



3538

C. & G. SURVEY,
LIBRARY AND ARCHIVES
NOV 12 1913
Acc. No. _____

Diag. Cht. No. 855.1-2

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

Hyd. Sheet No. *3538*

LOCALITY:

*Prince William
Sound
Passage Canal
Upper Part.*

1913

CHIEF OF PARTY:

G. T. Rude

11-4845

3538

Alaska.

3538

Gilbert T. Rude, 1913.

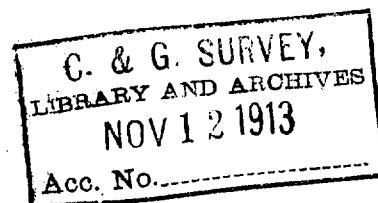
DESCRIPTIVE REPORT.

to accompany

D

Hydrographic Sheet No. _____

PASSAGE CANAL, ALASKA.



This sheet extends from the head of Passage Canal five miles down the Canal.

It is a detached survey. No triangulation has been carried up the Canal and the hydrographic work is controlled by topographic triangulation, carried down the Canal from a topographic base, measured across the gravel flats at its head. This is shown on topographic sheet "E", Head of Passage Canal.

The Steamer Taku was used on the larger part of the work. Launch No. 41 and whaleboat were used only near the head of the Canal on the inshore work. The soundings taken from the steamer were with improved cosmos sounding machine, backing up for upright casts in depths greater than about fifty fathoms. In depths less than about fifty fathoms pressure tube was used. An ordinary hand leadline was used from the launch and whaleboat.

The bottom is composed of blue glacial clay except close inshore at the head of the Canal; at Whittier Delta, and at Billings Delta. Here the bottom is gravel.

Difficulty was experienced on the inshore work with leadline in the small boats because of the sudden deepening of the water on the edge of the gravel flats. The inshore sounding shows

the possibilities of a dock paralleling the shoreline near the head of the Canal on the south side and along Whittier Delta, with room for bunker sites on Whittier Delta.

An anchorage of small extent, one mile long by one quarter mile wide, paralleling the general shoreline, was found on the south side of the Canal about four miles from its head, the depths ranging from ten to thirty fathoms. The bottom is sticky, blue glacial clay, a sample of which is forwarded to the Washington Office as a part of these records. When taken the clay had the appearance and consistency of ordinary commercial putty when mixed ready for use.

Notes concerning the weather etc in Passage Canal will be embodied in the Season Report covering this section.

A plain tide staff was erected in Passage Bay, indenting the south shore of Passage Canal about six miles from its head. A datum plane was established from observations, day and night, covering twelve days, August 11th to August 22nd.

The soundings plotted on the boat sheet are in fathoms, with no tidal reduction. The critical soundings plotted on the smooth hydrographic sheet are in feet with tidal reduction applied.

Respectfully submitted,

Gilbert J. Rude

Assistant, C. & G. Survey.

3538

C. & G. SURVEY,
LIBRARY AND ARCHIVES
NOV 12 1913
Acc. No. _____

3538
Statistics hydrographic sheet "X".

| <u>Date.</u> 1913 | <u>Letter</u> | <u>Vol.</u> | <u>positions</u> | <u>Soundings</u> | <u>Stat. mi.</u> | <u>Vessel</u> |
|-------------------|---------------|-------------|------------------|------------------|------------------|---------------|
| August 15 | a | 1 | 138 | 196 | 22.9 | Taku |
| " 16 | b | 1 | 152 | 254 | 24.9 | Taku |
| " 18 | c | 1 | 85 | 88 | 14.1 | Taku |
| " 18 | a | 2 | 58 | 249 | 6.1 | whaleboat |
| Sept. 9 | d | 1 | 19 | 26 | 2.5 | Taku |
| " 9 | a | 3 | <u>28</u> | <u>58</u> | <u>1.4</u> | Launch 41 |
| Totals | | | 480 | 871 | 71.9 | |

Note: Soundings plotted on Smooth Hydrographic are in feet and are plotted in pencil by field party.

Using Tide Staff in Passage Bay, Passage Canal, Alaska.

MKQ
Dec. 9, 1913.

HYDROGRAPHIC SHEET 3538.

Passage Canal, Prince William Sound, Alaska, by

Asst. G. T. Rude in 1913.

TIDES.

| | Passage Bay ft. |
|---|--------------------|
| Mean lower low water, or plane of reference on staff | 7.1 |
| Lowest tide observed " " | 6.1 |
| Highest " " " " | 20.7 |
| Mean range of tide | 10.0 |

MKQ
Dec. 9, 1913.

HYDROGRAPHIC SHEET 3538.

Passage Canal, Prince William Sound, Alaska, by
Asst. G. T. Rude in 1913.

TIDES.

| | Passage Bay ft. |
|---|--------------------|
| Mean lower low water, or plane of reference on staff | 7.1 |
| Lowest tide observed " " | 6.1 |
| Highest " " " " | 20.7 |
| Mean range of tide | 10.0 |

H. 3538.

The soundings are sufficient and well spaced. The projection is in pencil, as it is not a true projection it is left so. It was made to fit the signals which were determined graphically. Sheet examined in Div. of Hyd'y & Top'y.

Hyd. Sheet No. 3538.

"Passage Canal, Alaska"

Positions for work covered by this sheet, plotted by field party and have been taken as correct but checked in a few cases to identify position and line.

Soundings plotted in pencil and feet by field party: These have been reduced to fathoms and verified.

Work good and would appear sufficient to develop this area. Records well kept and nothing left for guess work.

Cross lines, where run, soundings coincide favorably.

John D. Torrey.
3/2/14.

Verified. John D. Torrey
3/2/14