MI-119-02

[redacted]

SUMMARY REPORT July 31, 1951

TO: L. H. Saarela, Commissioner of Mines, Juneau, Alaska

FROM: A. E. Gover, Assayer-Engineer, Ketchikan, Alaska

SUBJECT: Cooperative reconnaissance of Union Bay, Cleveland Peninsula, Ketchikan Precinct; an attempt to locate source of carnotite specimen AEC 65G

On April 11th, 1950, a single specimen, about 2" x 3" in size, was submitted to the writer by Mr. Bert Libe of Ketchikan for identification. Subsequent testing revealed that it was essentially composed of an anthracitic coal (or similar hydrocarbon), black shale, and much yellow carnotite and tyuyamunite*. The vanadium content was appreciable and the uranium content was determined (by Beckman MX-5 Geiger Counter) to be on the order of 40% eU.

Further information as to the source and occurrence of this specimen was asked for, and Mr. Libe provided an exact description of where it had been found, but he also explained that, so far as he could determine, it was a singular piece, and that further search at the time of discovery yielded no additional specimens or clues as to its lode source.

With Mr. Libe's permission, the above information was given to Mr. Helmuth Wedow, of the Alaska Trace Elements Unit when that unit arrived in Ketchikan on June 20, 1951. He examined the specimen and held further discussions with Mr. Libe, after which the matter was deemed of sufficient importance to warrant investigation. The writer was invited to accompany and assist the Trace Elements Unit on (1) an airborne Geiger Counter reconnaissance over the area, and (2) a field investigation.

The airplane trip was flown June 21st, 1951, covering the entire shore-line around Union Bay, and both sides of the valley which extends eastward from the abandoned cannery site to the mountain mass (Mt. Burnett) at the head. No positive anomalies were recorded during this traverse.

Union Bay is situated on the north side of Cleveland Peninsula, at approximately 132 degrees 13 minutes W long and 55 degrees 45 minutes N lat.. The abandoned and burned cannery site is located at the mouth of a small stream flowing westward from Mt. Burnett to the eastern beach of Union Bay, about two and a half miles due South of Union Point.

The field investigation was conducted by five men and two Geiger Counters. The locality described by Mr. Libe as the point of discovery, was found without difficulty near the old cannery. An intensive search was made without success. Likewise, an expanded search area in the vicinity and along the entire beach line around the cannery, to the head of the bay, yielded nothing of interest.

The rocks near the cannery and up the stream valley consisted of basic types (amphibolite, pyroxenite, hornblendite) and the Geiger Counter instruments yielded low background readings throughout, thus substantiating the results of the airborne traverse.

South of the creek, on the beach, is a small area of contorted gneissic rock adjoining black phyllite. Over the gneissic rock a slight increase in count was noted, the radioactivity of these being estimated at probably not more than 0.004% eU. Similar responses were obtained over some selected small fractures, or seams, in the phyllite and slate farther south, near the head of the bay.

Continuing the reconnaissance to the belt of Tertiary conglomerates and late volcanic rocks, which form the shore exposures for about 1 1/2 miles south of Union Point, no significant radioactivity was detected.

The negative nature of all the field evidence led logically to conjecture as to a foreign source for the carnotite specimen; a very systematic search of the entire cannery area, including buildings, trails, etc., and especially coal piles, slag and ash dumps, were carefully probed with the radiometric instruments without revealing anything remotely resembling the original specimen.

Consequently, it is the opinion of the writer that the Union Bay area can be entirely discounted as having provided the lode source of the specimen that Mr. Libe discovered there. Three possible explanations for its presence where found are suggested:

1. The specimen may have been found elsewhere in Southeastern Alaska by a cannery hand or fisherman, and left at the cannery or given to someone there, later to be discarded or lost along the trail or pipe line.
2. The specimen may have been extracted from a shipment of foreign coal received at the cannery, and later discarded or lost,

3. It may have constituted a mineralogical specimen in the possession of some cannery employee interested in prospecting, and suffered the same fate upon abandonment of the cannery.

Perhaps the grounds are insufficient to give any one of the above possibilities credence above the others, but if we consider the thoroughness of the search, coupled with other evidence, the first stated possibility, that the sample may have originated somewhere else in Southeastern Alaska, certainly should not be discounted entirely.

Respectfully submitted,

Art Glover
Assayer-Engineer

*Tyuyamunite identified by Alaska Trace Elements Unit laboratory, Fairbanks, Alaska - July, 195