UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

ANALYSES OF SAMPLES AND PRELIMINARY GEOLOGIC SUMMARY OF BARITE-SILVER-BASE METAL DEPOSITS NEAR GLACIER CREEK, SKAGWAY B-4 QUADRANGLE, SOUTHEASTERN ALASKA

By

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This report is preliminary
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reviewed for conformity with
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Introduction

This report gives analytical data on samples collected during a 1 1/2 day examination of barite-silver-base metal deposits near Glacier Creek, Skagway B-4 quadrangle, Alaska, in July 1971. It is supplemented by a preliminary geologic description of the deposits, which is subject to additions and modifications following completion of pertinent laboratory studies.

The barite-rich deposits are in the northern extremities of southeastern Alaska a few miles from the Alaska-British Columbia boundary and 5 1/2 to 7 miles southwest of Porcupine, a former placer gold camp (fig. 1). The deposits include one north of the head of Glacier Creek that was discovered in 1969 and another that crops out in a nunatak in the Sakasia Glacier that was discovered in 1971. The deposits are exposed at altitudes between 3,000 and 5,000 feet approximately 4 to 6 miles southwest of the Haines Highway, but separated from the highway by the Klehini River. Claims covering the known deposits are held by prospectors Merrill Palmer and Doug Morlan and their associates.

Figure 1. Index map showing location of barite-rich deposits near Glacier Creek.

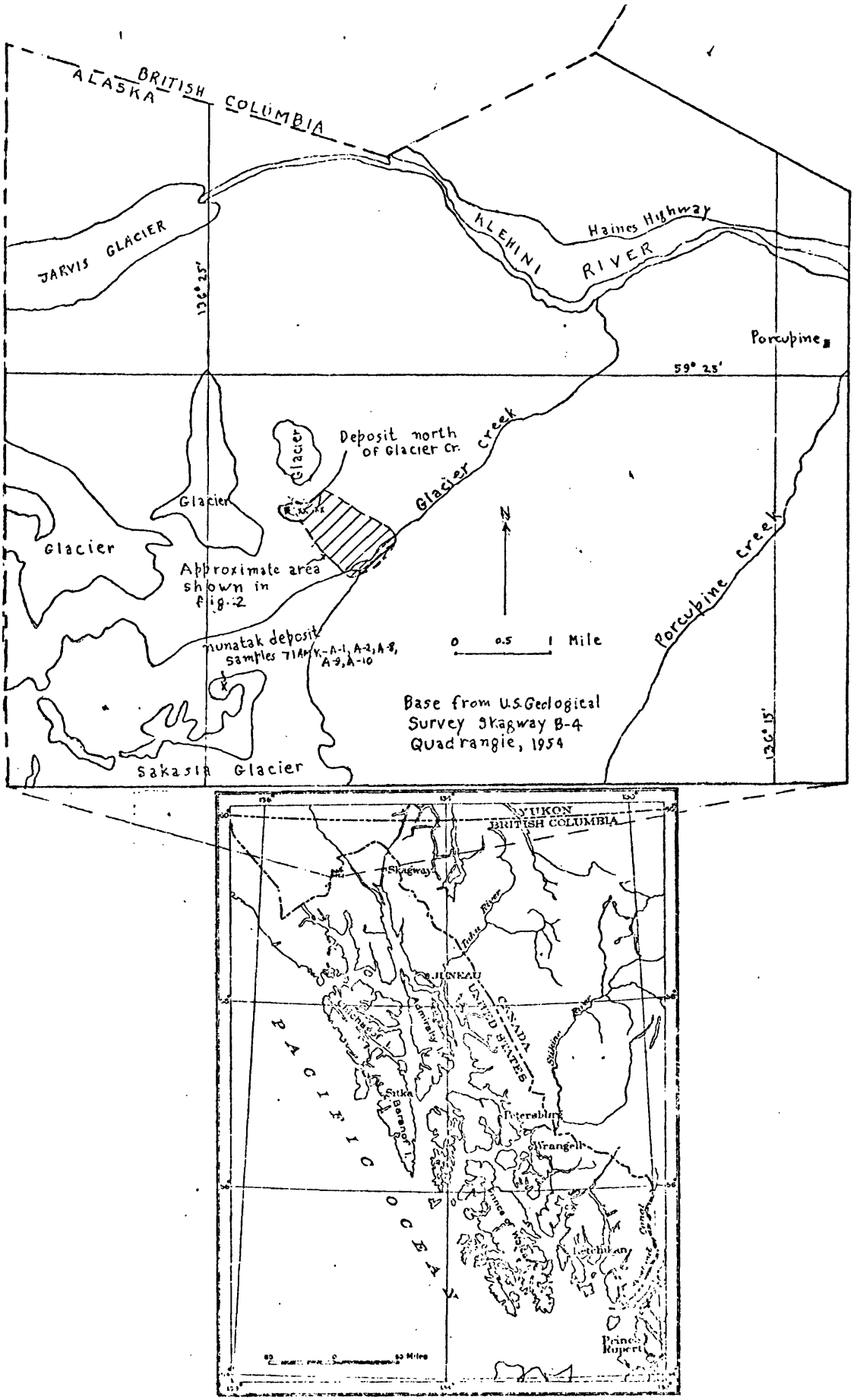

Figure 1. Index map showing location of barite-rich deposits

Geologic summary

Published descriptions of the geology near Glacier Creek are meager and are adjuncts of investigations that focused on the Porcupine placer gold deposits (Wright, 1904, and Eakin, 1919). The following summary is based on geologic investigations by MacKevett and G. R. Winkler during short periods in 1969 and 1970.

The deposits are in a topographically rugged region whose physiography strongly reflects glaciation and glacier-related processes. The bedrock geology is characterized by a sequence of metamorphosed Paleozoic sedimentary and volcanic rocks and local granitic plutons, chiefly quartz diorite, of probable Mesozoic age. The metamorphic rocks mainly reflect greenschist facies regional metamorphism with local overprints of thermal metamorphic effects near most plutons.

Mineral deposits

The deposit north of Glacier Creek, the best known and, apparently, largest of the deposits, is localized in a steep fault zone that mainly cuts chloritic schist. The fault zone, which in places is several hundred feet wide, strikes from N. 60° W. through east-west to about N. 85° E. It contains discrete fault strands marked by breccia, gouge, and sheared surfaces, and several interspersed blocks of intensely altered and bleached schist (fig. 2). The barite-rich lode is as much as 30 feet wide and intermittently traceable for about 1/2 mile along strike throughout a vertical extent of more than 1,000 feet. The lode generally strikes parallel to the fault zone and appears to dip steeply northward. However, most outcrops of the lode are separated by sizable areas covered by snow or talus, and the lode's continuity has not been conclusively established.

Figure 2. Geologic sketch map showing sample locations at deposit north of Glacier Creek.

References

Eakin, H. M., 1919, The Porcupine gold placer district, Alaska: U.S. Geol. Survey Bull. 699, 27 p.

Winkler, G. R., and MacKevett, E. M., Jr., 1970, Analyses of bedrock and stream-sediment samples from the Haines-Porcupine region, southeastern Alaska: U.S. Geol. Survey open-file rept., 91 p.

Wright, C. W., 1904, The Porcupine placer district, Alaska: U.S. Geol. Survey Bull. 236, 35 p.