

GEOLOGICAL SURVEY OF WYOMING

MR65-2

Memorandum for Record

October 28, 1965

To: H.D. Thomas, State Geologist
From: M.L. Millgate

Subject: Copper Prospect, sec. 35, T.15 N., R. 80 W.,
Carbon County, Wyoming:
Refer U.S.G.S. Keystone 7½ min. topographic quadrangle

On July 8, 1964, Mr. Duncan and Mr. Davis (NRRI), and the writer, visited a copper prospect located approximately 800 feet north of the south line and 1800 feet east of the west line, sec. 35, T.15 N., R. 80 W., Carbon County, Wyoming. Land holdings consist of six to eight unpatented lode claims (Mr. Duncan, personal communication). No claim corner locations were found but the southwest corner of sec. 35, and the northeast corner of sec. 3, T.14 N., R. 80 W. were recovered.

The prospect is reached by jeep trail from the U.S. Forest Service road between Keystone and Wyoming Highway 230. The prospect is located in the heavily forested, relatively flat, uplands of the Medicine Bow Mountains. Water and timber are adequate for prospect development. Powerlines and heavy-duty, all weather roads are lacking.

Mine workings consist of several trenches about eight to ten feet deep and two shafts of unknown depth. The shafts are flooded to within 8 to 10 feet of the surface, and water 2 to 3 feet deep occurs in the bottom of the trenches. Thus the water table is very near land surface and the possible zones of oxidation and supergene enrichment are probably not of economic importance.

Poorly exposed mineralized zones are apparently veins 1 to 3 feet wide which strike a few degrees north of west and are nearly vertical. These zones have no obvious topographic expression. The host rock is sheared granite of Precambrian age presumably of the Sherman type. In trenches the veins are hematitic at the surface and a vein in one trench floor contained a 2 to 6 inch zone of copper mineralization.

Vein material consists mostly of quartz, sparse potassium feldspar, dolomite (?), malachite, azurite, hematite, limonite, and chrysocolla (?). Malachite is the most abundant copper-bearing mineral. Chalcocite reportedly occurs, but the writer found no chalcocite in place or in spoil from trenches and shafts.

Workings in the N $\frac{1}{2}$, S $\frac{1}{2}$, sec. 35 along the jeep trail leading to the prospect consist of a few shallow pits and two large trenches 6 to 8 feet deep, all apparently barren.

Samples of surface water were collected and assayed for copper content by the Natural Resources Research Institute, Laramie, Wyoming. Sample location and assay results are given below. Eh and pH values are not particularly representative of the waters because the samples were removed from their environment before the values were obtained.

<u>Sample No. (NRRI)</u>	<u>Description and approximate location in sec. 35, T.15 N., R. 80 W.</u>
M854	Spring 350 ft. N. of S. line and 875 ft. E. of W. line
M855	Spring 1725 ft. N. of S. line and 1850 ft. W. of E. line
M856	Stream 2975 ft. N. of S. line and 2300 ft. E. of W. line
M857	Spring 750 ft. N. of S. line and 1875 ft. E. of W. line
M858	West Shaft 800 ft. N. of S. line and 1800 ft. E. of W. line
M859	East Shaft 800 ft. N. of S. line and 1800 ft. E. of W. line

Results of Assay

<u>Sample No. (NRRI)</u>	<u>Eh</u>	<u>pH</u>	<u>Copper (ppM)</u>
M854	+0.014	6.41	15
M855	+0.028	6.25	1
M856	+0.039	6.10	<1
M857	+0.022	6.46	<1
M858	+0.044	5.65	1
M859	+0.054	5.35	5