

83
STH
3405

3405

C. & G. SURVEY,
LIBRARY AND ARCHIVES
NOV - 8 1913
Acc. No. _____

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: _____

DESCRIPTIVE REPORT.

Sp. Sheet No. *3405*

LOCALITY:

191

CHIEF OF PARTY:

11-4045

3405

Alaska.

3405

Wilbert T. Rude, 1913

DESCRIPTIVE REPORT.

to accompany

Topographic Sheet No. G.

PORTAGE GLACIER, ALASKA.

C. & G. SURVEY, LIBRARY AND ARCHIVES NOV - 8 1913 Acc. No. _____

This topographic sheet extends from Station South Base, at high water mark on the gravel flats at the head of Passage Canal, over Portage Glacier and across the divide to the gravel flats between the west end of the glacier and Turnagain Arm, including Tunnel and Turnagain Shoulders. The peaks to the southward, forming a large basin in which Portage Glacier lies, are included in the area covered by topographic sheet No. F.

Two plane table parties were run along ~~along~~ the same traverse line, checking in elevation and position on each plane table station on the traverse. One party mapped the area north of the traverse and the other the area south of the line. The two sheets may be joined by using the initial station, South Base, and the orienting lines to Stations Saw, Claim and Delta, which are common to both sheets, F and G. Stations South Base, Saw, Claim and Delta are also on topographic sheet E, the Head of Passage Canal.

The plane tables were set up at Station South Base and orienting lines laid down on the sheets to Stations Saw, Claim and Delta. No projection was made as the triangulation had not been brought over from Perry Island. From this station a traverse line was run over Taku Pass and across Portage Glacier as far as it was possible to travel at this time of year, following a line

of flags placed ahead by a reconnaissance party in charge of the Chief of Party. It was impossible at this season of the year to get across the glacier and down into the flats on the Turnagain Arm side on account of the deep crevasses, many of them probably 200 feet deep and from 20 to 50 feet wide. The last half mile of the traverse was across this bad travelling. The whole afternoon was consumed making this half mile and back again to the smoother part of the glacier. It was necessary to walk back and forth along furrow after furrow to find places narrow enough to be jumped or to find snow bridges on which to cross. Many of these were very unstable. A good view was had though, of the flats between Tunnel and Turnagain Shoulders and of the main flats towards Turnagain Arm. Two light colored rocks, one in each of these flats, were determined both as to location and elevation by cuts from the traverse stations on top of the glacier, as also were a number of points on Turnagain Shoulder. Tangent cuts were also taken to each side of the valley toward Turnagain Arm and the approximate 200 foot contour sketched, showing the limit of the gravel flats.

Numerous elevations were determined on the slope of Tunnel Shoulder as this was considered the most important part of the survey. An attempt was made to run the traverse line across this shoulder before trying the glacier. It was impossible on account of the steep slopes and the dangerous slides of loose earth and stone. It was impossible to get any cuts to the west slope of Tunnel Shoulder, but the contours were sketched and shown on the sheet with broken lines.

The contour interval is one hundred feet and the scale of

the sheet 1 - 20,000.

The gravel flats are covered with alder brush except along the glacial streams which run through them. All the hills are bare rock, without trees or shrubbery of any kind. T

Tunnel Shoulder on the east side is composed of sandstone and shale. This composition continues through Taku Pass. No opportunity was had to examine the rock after reaching Portage Glacier. About half way across the glacier a slide appeared to be basalt.

The approximate locations and elevations of the possible tunnel openings are shown on the sheet in pencil. The amount of topography done with the limited time and under the adverse conditions due to the season of the year shows all the possibilities of a tunnel location and descent to tide water in both directions.

The following names shown on the sheet are local: Portage Glacier, Passage Canal and Turnagain Arm. The following were supplied by the party: Turnagain Shoulder, Tunnel Shoulder, Taku Pass, Byron Glacier, and Longfellow Glacier.

Respectfully, Submitted,

Gilbert T. Wade

Chief of Party, C. & G. Survey.