MR-50-4

# NOTES ON GLACIATION IN THE CIRCLE QUADRANGLE

During June 7 to 10, 1960, while on Annual Leave, I made a trip into the headwater regions of Nome, Champion, and Preacher creeks in the Circle District. The trip was made to satisfy my own personal curiosity about the area and to test a few items of field gear that I had not used previously. I drove to the upper part of Sourdough Creek then traveled on foot to a headwater tributary of Nome Creek, followed Nome Creek to its head, and crossed the divide between Nome and Champion creeks. I then went to the head of Champion Creek and over the divide into Convert Creek, a tributary to Preacher Creek. My route around the head of Convert Creek and across American Creek and Hope Creek is shown on the accompanying map. After leaving Hope Creek, I crossed the next ridge to the south and returned to the upper part of Sourdough Creek.

The higher peaks in the country traversed rise to more than 5000 feet altitude. Numerous signs of glaciation exist in the higher country; these include: a typical cirque at the head of Convert Creek, cols between Nome and Champion creeks and between Nome and American creeks, the "U"-shape of the upper American Creek valley, hanging tributaries to the American Creek valley, and faceted spurs along the sides of the valley.

After returning, I discussed these evidences of glaciation with Dr. T. L. Pe'we' of the U. S. Geological Survey and the University of Alaska. He has had an assistant, Larry Burbank, wtudying aerial photographs of the Yukon-Tanana Region and outlining on Quadrangle maps the glaciated areas. In the Preacher-Nome Creek area and in some other areas, two distinct periods of glaciation have been recognized. The results of these studies probably will be published within the next three years. Two publications are planned: one in regard to glaciation in all Alaska, and the other a more detailed

description of glaciation in the Yukon-Tanana Region.

The information gained by these studies will be of value from the standpoint of economic geology. Any placer deposits that existed before the glacial periods probably would have been scoured from the valleys in the areas glaciated; this explains why, in some areas, mining and discoveries of placer deposits have been confined to the lower courses of the streams. Knowledge that the glaciation took place makes the headwater regions appear to be somewhat more favorable for lode prospecting than is indicated by the distribution of the placers.

Fig. 1. Cirque at the head of Convert Creek.

Fig. 2. View down Convert Creek.

Fig. 3. Upper part of American Creek valley.

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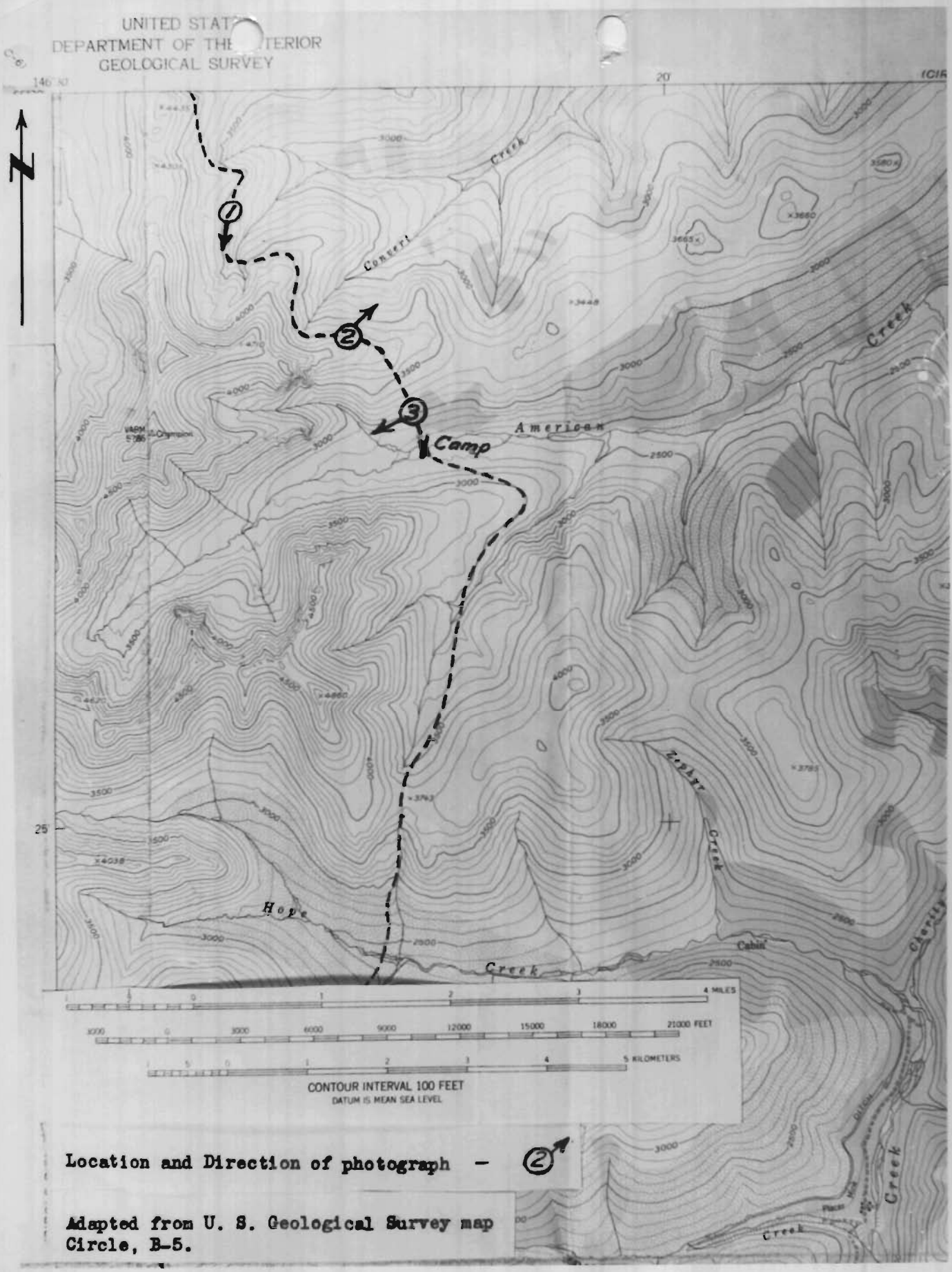
J-12-11


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
146° 30'
20'
25'
N
1
2
3
Camp
American
Creek
Hope
Cabin
Location and Direction of photograph – 2
Adapted from U. S. Geological Survey map Circle, B-5.
4 MILES
21000 FEET
5 KILOMETERS
CONTOUR INTERVAL 100 FEET
DATUM IS MEAN SEA LEVEL