

PROSPECT: Placer Creek

LOCATION: T2S R17W Section 3, 4, 8, 9, Beaverhead County, Montana

TOPOGRAPHIC MAP: Big Hole Battlefield, 1:24,000

REVIEW DATE: 1990

GEOLOGY: The prospect area is underlain by a Cretaceous to Tertiary intrusion which varies in composition from a fine to typically medium-grained quartz-feldspar-muscovite quartz monzonite to a quartz-feldspar graphic granite and pegmatite. The quartz monzonite has intruded Mount Shields micaceous quartzite which is contact metamorphosed and has developed a local gneissic banding, darkened color, and weak biotite hornfelsing. The distribution and appearance of the quartzite suggests it occurs as stoped blocks. Mineralization is associated with silicification and late residual silica flooding in the quartz monzonite in a roof margin environment. Past lode exploration consists of four short dozer trenches on a zone with massive and brecciated barite. Placer Creek has been placered along a narrow half-mile reach at its juncture with Trail Creek and has been tested and worked on a limited basis for the remainder of its 1.5 mile length.

Silicification is concentrated along at least two N55°-80°W trending zones which appear to be early formed, recurrent lines of structural weakness. The zones are mapped predominantly by float. Each ranges from 25 feet to possibly greater than 100 feet wide and both can be followed along strike for at least 2,000 feet. Cobbles of subrounded chalcedony form aprons of resistant float along the zones and probably cover a wider area than the outcrops. The strongest silicification occurs along the northern zone. The southern zone includes a discontinuous screen of stoped and partially assimilated quartzite blocks.

Banded and massive chalcedony range in color from white, to light gray, to dark gray. The darker silica appears to contain very fine-grained disseminated silver-gray sulfides. Pyrite occurs as slightly coarser disseminations in amounts always less than 1 per cent. Cinnabar occurs along bands in chalcedony veins. Late barite commonly is precipitated in open space gash fractures and breccias. Quartz monzonite in and adjacent to the silicified zones is partially replaced by a silica-iron mixture which renders the rock more resistant to erosion.

Sixteen samples of the more mineralized looking rock contain a high of 221 ppb Au and 1.8 ppm Ag. Some of the samples contain anomalous As, and two of the samples contain over 50 ppm Hg. Source of placer not positively identified.