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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

\_\_\_\_\_  
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

*Hyd<sup>c</sup>* Sheet No. *3209*

LOCALITY:

*Wrangell Straits*

\_\_\_\_\_  
1901

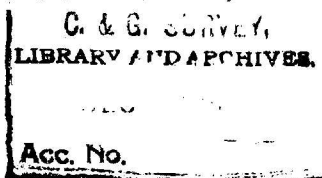
CHIEF OF PARTY:

*R. B. Herickson*

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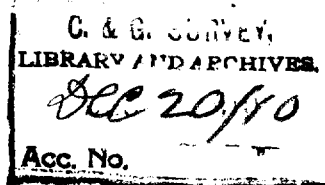
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Title for  
Hydrographic Sheet No. 5.  
Wrangell Straits,  
S.E. Alaska.  
From 1/2 mile south of Petersburg to  
Green Point.  
J.M. Coleman, Mate, and E.J. Maher, Asst.,  
in charge of Sounding Launches #27 & #117.  
Str. "Gedney"  
Hydrographic Survey made between August 24,  
and October 11, 1910.  
Scale 1:10000  
R.B. Derickson, Asst. Comdr.  
Chief of Party.

3209



Descriptive Report

to

accompany

Hydrographic Sheet No. 5.

Wrangell Straits,

S.E. Alaska.

U.S.S. "GEDVEY"

1910.

R.B. Derickson, Asst., Comdr.

Chief of Party.

*RBD*

Descriptive Report to accompany Hydrographic Sheet No.5.

This sheet covers that part of Wrangell Straits, S.E. Alaska, lying between Turn Point and Green Point, a total length of seven and one half miles. It is a common part of Sheet No.6.

Except at Mountain Point the shores have a gentle even slope. Consequently the high water line is from ten to two hundred meters beyond the low water line. At Mountain Point, on both sides of the channel the mountain slopes run directly into the water. The entire shore line is heavily wooded.

Across the Straits from Blunt Point and one half mile south of it is the mouth of a medium sized creek. A sand bar hides it from the view of north bound boats. This stream has formed a mud-flat which extends for 400 meters into the channel and 500 meters north and south.

Another flat begins just north of the first prominent point south of the creek and extends 700 meters south. It extends out 400 meters from the shore line into the straits. Both of these flats bare at low water. Thirty meters out from low water line they suddenly drop off into deep water.

Numerous boulders from 1 to 5 feet in diameter lie along the shore between Blunt and Turn Points. These are a menace to small boats hugging the shore to keep out of the current. There is a particularly dangerous one lying on the low water line of the east shore 160 meters north of Black Buoy No.7 and 340 meters south of Turn Point. It covers at half tide and is then

20 meters from the shore. There are several boulder patches below low water line, but they are well marked by kelp and were developed with many soundings. Other than these there are no known dangers. The bottom of this part of the Straits is smooth and hard with depths of 5 to 7 fathoms shoaling gradually to the shore line.

The 3 fathom spot in Scow Bay, as shown on Chart 8170 could not be found. This part of the Straits is used to anchor the fish scows belonging to local fishermen and all vessels load from these scows. The local fishermen know nothing of the 3 fathom spot in this vicinity, and its present existence is doubtful.

Very good anchorage is had here in Scow Bay in 5 to 15 fathoms of water. There is also good anchorage opposite Tonka Wharf as already described in <sup>*the Coast Pilot*</sup> Sailing Directions.

Owing to the excellent anchorage and light currents in Scow Bay it is a most favorable place for a fishing station. The small seas from the Sound in heavy S.E. weather have little force and small launches anchor here the year round.

The ebb tides sets the current to the northward, the flood entering from Frederick Sound. It is reported during S.E. blows the flood current sets thru the entire Straits from south to north. Off Tonka the currents have a velocity of one to two miles per hour. Northward of Tonka, near narrower part, they increase and southward decrease. At Turn Point they run as high as four and half miles per hour, frequently towing under

the black spar buoy No.7 placed there.

Vessels can obtain fine water at Scow Bay and Tonka. Both places have pipe laid to within twenty five feet of the outer edge of the wharf but are in poor condition especially at Scow Bay. The wharf at Scow Bay has a face of fifty feet and at low water can accomodate vessels of fourteen foot draft. A very strong eddy sets past the face of the wharf from south to north at flood tide. The wharf at Tonka has a face of 150 feet and can accomodate vessels at low water of 18 foot draft. There is little or no current along the face of the <sup>Tonka</sup> wharf at any time.

The Sailing Directions given in the Coast Pilot for this stretch of the Straits, are good.

#### SURVEY METHODS.

The Survey was controlled by the tertiary triangulation made by the Army Engineers in 1902. Engineer Stations 17 and 18 could not be found. New ones were established in their place and set out with the plane-table. Signals "A" and 16' were located by sextant angles.

The methods used in making the survey for this sheet were the same as those used thruout the entire season. For a detailed description of them see the general report on the whole survey.

All the soundings were taken by the hand lead. Most of the soundings were between one and seven fathoms. Water over 15 fathoms in depth was not investigated.

As the channel is wide and deep for a distance of three miles north of Tonka a few lines only were run along the shore to make sure that no flats or bars extended out into the channel from the shore-line. These lines approximately develop the 1 to 5 fathom curve and show the extent of the flats off the mouths of the creeks emptying into the Straits north of Tonka.

The weather was extremely bad when the survey at the south end of the sheet was made. The rains obliterated at times the signals and the lines on the boat-sheet so that no regular system of sounding lines could be run; consequently many cover the same ground. The channel becomes very narrow to the southward of Tonka and runs between two large mud flats which narrow it down to 75 meters. A great many sounding lines were run so as to develop the entrance to the channel thoroly. The depth averages about 5 fathoms in mid channel. The sides of the channel are fairly abrupt. Between Blunt and Turn Points the sounding lines were run from fifteen to forty meters apart.

All kelp patches were plotted on the boat-sheet in the field as it was encountered. There are a great many sprays of kelp which are not thought to be sufficient important to note

The main tidal station for the reduction of all soundings was located at Petersburg. Sub-Stations were established at Tonka and Finger Point and simultaneous readings taken to get the proper time and tidal interval.

Respectfully submitted,

Approved,

*R. B. Swainson*  
Asst., Comdg. Chief of Party.

O. W. Swainson

Aid, C. & G. Survey.

# 3209

## LIST OF PERMANENT POSITIONS DETERMINED.

Sheet N<sup>o</sup> 5

Object	Lat.	D.M.	Long.	D.P.	Height	Remarks.
Prominent Boulder	56° 47'	1758	132° 58'	912	awash 1/2 tide	Conspicuous boulder.
Lone Pile "A"	56 47	224	132 58	736	approx. 30'	Heavy pile about L.W. mark
N.W. Cor. Hofstals Wharf.	56 46	206	132 57	833	approx. 30'	
N. Cor. Tonka Wharf.	56 43	806	132 57	242	approx. 30'	Substantial Wharf.
N.W. Gable of House	56 42	1535	132 56	368	20 feet	Small house near old wharf.
Green Pt. Beacon.	56 41	1694	132 57	302	15 feet.	White-washed triangular caged beacon.

For permanent marked stations on this sheet see List of Geographic Positions rendered with Triangulation Computations of Wrangell Straits.

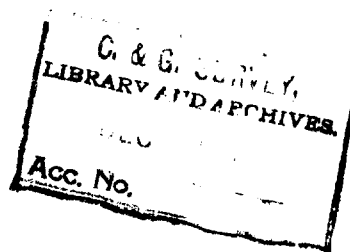
For permanent objects on shore see List of Plane Table Positions rendered with Plane-Table Sheet "C" North end of Wrangell Straits.

*ESD*



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## STATISTICS OF SHEET NO. 5.



DATE 1910.	LETTER	VOL.	POS.	SDGS.	MILES STATUE	BOAT.
Aug. 24,	Green g	3	124	452	6.25	Launch 117.
" 25,	" h	4	192	1093	14.8	Launch 117.
" 26,	" i	4	100	504	5.7	Launch 117.
" 26,	" i	5	73	427	4.5	Launch 117.
Sept. 20,	" t	10	74	340	7.5	Launch 117.
" 22,	" u	10	128	381	5.5	Launch 117.
Oct. 10,	" f'	10	85	335	6.75	Launch 117.
" 11,	" g'	10	97	429	4.5	Launch 117.
" 6,	Orange a	1 M	30	109	1.0	Launch 27.
" 7,	" b	1 M	141	403	6.0	Launch 27.
" 8,	" c	1 M	86	382	5.0	Launch 27.
" 10,	" d	1 M	120	678	8.1	Launch 27.
" 10,	" d	2 M	73	344	5.7	Launch 27.
" 11,	" e	2 M	117	406	6.7	Launch 27.
TOTAL.			1440	6283	88.0	

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VEC  
Feb. 17, 1911.

HYDROGRAPHIC SHEET 3209.

*Handwritten:*  
2/25/11

Wrangell Strait , S. E. Alaska, From 1/2 mile south of  
Petersburg to Green Point, by Asst. R. B. Derickson in 1910.

TIDES.

	Petersburg	Tonka
	ft.	ft.
3 feet below mean lower low water or plane of reference on staff	0.5	2.3
Lowest tide observed       "       "	1.0	2.8
Highest       "       "       "       "	21.8	23.8
Mean range of tide	13.8	14.3

Coast and Geodetic Survey

FEB 24 1911

TIDAL DIVISION.

Cyd Sheet No 3209

Apr 6, 1911.

From lat.  $56^{\circ}43'$  north to about Planet Point the survey is incomplete; only a few lines having been run along shore. North of Planet Pt. and south of lat  $56^{\circ}43'$  the ground is well covered.

The descriptive report states that the  $3\frac{1}{2}$  fath spot in Sew Bay could not be found and that its existence is doubtful. If this refers to the  $2\frac{1}{4}$  fath shoal, below Planet Pt., the spot has not been well enough developed to show that its existence is doubtful; in fact the soundings taken indicate that there is a shoal at or near the charted position.

H. L. Simmons

Verified;

Nov 9<sup>th</sup>, 1911.

In the work on the lower part of the sheet between  $\Delta 29$  +  $\Delta 31$ , there are a number of rather shoal soundings falling in the channel. Some of these may be slightly out of position or in error, but as all are deeper than the shoal, extending entirely across the channel, near the entrance to the Narrows, they are not important.

R. L. Johnston

A few lines could not be shown as the Hyd. signal used, was located only on the last sheet, which was not sent in to the office.