

TERRITORY OF ALASKA
DEPARTMENT OF MINES
BOX 1391
JUNEAU, ALASKA

PROPERTY EXAMINATION REPORT

KX 118-2

COPPER KING PROSPECT, BRADFIELD CANAL QUADRANGLE, COPPER

James A. Williams
May 1957

The Copper King prospect is an old prospect that has been held by Mr. L. C. Berg of Sitka, the discoverer, for many years. The examination of the property was made at his request. The writer was on the property on 28 August 1956 and was accompanied by Mr. Leslie Yaw, also of Sitka, an associate of Mr. Berg's. The vein structure and mineralization appeared promising upon examination, but the assay returns on the samples taken were quite disappointing and preclude much likelihood of commercial possibilities.

The prospect is reached by following the Forest Service trail to and up Aaron Creek 5 or 6 miles from the old Berg Lower Camp, and then climbing to an estimated elevation of about 1600 feet by following up a tributary and then up the first left limit tributary to that tributary as shown on the attached vicinity map. The Lower Camp can be reached at high tide by small boat, otherwise by a three-mile trail from Berg Bay. Several elevations were taken by altimeter, but the weather was stormy and the barometric pressure was fluctuating so rapidly that even approximate figures for elevations could not be obtained. A full day is required for the hike each way. The approximate geographical coordinates of the prospect

are 131°58'W longitude and 56°26-1/2'N latitude, and it is located in the Wrangell Recording Precinct.

The Copper King vein strikes N 35° W and dips about 80° E. It crosses the tributary mentioned above and has been exposed on both sides of the creek over a total horizontal distance of about 45 feet. It averages 4-1/2 feet wide where exposed. On the left limit of the creek slightly above creek level is a shaft reportedly nine feet deep sunk on the vein, but it is full of water. The vein appears to become slightly narrower down the shaft. The walls are distinct and the vein material breaks away cleanly. It is a very regular and consistent structure as far as exposed, and the owner reports finding quartz along the claim center line over 300 feet away which apparently worked up through the over-burden from the vein.

The mineralization of the vein changes markedly with depth. At an elevation of about eight feet above the creek level, the vein consists of quartz grading into a fine-grained diorite, or possibly rhyolite, which is rather weakly mineralized with fine sulfides, including sparse specks of bornite. As the elevation drops, the sulfide content increases rapidly. The dump from the shaft was examined and found to be largely almost solid sulfides. This appears to be a replacement type of mineralization which perhaps did not penetrate higher because of less fracturing or some other change. Small inclusions in the sulfides from the shaft were noted which probably were originally conglomerate pebbles. This can not be stated definitely because of the extremely weathered and oxidized condition of the dump material. The sulfides are pyrite, pyrrhotite sphalerite, and perhaps others. The examination was made during a heavy rain, so a few

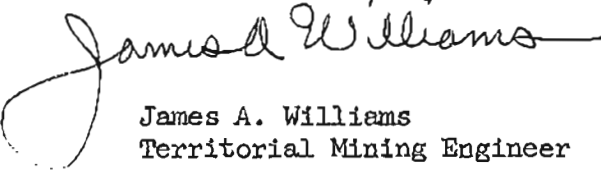
details may have been missed.

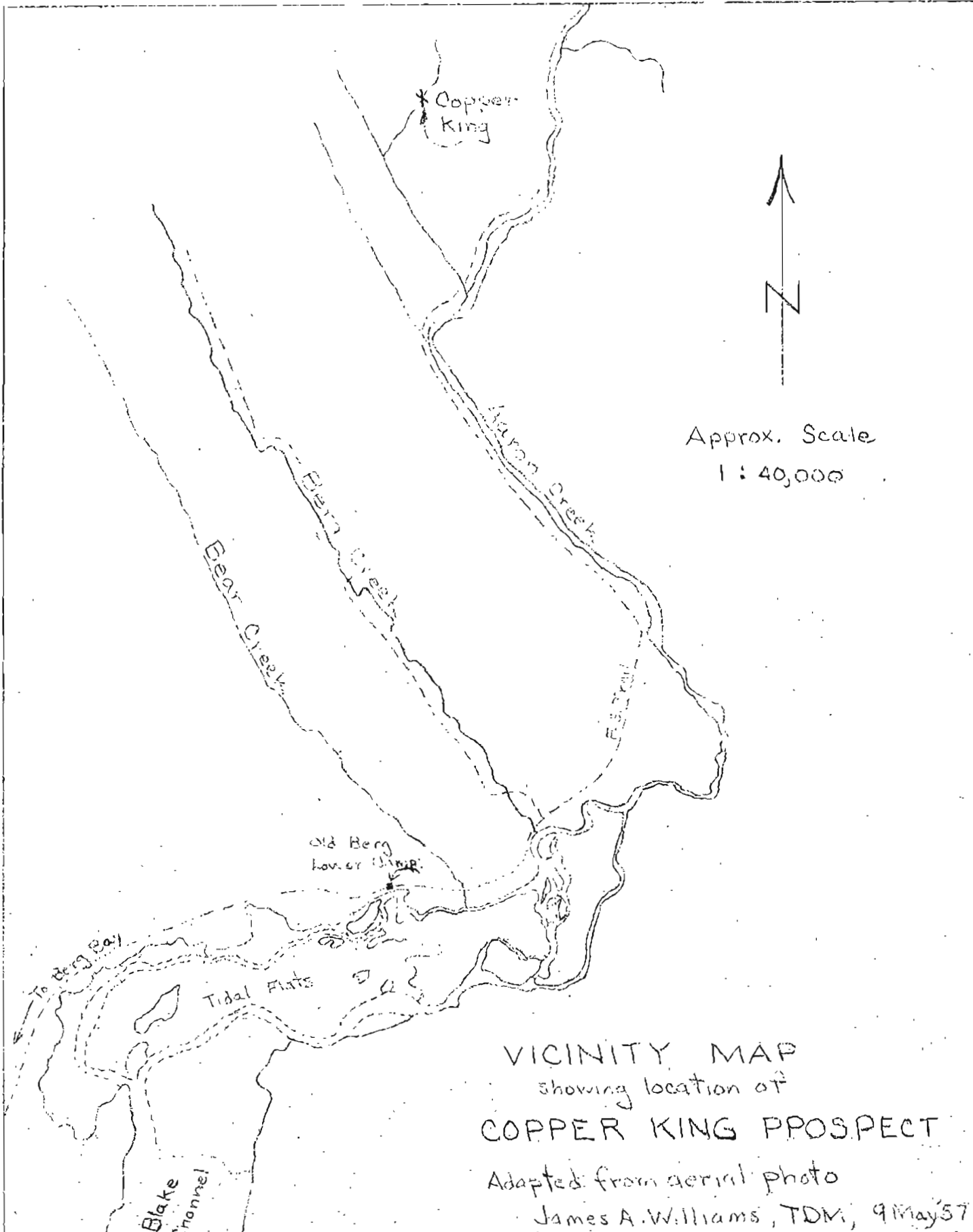
A study of aerial photographs of the prospect vicinity reveals many predominant parallel structures trending on the same strike as the Copper King vein. These are the result of metamorphosed sediments having been tilted to a fairly steep angle but folded little. Their trend is indicated in the accompanying vicinity map by the drainage pattern. The Copper King vein is probably an igneous sill which intruded the metamorphics and was then altered and mineralized. A series of less distinct structures, evidently small faults, trending roughly N 20° E, are noted in the near vicinity of the prospect. The tributary on which the prospect is located follows one of these. If further prospecting in the area were to be undertaken, it would be well to check particularly the intersections of the sill (if it can be followed) and these secondary structures.

According to Mr. Berg, the prospect, when discovered, was named the Copper King because of specks of peacock copper in the vein at the surface. A sample of the heavy sulfides taken by Mr. Berg at an earlier date was assayed April 30, 1956 by Arthur Glover, TDM Assayer, with the following results: Au nil, Ag nil, Cu 0.53%, Zn 3.71%, and Ni trace. The zinc is consistent with the result from the writer's sampling, but the copper is not. Two samples were taken during the examination, one across the vein at the higher level and one from the shaft dump material. In the upper sample, copper was nil and zinc 0.15%. In the dump sample, there was only a trace of copper and zinc was 3.33%. A check for nickel showed it to be absent.

It appears then that in spite of the heavy mineralization,

there is little hope of commercial values in the vein. With the increase of sulfides with depth, it is possible that their nature may change to provide good values at greater depth. However, this possibility is too small to warrant the spending of funds from a small private source for further exploration when the size and location of the deposit is considered. If an overall regional prospecting program were to be projected for that section by a company, then the Copper King possibilities should be investigated further as a part of that program.


James A. Williams
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VICINITY MAP
showing location of
COPPER KING PROSPECT

Adapted from aerial photo
James A. Williams, TDM, 9 May 57