CHERRY CREEK COPPER PROSPECT, CARBON COUNTY

Location and Ownership

The prospect (old Weidemeir diggings) is located on the headwaters of Cherry Creek in the Ferris Mountains in approximately sec. 26, T. 27 N., R. 88 W. At the time of examination, October 8, 1955, the Ferris Copper Company (William Babbs, General Manager) was exploring the vein.

Mining

The present development work consists of an adit approximately 150 feet long which is driven with a 5 by 7 foot heading. In general, the adit follows a bearing varying from N. 17° E. to N. 3° W. and drifts along the strike of the copper-quartz vein for a distance of about 125 feet. The vein is not exposed at the face.

Mining equipment noted by the writer consists of a Leroi 315 compressor, Eimco loader, and a 1 1/2 ton ore car.

Geology and Mineralization

The prospect occurs in rocks of pre-Cambrian age. The principal rock type is a light brown coarse-grained biotite granite which is intruded by northwesterly striking pink medium-grained granite dikes.

At the portal of the adit, the biotite granite is intruded by a random network of pink coarse-grained quartz-feldspar dikes that vary from one to 16 inches in width. Two prominent joint sets are exposed here; the first set strikes north and dips 80° east, and the second strikes N. 5° E. and dips 66° west. The mineralized quartz vein, except for minor variation, has the attitude of the first set of joints. Both walls of the quartz vein are banded by lenses of a green weathering biotite schist (Fig. 1).

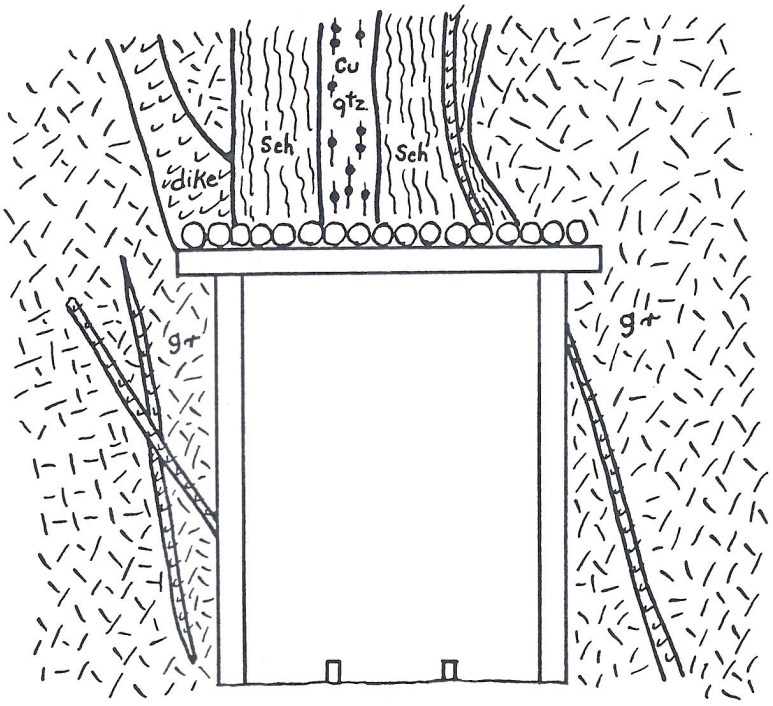

Fig. 1. Sketch of geology at portal of adit.

Two distinct types of mineralization are present: (1) copper-quartz vein, and (2) pyrite-chalcopyrite disseminated in, and forming veinlets in, a brecciated and silicified matrix. The latter was observed in dump samples only.

The copper-quartz vein, where exposed in the adit, varies from 6 to 18 inches in width. Malachite is the most abundant copper mineral present and occurs as coatings on fracture surfaces of the quartz. Chalcopyrite, pyrite, allanite (?) and an unidentified brown alteration product of allanite (?) occur in irregular pods and veinlets in the quartz. Traces of scheelite are found lining small cavities in the quartz. The slight amount of radioactivity of 0.10 MR/hr. (maximum recorded) is undoubtedly due to the presence of allanite.

Copper-bearing quartz specimens, similar to (1) above were observed on the dump of the caved shaft, but the vein was not exposed. Since the projection of the bearing of the adit with the plunge of the shaft will not intersect, it is believed that either two copper-quartz veins are present, or a concealed fault has offset the vein in the adit to the east, thus accounting for the mineralization near or in the caved shaft.

Signed:

William H. Wilson

William H. Wilson
Assistant State Geologist
Geological Survey of Wyoming
November 30, 1955