KY 66-61 [redacted] PE-060-02

MEMORANDUM: Wolverine Copper Prospect, Charley River District, Alaska

Owner: Howard Sparks, Fairbanks, Alaska

Location: Copper Creek, tributary of Charley River--on right limit bluff of Copper Creek about 6 miles above its mouth. Charley is a tributary entering the Yukon River from the south about midway between Eagle and Circle.

Nature of Deposit: Probably replacement of calcareous roof pendent. Most common minerals in ore body are garnet, calcite, bornite, chalcopyrite, quartz, pyrrhotite, amphiboles or pyroxenes, galena, scheelite, and covelite with a number of other replacement minerals.

General Rock Formations: Fine-grained granitic bedrock on at least two sides of deposit. Ore body apparently is replacement of limestone or calcareous sedimentary rock. Deposit lies near center of Charley River batholith.

Development: About 150 feet tunnel striking N 10' E., veering to east about 20 ft. from portal and then turning westerly. Tunnel driven in low grade replacement type of copper ore for about 20 feet--farther in tunnel appears to have left ore body and is driven in rock almost barren of metallic mineralization. Tunnel was driven in rock almost barren of metallic mineralization. Tunnel was driven by hand about 1903.

Surface Outcroppings: Mineralized zone about 30 to 40 feet wide (on cliff face is exposed on steep NE-SW bluff for about 50 feet vertically then arches toward the NE and disappears under overburden about 100 feet vertically above the portal and perhaps 150 feet horizontally to the NE of the tunnel entrance. Tunnel enters base of cliff a few feet above the level of Copper Creek and is driven northward.

Tunnel was begun on six foot wide vertical zone of green, garnet-malachite ore which continues vertically up cliff for a short distance then becomes disseminated through a 30 to 50 foot wide predominantly iron-stained mineralized zone. Copper stained zones are scattered through this iron-stained zone. Not much copper staining can be seen where mineralized zone disappears under over-burden at top of bluff. Green malachite stained zone rising from portal is visible from airplanes at a considerable distance.

Representative channel samples were not taken. It is estimated from assay of hand specimens that six foot zone at tunnel mouth above tunnel would average somewhat less than 2.5% copper, 30 oz. silver and 0.02 oz gold per ton. The 30 to 40 foot zone including this 6 foot band would average considerably less in all of these metals.

Sheelite was present in a number of hand samples taken from widely separated points on the mineralized zone. The mineral was not recognized until the ores were examined under a flourescent lamp in Fairbanks. It is possible that scheelite may be a fairly common ore mineral in the deposit. In hand specimens taken without knowledge of the presence of scheelite that mineral seemed more abundant in the wider zone than in the highest copper bearing zone which was six feet wide where exposed. A brief examination with a fluorescent lamp would reveal the general scheelite content of the deposit as in most places on the bluff fresh ore is at or very near the surface. Timber, water and perhaps water power are available in the area.

/s/ Eskil Anderson, July, 1946,
College, Alaska