the natural course of

DOMES, OVERTURNED.

Gold at Bannack, Montana, P.J. Shenon, EMJ vol. 123, Feb. 19, 1927, p. 326.

Central part of Beaverhead Co. Look up regional setting. Miss. Madison ls. is intruded by fg. diorite, small exposures. Ls as overturned dome and thrust over Trias. Red beds on the E. The diorite occupies core of this dome-like fold. Ods at or near contact ls; diorite; CM deposits. Marmorized intense mble for some distance from contact; heavy garnet zones near contact. OBx on ls side of garnet zones (CF Yerington); some of best deposits along apices of diorite apophyses. Gold in tellurides; along fractures in py, ccpy.