

4996

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DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director	
C & G. SUR L & A APR 10 1930 Acc. No.	
State: ALASKA	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. 9 4996
LOCALITY	
U. S. ALASKA	
Sumner Strait	
WRANGELL NARROWS	
Beecher Pass	
Vicinity of Keene Island	
1929	
CHIEF OF PARTY	
E. W. Mickelberg	

U. S. GOVERNMENT PRINTING OFFICE: 1928

4996

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET # 9.

AUTHORITY: The hydrography on this sheet was executed under instructions of the Director of the U. S. Coast & Geodetic Survey, dated February 19th, 1929.

SCALE: 1:5,000 and soundings are in feet.

LIMITS: This survey covers the area in the vicinity of Keene Island, Wrangell Narrows, begins at 56° 35' N., just north of Point No Thorofare and ends at 56° 37' 30" N. and 132° 57' 30" W. Westward it extends through Beecher Pass, as far as 133° 01' 00" W.

METHODS: The work in the main channel was done by the Launch "Delta", using a 10 pound hand-lead, and in depths less than 12 feet, a sounding pole was used. The area between 133° 00' and 133° 01' West, was covered by Launch # 69, Mr. J. C. Partington, Jr. H. & G. Engineer, in charge.

All soundings are up and down, and no difficulties were experienced with the exception of a few development lines. The lines are spaced from 10 to 30 meters apart, depending upon the nature of the bottom.

The soundings between 1-2 m. day are rejected, as they plot practically in the main channel.

The area in question is thoroughly developed and results recorded on "h" and "j" day in sounding volumes for #8 sheet.

As hundreds of soundings were taken in this vicinity, only regular sounding lines are plotted and positions showing least depths. This was done to avoid confusion on boat and smooth sheet.

Positions 1 to 14 "j", and 26-27-28-29-46-47 "j", are plotted on sheet # 9.

CONTROL: Triangulation and topography furnish the necessary control. Signals for immediate work were cut in by the topographer on boat sheet while the actual topography was carried out after the hydrography was practically completed. This statement does not apply to the area west of Keene Island.

TIDES: During May and June a tide staff was established about 130 meters west of triangulation station BON, on the northern shores of Woewodski Island, and during the month of September, tides were read near triangulation station # 54, south of triangulation station BON.

RESULTS:

In addition to the development of the main channel, special attention was paid to the area between Keene and Burnt Islands and the east shores of Lindenberg Peninsula, in order to develop a channel for small boats and boats towing log rafts.

Aids to navigation will be established in the near future, after the chart is completed.

No attention was paid to the location of the buoys in vicinity of Spike Rock Light as they were found to be out of position and the channel not any more being used by large draft vessels as in by-gone days.

Another channel was developed south of Keene Island near the shores of Woewodski Island. This channel was used quite frequently by the steamer EXPLORER while operating in that locality.

This channel is not recommended to large draft vessels on account of the sharp turn to be made coming either from the south or worse yet, from the north.

The entrance to the channel is comparatively wide near Point No Thorofare but narrows down to about 65 meters in the middle, with a sand bank north of it and a reef with 7 feet over it at M.L.L.W. south of it.

The controlling depth of the channel is about 12 feet with a 11 foot spot directly north of triangulation station BON.

There are no aids to navigation in this channel but a perfect range was established by the hydrographer which is not easily recognized by strangers.

This range is located by topography, and shown on topographic sheet.

During the month of September, this passage was covered with kelp.

The channel between Keene Island and Lindenberg Peninsula is of no commercial importance and is closed to navigation at low tides on account of the crooked channel, numerous rocks and the very thick kelp patches.

Fox farmers and small boat fishermen use this channel at half tides but local knowledge is required.

It is known (by personal observation) that some people will use the channel east of Keene Island at low tides, again, some will use the crooked channel with sea sleds, which draw only a few inches.

DANGERS AND OTHER OBSTRUCTIONS:

1. A shoal with a least depth found of 10 feet at M.L.L.W., lies about 280 meters, 178° from triangulation station SPIKE (Spike Rock Light). C

This shoal area lies about 50 meters west of the main channel, using Keene Island Light and Burnt Island Light as a range. Bottom is sandy. No kelp was observed in this locality. (P's. 1-9 p.) L

2. A reef with a least depth found of 5 feet at M.L.L.W., lies about 218 meters, 308° from triangulation station SPIKE. This area is of small extent, and is marked by kelp. (Pos. 1 "k" and 7 "g"). The five foot sounding was taken over a rock of about 10 square meters. ✓

3. A reef ^{barely} awash at M.L.L.W., lies about 365 meters, 270° from triangulation station No. 53. This reef is of small extent and is marked by thick kelp. The area south-west of this reef is very irregular with several 6 foot spots. (Pos. 16-17 "e"). ✓

4. A reef with a least depth found of 1 foot at M.L.L.W., lies about 210 meters, 266° from triangulation station No. 53, and is marked by very thick kelp. This reef covers an area of about 50 square meters. A five and six foot spot lies north of this reef and is not developed. ✓

5. A rocky patch with a least depth found of 7 feet at M.L.L.W., lies about 230 meters, 110° from triangulation station No. 54. This area is marked by very thick kelp and bottom is very irregular. (Pos. 103-104-109-110 & 113 g.) ✓
The area immediately south bares at low and minus tides.

6. A shoal marked by very thin kelp and with a least depth found of 11 feet at M.L.L.W., lies about 145 meters, 353° from triangulation station BON. (Pos. 166 & 167 t.) ✓
12 and 13 foot soundings were obtained about 35 meters north-east from above position. Hard bottom with some kelp. (Pos. 164 & 165 t.)

7. A small kelp patch with a least depth found of 18 and 20 feet at M.L.L.W. lies about 300 meters, 309° from triangulation station BON. Rocky bottom (Pos. 90 & 91 u.) ✓
A 17 foot spot lies about 35 meters north of position 90 "u".

8. A sand bank marked by kelp during the month of September lies about 185 meters west of a small wooded island on which station PULL is located. ✓

3 and 4 foot soundings were obtained at the west end of the bank (Pos. 2-3-4-6-7 "t") while a 2 foot sounding was obtained at the east end of the bank. (Pos. 10 "t") There is deeper water all around the bank.

No kelp was observed in this locality during May and June.

KELP: During the earlier part of the season little or no kelp was noticed with the exception of the passage between Keene Island and the Lindenberg peninsula.

The channel south of Keene Island was found to be free of kelp during May and June, but upon return from Duncan Canal and Level Island in September, to complete the survey, the channel was found to be covered with thick kelp.

ANCHORAGES: While working in this locality, the steamer EXPLORER anchored about 175 meters south of the Island on which station PULL is located, in about $4\frac{1}{2}$ fathoms of water, muddy bottom.

*W. Middlek
Inst. G. Survey*

The following geographic name was approved by USGB and added to sheet

BIG SALTERY ISLAND in Beecher Pass Lat $56^{\circ}36'$ Long $133^{\circ}01'$

E. K. B.

10/15/34

APPROVAL SHEET

TO ACCOMPANY SHEET NO. 9

WRANGELL NARROWS

This sheet shows some changes over the former survey, principally in showing less water on shoal spots but not effecting dredged channel depths.

On the vicinity of Spike Rock the old survey shows a shoal extending to northward 75 to 90 meters, depths from 6 to 11 feet. The new survey does not show this shoal, and it is possible that due to dredging operations and changes in current, that this shoal has been somewhat deepened.



E. W. Eickelberg,
Chief of Party, C. & G. S.

STATISTIC

Hydrographic Sheet # 9.

<u>Date,</u>	<u>VOL.</u>	<u>Letter</u>	<u>St.Miles.</u>	<u>Pos.</u>	<u>Soundings</u>	<u>Launch.</u>
5-28-29	1.	a red	9.4	115	840	Delta
5-29-29	1&2	b "	10.3	136	1003	"
5-31-29	2	c "	11.6	152	1244	"
6- 1-29	2&3	d "	4.0	46	344	"
6- 3-29	3	e "	7.4	95	772	"
6- 4-29	3	f "	9.2	121	882	"
6- 5-29	4	g "	6.3	131	761	"
6- 6-29	4	h "	8.1	112	736	"
6- 7-29	4&5	j "	5.7	85	506	"
6- 8-29	5	k "	0.0	7	4	"
6-11-29	5	l "	5.2	72	468	"
6-12-29	5	m "	4.2	67	433	"
6-13-29	5&6	n "	7.5	115	754	"
6-15-29	6	p "	1.5	36	161	"
6-25-29	6	q "	1.8	32	196	"
9-17-29	6	r "	4.6	74	417	"
9-18-29	6	s "	5.6	70	403	"
9-20-29	7	t "	10.0	196	872	"
9-21-29	7	u "	5.6	95	448	"
<hr/>						
Total			118.0	1757	10244	
9-11-29	1	a green	8.4	110	597	# 69
9-12-29	1	b "	6.9	107	567	# 69
<hr/>						
Total			15.3	217	1164	
Total of two launches			133.3	1974	11408	

TIDAL NOTES

TO ACCOMPANY SHEET # 9

Location of Plain Tide Staff #1 = $56^{\circ} 35' 46.8''$ N. $132^{\circ} 59' 22.2''$ W.
(May 28th - June 25th)

Plane of Reference = M. L. L. W.

M.L.L.W. on staff = 6.37

Highest tide = 14.9 - June 7th

Lowest tide = -3.8 - June 7th

Location of Plain Tide Staff #2 = $56^{\circ} 35' 42''$ N. $132^{\circ} 59' 06''$ W.
(September 11 - September 21st)

Plane of Reference = M. L. L. W.

M.L.L.W. on staff = 4.83 feet

Highest Tide = 16.4 - September 20th.

Lowest Tide = -0.55- September 21st.

On Sheet # 9 a. Staff # 2 is used.

Tides on A.M. of September 11th interpolated from Duncan Canal.

April 30, 1930.

ecm
R.E.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 4996

Locality: Alaska (Wrangell Narrows, Keene I.)

Chief of Party: H. A. Cotton in 1929

Plane of reference is mean lower low water, reading

6.4 ft. on tide staff at No. 1 at Beecher Pass

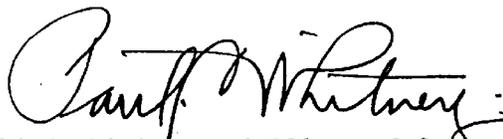
~~ft. below B.M.~~

4.8 ft. on tide staff No. 2 at Beecher Pass

11.0 ft. below B.M. I

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.



Chief, Division of Tides and Currents.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4996

Beecher Pass, Wrangell Narrows, Alaska

Surveyed in 1929

Hand lead and pole soundings

Instructions dated February 19, 1929 (EXPLORER)

Chiefs of Party, H. A. Cotton and E. W. Eickelberg

Surveyed by W. Weidlick and J. C. Partington

Protracted by H. O. Fortin and W. Weidlick

Soundings plotted by W. W.

Verified and inked by H. E. MacEwen

1. The records conform to the requirements with the following exceptions:

No compass course was recorded. While most of the lines may have been run on ranges no statement to that effect was made in the records or descriptive report.

Critical soundings were not O.K.ed in the records.

2. The plan, character and extent of the survey satisfy the general and specific instructions.
3. Only a few cross lines were run. These cross satisfactorily and in general the agreement of adjacent lines is good.
4. The information is sufficient for completely drawing the usual depth curves except the low water curve, which can be partially drawn.

5. The junction with H. 5004 is satisfactory.

The junction with H. 5019 in Beecher Pass appears satisfactory, but this sheet has not yet been verified and this junction will be reported in the review of H. 5019.

The junction with H. 4994, at No Thoroughfare Point, is satisfactory.

The rocky ledge symbol, shown on T. 4510, was enlarged and placed on this sheet. It was necessary to modify it somewhat in order that it would not cover plus soundings. In about Lat. $56^{\circ} 36' 30''$ (150 m.), Long. $132^{\circ} 58' 30''$ (100 m.) two rocks swash have been placed on this sheet, H. 4996. These rocks were not located by the hydrographic party and the only authority for them is the rocky ledge symbol shown on T. 4510.

In general this survey, H. 4996, agrees very well with the old survey of 1910, H. 3214. In a few places there are some shoaler soundings on H. 3214, most of which appear to have been disproved by the new work; however, a few soundings were added to this sheet, H. 4996, in the vicinity of Lat. $56^{\circ} 36' 30''$, Long. $132^{\circ} 58' 00''$ (265 m.).

In the area north of Burnt Island there seems to have been a general change in the channel and the survey of 1910, H. 3213, should be superseded by this sheet, H. 4996.

A few minus soundings, not disproved by this work, were added to this sheet from H. 3213, in the irregular area just southwest of 50.

The older surveys, H. 1525b, H. 1616 and H. 1737 were examined, but should be entirely superseded.

The old survey in Beecher Pass, H. 1808, should also be superseded by this survey, H. 4996.

6. The usual amount of field plotting was acceptably done by the field party. A few errors in pretracting were found and the soundings were not always spaced correctly on some lines where the sounding interval was changed between positions.

7. Character and scope of surveying - good. The ground is closely covered and shoal development sufficient, but there are some irregularities, such as kinks in the curves which could not be smoothed out. It is also noted that on some of the lines the distance between positions does not check the elapsed time. These discrepancies are probably more apparent because of the large scale used.

Definite recommendations as to the rejection or retention of the most critical soundings on the old surveys would have been desirable.

8. No additional work within the limits of this sheet is necessary.
9. Reviewed by R. L. Johnston, July 31, 1930.

Approved:

A. M. Sobieralski
Chief, Section of Field Records (Charts)

J. S. Borden
Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4996

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 9

REGISTER NO. 4996

State Alaska

General locality SE Alaska Sumner Strait, Wrangell Narrows

Locality Beecher Pass
Wrangell Narrows, vicinity of Keen Island

Scale 1:5,000 Date of survey May-June & Sept., 1929

Vessel S.S. Explorer.

Chief of Party H.A. Cotton & E.W. Fickelberg

Surveyed by W.Weidlich & J C. Partington

Protracted by H.O. Fortin & W.Weidlich.

Soundings penciled by W.Weidlich.

Soundings in fathoms feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated February 19th., 1929

Remarks: