

5290 0097

Justification for

Project Proposal

White Pine District, Nevada

July, 1969 ⁽³⁴⁴⁾ Item
not submitted 97

The primary mineral from which the cerargyrite was derived is not known, although it has been assumed to be argentite.

The channels that guided the mineralizing solutions from their source are not known, although three structural controls have been proposed. The most recent is steep faults along the axis of the Treasure Hill anticline terminating in saddle reefs just below the Pilot Shale.

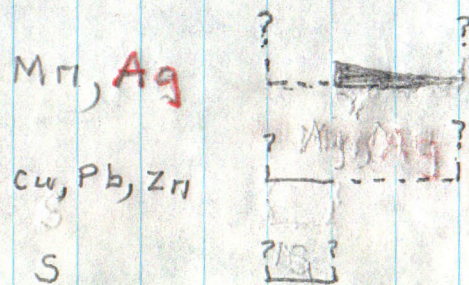
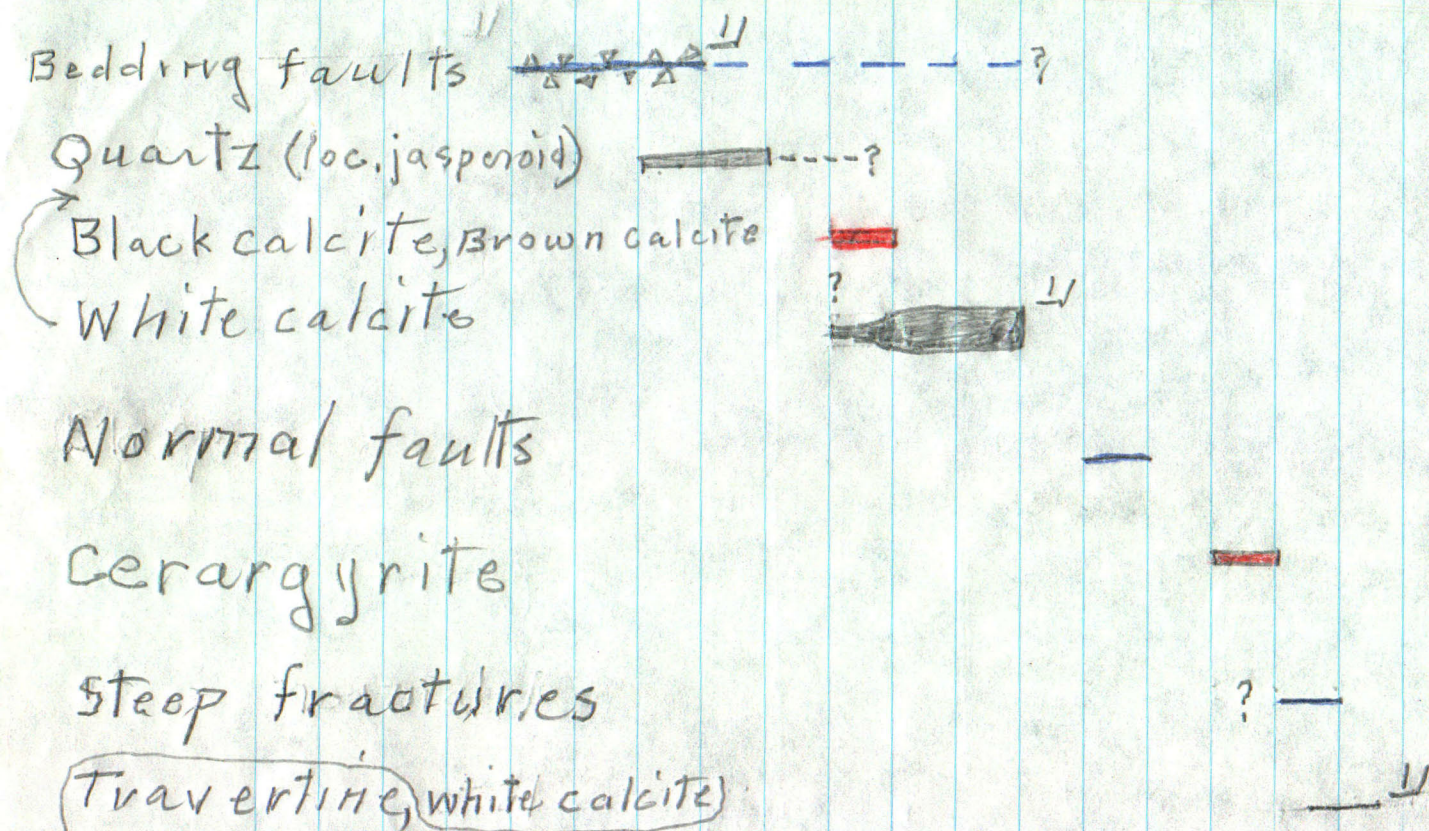
The source of the mineralizing solutions is not known, although it is generally assumed to be the granitic stocks 5 miles to the west, well beyond the projected continuations of steep faults.

Foster Hewett's work on black calcite from Treasure Hill and from many other silver camps indicates that this mineral is widespread, hypogene, commonly silver-bearing, and may well be a principal mineral from which the chloride ores were derived. If this relationship can be demonstrated at any one deposit, it may apply to many deposits.

The structural control of black calcite has been virtually ignored in all(?) published reports on silver districts. Since black calcite is abundant ^{at} ~~Treasure Hill~~ but was not mined intentionally as an ore, and since some workings are still accessible and all of them are dry, the structural controls may still be evident in the old workings. Knowledge of these controls and of the relationship of black calcite to cerargyrite may explain the shallow extent of the ore, and account for the former misconception that "Silver ores do not go down." It might, therefore, lead to new discoveries at Treasure Hill and elsewhere.

Treasure Hill (Hamilton) Nevada

PARAGENESIS - from field observations



|| New concepts - Aug. 9, 10, 1969 - Rmd. subject to refinement

stratigraphic control of the ore was recognized by the early observers. Hague (1870, p. 148) reported both "... contact deposits, between the limestone and calcareous shale, and ... beds or chambers in the limestone, parallel to the line stratification of the rock." Clayton (1873, p. 88) in another first hand description reported that the ore is found in ~~have in it~~ "... brecciated beds of limestone, ... and ... in layers between the bedding ..."

"... It is somewhat singular that experienced prospectors had previously passed over this hill in search of mines, without being successful. The fact is explained when it is known that the float-rock has a very unusual appearance. It is generally dark, with a slight reddish or rusty tinge, sometimes yellow, or even black, and looks much like a specimen of limestone colored with the oxide of iron. It is heavy and compact, and when broken, has a dull, unpromising lustre, very different from that shown by rich quartz generally.

"... In a few places there is a trace of lead, and a glance of copper. Small quantities of iron are found everywhere, but this is all. The silver is in the form of chlorides. Very careful assays show a small per cent. of gold. Horn silver is not found alone in scales and thin linings, but massive, in specimens weighing between fifty and a hundred pounds, nearly solid, with only quartz sufficient to give it body and consistence."

(White, 1869, p. 52)

Aug. 1969

Black calcite is the only silver-bearing mineral sufficiently abundant to be the source of the bonanza chloride deposits.

Distribution of black calcite is proportional to the production of chloride ore

White calcite, reported to be post mineral, is for the most part intra mineral — only thin veinlets of fine grained white calcite (travertine) is post mineral

Dire control of black and white calcite is a low angle bedding fault (thrust? fault) at the top of the Guilmette (Nevada) limestone ~~in and under~~

at the base of the Pilot shale (jasperoid is abundant at the top of the Pilot in the bottom of the Doama limestone)