

3938

Diag. Cht. No. 8201-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. Office No. H-3938

LOCALITY

State ALASKA

General locality SUMNER STRAIT

Locality WRANGELL HARBOR

1916

CHIEF OF PARTY

C. G. Quillian

LIBRARY & ARCHIVES

DATE MARCH 14, 1917

B-1870-1 (1)

3938

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3938

State A. L. A. S. K. A.

General locality S U M N E R . S T R A I T

Locality W R A N G E L L H A R B O R

Chief of party . C. G. Quillian, Asst. Comm'g. Str. PATTERSON.

Surveyed by . . W. Weidlich, Mate, C. & G. Survey.

Date of survey . . October 1916

Scale 1 : 10,000

Soundings in . . fathoms

Plane of reference . . . Mean Lower Low Water

Protracted by W. Weidlich . Soundings in pencil by W. Weidlich

Inked by *H.S. Ruppberg* . Verified by *H.S. Ruppberg*

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, _____ Marigram's, 1 Boat sheets,

1 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks:

DESCRIPTIVE REPORT

To Accompany ^{Hyd.} Sheet No. 3938.

WRANGELL HARBOR

METHOD

The work was executed in accordance with the Superintendent's instructions dated February, 1916.

Steam Launch No. 47 was used with Cosmos Hand Sounding Machine. On the last day the Launch Delta was in use and a Cosmos Sounding Machine with steam attachment was employed.

The handlead was employed for soundings up to 10 fathoms.

The shore line was approached as closely as possible without endangering the launch.

The work was controlled by signals located by tertiary triangulation and by plane table.

Soundings on this sheet are in fathoms. The plane of reference is Mean Lower Low Water. The height of the tide was obtained from a tide staff at Wrangell and from a marigram of Wire Drag Party No. 3. The scalings of this marigram were referred to this same tide staff. Plane of reference on the staff was 4.8 ft.

The hydrography was executed by this party from a line drawn west of signal SET to about one mile south of Station Point. The hydrography north of signal SET was done by Mr. H.T. Kelsh.

ROCKS AND DANGERS

The approaches are deep and clear. Soundings of 50 fathoms were obtained one mile off shore. The bottom is soft and sticky gradually shoaling toward the shore.

The shores are rocky but may be approached within 100 meters. Point Shekesti is foul and should be given a berth of at least 150 meters at the west shore.

A GROUP OF ROCKS which bare at M.L.L.W. lie 230 meters, 32° true from signal St. These rocks are marked by thick kelp during the summer.

ANCHORAGES

The following anchorage, which has been used by the PATTERSON to a great extent, is recommended. Enter Wrangell on a 73° true course (NE $\frac{1}{2}$ N mag) heading for the smoke stack of the saw mill which should be slightly south of the steeple of a church. When the north shore of Wrangell Island is in line with the Sanitary Cannery and Station Point come to an anchor in 18 or 20 fathoms, sticky bottom. This anchorage offers a swinging room of about 250 meters.

During strong NE winds, which are very severe at Wrangell at times, anchor about 350 meters north of Station Point in 15 fathoms, sticky bottom.

The south end of Wrangell Harbor is well sheltered except from NW

winds, and is used by small craft. Very little hydrography was done as this harbor was full of small fishing boats. There are mud flats to the south of the harbor which are used by fishermen for hauling out boats.

Larger vessels may be hauled out east of Station Point. This place is used to a great extent by the Alaska Packers.

No hydrography was done inside the wharfs. There is a boat landing between the St. Michael Trading Co. Wharf and the Saltery Wharf. The area east of this landing in line with the Saltery Wharf is foul and bare at low tide.

The saw mill wharf bares at low tides.

The St. Michael Trading Co. wharf may be used by all vessels at any stage of the tide. The Saltery Wharf is used by large vessels only at high water.

WATER SUPPLY

Water may be had at the St. Michael Trading Co. wharf from a pipe line.

SUPPLIES

As a rule coal is kept on hand in small quantities but at the present shortage of tonnage, the supply is uncertain and can not be depended upon.

There are several ship chandlery stores and blacksmith shops at Wrangell.

CURRENTS

The glacial water of Stikine River discolors all the water in this vicinity, and during strong ebb tide, heavy tide rips were observed at Wrangell Harbor. Flood current sets in a NNW direction with a maximum velocity of 1 knot. The Ebb current sets in a southerly direction and is greatly augmented by the water from Stikine River. The maximum observed velocity was 2 knots.

Respectfully submitted

H. Heidlrich

Math. G. Swaney

Statistics Sheet No.....

Wrangell Harbor

Date 1916	Letter	Volume	Positions	Soundings	Miles Statute	Boat
Oct. 7	a	1	108	355	10.0	Launch 47
16	b	1	27	90	2.3	do
17	c	1	46	185	5.5	do
18	a	1	<u>27</u>	<u>93</u>	<u>1.8</u>	<u>Delta</u>
TOTALS			208	723	19.6	

Soundings are in fathoms.

Plane of Reference is Mean Lower Low Water, which corresponds to a reading of 4.8 feet on the tide staff at Wrangell. The height of the tide was obtained from a marigram of Wire Drag Party No. 3 for a day (launch 47) and from direct readings of the staff to which the scalings of this marigram were reduced for the remaining days.

During the three days when this staff was read the highest tide observed was on October 16 and the lowest on October 16. For highest and lowest tides observed with this gauge during the entire season, see records of Wire Drag Party No.3

Hydrographic Sheet No. 3938.

This sheet was protracted and the soundings put on in pencil by W. Weidlich of the field party. The protracting was good but the soundings were not well plotted. The chief trouble seemed to be that irregular time intervals near the ends of the line were not given the notice that they should have had and also the practice of calling four feet the next whole fathom when changing from feet to fathoms, instead of dropping all fractions up to 4.5 as required by the instructions.

The low water line as given on the Topographic Sheet for this locality, (No. 3655) was quite different from the low water line as given by the hydrography, especially to the southward of Wrangell Harbor.

No combination was attempted with the old work in this locality as the old work could not be made to agree with the new for reason of the rather poor character of the old work and the absence of common control for the combining of the two.

The area seems to have been well covered with the exception of the entrance to the inner harbor about half way between the signals Green and Stack. This in order to make the sheet complete should be investigated.

Howard S. Rappleye

Draftsman.

Protracted by W. Weidlich.
Soundings in pencil by W. Weidlich.
Inked and verified by H.S. Rappleye.

Soundings in fathoms.

VEC
June 29, 1917

2.0.1

HYDROGRAPHIC SHEET 3938.

Wrangell Harbor, Alaska, by party of Assistant C. G.
Quillian in 1916.

TIDES.

	Wrangell Feet.
Mean lower low water, or plane of reference on staff	4.8
Mean range of tide	13.8