

VELVET FACTS AND DATA

Mineralization

1. Precious metal mineralization associated with northeast and northwest trending shears.

2. Mineralized shears characterized by quartz-clay intergrowths and cut by numerous quartz veinlets.

3. As would be expected, mineralization is most pronounced at intersection of shears/faults.

* 4. a. Fluid inclusion work indicates Temperature of quartz formation to be between 218 degrees C. and 264 degrees C.

b. Most inclusions studied were empty of fluids or only slightly wet, indicating fluids were in vapor stage during quartz deposition.

c. Salinity of fluids approximately .8 % NaCl.

* 5. Isotopic composition of quartz veins indicates higher water to rock ratios towards the southeast, i.e. a greater amount of hydrothermal fluids passed through the country rock in this area. This method was used to pinpoint the center of the Tonopah District.

6. The lack of calcite and adularia in the dump material, as well as the relatively dry fluid inclusions, indicate the present topographic surface may be well above the zone of boiling.

* 7. a. Alteration assemblages include the innermost illite-kaolinite-quartz zone associated with large zones of quartz veining - the major conduits of mineralizing fluids.

b. The kaolinite-smectite-alunite-quartz (mixed layer zone) is associated with the fringes of the system.

c. The propylitic alteration is associated with the andesite breccia intrusion.

8. Arsenic and antimony both appear to be good indicators of precious metal mineralization.

* From Epithermal Gold Mineralization in the Velvet District, Pershing County, Nevada. Masters Thesis by W.D. Masterson, University of Texas.