

4961

Diag. Cht. No 8201-3

4961

Form 504 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY
State: Alaska <small>11-5613</small>
DESCRIPTIVE REPORT. <small>6</small> Hydrographic Sheet No. 4961
LOCALITY: Frederick Sound Wrangell Narrows Green Point to Turn Point
1929
CHIEF OF PARTY: E. W. Eickelberg

C. & G. SURVEY
L. & A.
MAR 6 1930
Acc. No.

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET NO. 6

4961

GREEN POINT to TURN POINT

WRANGELL NARROWS

S. E. ALASKA

1929

E. W. EICKELBERG, CHIEF of PARTY

DESCRIPTIVE REPORT

TO ACCOMPANY SHEET # 6

GREEN POINT - TURN POINT

WRANGELL NARROWS, S. E. ALASKA

INSTRUCTIONS:

This survey was made under instructions dated February 19, 1929.

SURVEY METHODS:

All soundings were taken from a 35 foot sounding launch using a hand lead for the shoaler soundings and a power driven sounding machine for the deeper soundings. Signals used were triangulation stations (1929) and topographic stations (1929).

TIDAL REDUCERS:

Reducers on the north end of this sheet were from the portable automatic tide gauge at Petersburg, and on the south end from the gauge at Finger Point.

COMPARISON WITH SURVEY OF 1910:

The north end of this sheet has changed very little since the survey of 1910. Soundings in this area were plotted on the boat sheet in feet instead of fathoms, to make comparison easier with soundings on the photostat.

No indication was found of the 43 foot spot (40 feet on the photostat) 350 meters, 282° true from station 27.

The 19 and 16 foot spots, (16 and 13 feet) 600 meters, 238° true and 680 meters, 227° true, respectively from station 29, were not found. I was informed by Mr. Truit of the U. S. Engineers that these spots have been removed by dredging.

The shoal in mid-channel off Green Point Beacon (14 and 15 feet on the photostat) has also been removed by dredging.

Respectfully submitted,

Thomas B. Reed,
Jr. H. & G. E.

STATISTICS
TO ACCOMPANY SHEET # 6

DAY	VOLUME	DATE	POSITIONS	SOUNDINGS		STATUTE MILES	STATUTE MILES TO AND FROM WORK
				HAND	MACHINE		
a	1	May 6	123	529	----	10.9	6.5
b	1	May 7	148	278	240	16.0	10.0
c	1	May 8	56	217	----	6.5	5.0
c	2	May 8	96	43	295	10.4	4.0
d	2	May 25	92	507	----	11.7	3.5
e	2	May 27	82	384	----	8.0	5.0
f	3	May 28	147	931		16.4	5.0
g	3	Sept. 23	140	387	157	15.0	9.0
g	4	Sept. 23	8	10	17	1.0	4.0
h	4	Sept. 24	182	290	363	22.2	8.5
Totals: 4			1074	3576	1072	118.1	60.5

SUMMARY OF STATISTICS

Positions: 1074
Soundings: 4648
Statute Miles: 118.1

TIDAL NOTE
TO ACCOMPANY SHEET # 6

All tides reduced from tide station.

At Finger Point

Lowest Tide = minus 2.9 @ M.L.L.W. - May 8th.

Highest tide = plus 18.1 @ M.L.L.W. - June 7th.

M.L.L.W. on staff = 5.7 feet.

Portable Automatic Tide Gauge #177 - May (6 - 9th) May 31 - June 5th.

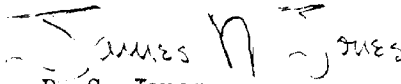
Plain staff - May 29th & 31st - September 23rd & 24th.

NOTES BY PLOTTER OF SHEET # 6

In volume 1, "a" day, etc., signal BAN was changed to BAR,
as triangulation station No. 11 was named BAN.

Low water line was transferred from bromide of old topographic
sheets 3105 and 3110, and this years sheets "A" and "B".

Respectfully submitted,


~~B. G. Jones,~~
~~Jr. H. & G. E.~~ *W*

APPROVAL SHEET

TO ACCOMPANY HYDROGRAPHIC SHEET # 6

WRANGELL NARROWS, S. E. ALASKA

The field work on this sheet was done by Lieutenant T. B. Reed, who was ordered to the east coast after arrival of this vessel in Seattle. As left angle was taken by a chief petty officer, the sheet was plotted by Ensign J. N. Jones. ✓

There is a questionable sounding of 61 feet between positions 85 and 85 b, which was not checked in the record as a sudden change in depth. The bottom is irregular in this locality and the sounding is probably correct. ✓

Inshore development northeast of triangulation station 12 and southwest of triangulation station 13 is not complete but these areas are well covered in former work. The 27 foot spot shown 190 meters northeast of Light South Flat North end in bromide sheet 3209 is not on chart 8170 and was not found on this survey. It is probably a slight error in position as there is a 27 foot spot 230 meters to the northeast of this light. The 19 and 16 foot spots, 625 meters and 675 meters ^{from station 29} have been removed by dredging. The former is still shown on chart 8170, but the latter is not. ✓

Both still
carried on
latest chart.
A.L.S.

The area east of, and between triangulation stations 18 and 20, was used as a dumping ground for material removed from the Petersburg bar. ✓



E. W. Eickelberg,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

DEPARTMENT OF COMMERCE

AND REFER TO NO. 11-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

April 17, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4961

Wrangell Narrows, Alaska

Surveyed in 1929

Instructions dated Feb. 19, 1929 - EXPLORER

Chief of Party, E. W. Eickelberg.

Surveyed by Thos. B. Reed.

Protracted and soundings plotted by J. N. Jones.

Verified and inked by J. Fleming.

1. The records conform to the requirements of the General Instructions.
2. The work conforms generally to the specific instructions. There are a few cases where soundings appear doubtful and where further examination would have been desirable, but since most of these cases fall either close inshore or in depths that are not critical, no great violence will result from accepting them. Cases such as these are the 61 foot sounding in Lat. $56^{\circ} 43'$ 360 m., Long. $132^{\circ} 57' 80$ m., the 57 foot sounding in Lat. $56^{\circ} 43'$ 1560 m., Long. $132^{\circ} 56' 260$ m., and the 61 foot sounding in Lat. $56^{\circ} 46'$, Long. $132^{\circ} 58' 450$ m.
3. There are numerous soundings on the old survey (H. 3209) that are shoaler than the depths found on the new survey. Owing to the importance of the locality, and notwithstanding the dredging operations that have been carried on here, considerable thought was given, in all cases, to the advisability of carrying forward the old soundings. Except in one or two cases no specific mention will be made of the disposition of individual soundings but will be considered in groups.
 - (a) In the area between South Flat N. End Light and buoy S-20 there are a number of shoal soundings from the 1910 survey that encroach considerably on the main channel. While the shoaler depths are not disproved in all cases by the new survey, it is recommended that owing to the dredging and the natural changes that have taken place here, they be omitted from the chart.

- (b) The shoal soundings off Green Point Beacon from the 1910 survey may also be disregarded since the new survey shows no indication of them and dredging has been done here (see Descriptive Report).
- (c) In Lat. $56^{\circ} 42' 680$ m., Long. $132^{\circ} 56' 860$ m. (N. A. datum) a 13 foot sounding (16 feet M.L.L.W.) appears on the old survey. Since the new survey shows considerable changes in the area surrounding this 13, there is no doubt that the shoal has been removed and therefore can be disregarded entirely in the future.
- (d) The 16 foot sounding (19 at M.L.L.W.) from H. 3209 in Lat. $56^{\circ} 42' 840$ m., Long. $132^{\circ} 56' 900$ m. (N. A. datum) was carefully looked into for the reason that the surrounding depths on the old survey compare favorably with those on the new survey. The shoal on the old survey was determined by a single sounding without any corroborating evidence. The new survey shows depths of 32 to 40 feet over the spot and while a few more soundings in the vicinity would have been desirable it is believed that, in view of the statement in the Descriptive Report that the shoal was removed by the Army Engineers, together with the fact that it is not a rock (soft bottom) the sounding can be safely removed from the charts and it is so recommended.
- (e) In the vicinity of the 34 and 40 foot soundings (37 and 43 feet at M.L.L.W.) from H. 3209 in approx. Lat. $56^{\circ} 42' 1760$ m., Long. $132^{\circ} 56' 680$ m., the new survey shows considerably deeper water and it does not appear likely that the old soundings still remain. They should therefore be omitted from the charts.
- (f) The 24 foot sounding (27 at M.L.L.W.) from H. 3209 in Lat. $56^{\circ} 46' 270$ m., Long. $132^{\circ} 57' 960$ m. (N. A. datum) was not found on the new survey. While the depths are somewhat irregular in this area there is no indication of any such shoal here. An inspection of the old record (position 70-U) shows that it is the first sounding taken on the line and there is also a marked change in course at the next position. There is a possibility that either the position belongs farther inshore, in line with positions 71 and 72 U or that the sounding was erroneous. No adjustment of the old work was possible. It is recommended that the sounding be omitted from the charts.
- (g) The charted shoals to the west and southwest of Blunt Point can be superseded by the work on the new survey. The differences between the two surveys are slight and in most cases not more than 1 foot.

4. Note to compiler.

The 1910 work should be used to fill in gaps along the inshore end of the new survey only where the overlapping soundings indicate no change to have taken place.

5. The junction with H. 4960 on the south is satisfactory.

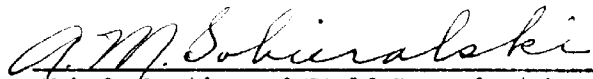
The junction with H. 4955 on the north will be taken up when that sheet is reviewed.


6. No additional work is recommended here, but the work should have been carried closer inshore in the area southward of Δ 15 and in the vicinity of Scow Bay and to the southward.

About 300 meters southwest of Δ 25 an irregularity in the bottom is disclosed. An attempt was made to adjust some of the lines, but no reasonable hypothesis could be advanced to justify either a change or a rejection and the work was accepted as recorded. As the depths are not critical no further investigation is necessary.

7. Reviewed by A. L. Shalowitz, April, 1930.

Approved:


Chief, Section of Field Records (Charts)


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

Field Records Section

Related Surveys

H-5209
T-3105
T-3110
T-4480
T-4484

Report on St. 4961 - Surveyed in 1929

Chief of Party - E. W. Eichelberg - Surveyed by - T. B. Reed

Contracted by J. W. Jones - Soundings by - J. H. B

Verified and inked by J. Fleming

- ① The records conform to the requirements of G. I.
- ② The plan and character of the development fulfill the requirements of G. I.
- ③ The sounding-line crossings are adequate except between 42-43 - G. (S.W. of Δ But) where there is a discrepancy of several feet.
- ④ except in places close in shore where the shelving is steep the depth errors can be completely removed
- ⑤ The field plotting was completed to the extent prescribed in G. I. except in places where the low water line had to be changed to conform to the Hydrography only a very few positions had to be changed but a number of soundings inshore were changed ten times or perhaps it is better stated thus

The distance traveled between two inshore positions invariably had uniform time intervals for the soundings. However, it was assumed that the distance between soundings was not equal, the distance between soundings close to the inshore position being less than the distance between soundings close to the off shore position for equal time intervals

Operating upon ~~the~~ the assumption that the boat gained speed leaving shore and reduced speed coming in many obvious irregularities in the curves were eliminated

Report on Z. 4961

(6) Agreement with adjoining sheet on the south is good ✓

(7) Pos. 87-a was out about 100-m (300-m S.E. of O'Her) ✓
" 1-g " " " " (300-m - N.E. of ΔTn)

8 - The indeed indentation of the low water line on the B.S is assumed to indicate the mouth of the small stream shown on the Topo sheet altho the 3 foot sounding ~~low~~ on the sounding line just to the North seems to indicate what this is it - note also the 3 foot sounding to the West of the 3rd sounding in question. ✓

(9) The rocky ledge 300-m - N.E of Green Point was shown on the boat sheet but not on the smooth sheet. This feature was not on the recent topo survey (T-4484) However it is shown on the old Topo (T-3110) as a rocky ledge bar at L.W. yet when the field party was at this point the tide was 11^{ft} yet according to the boat sheet it was visible even then. } This was probably transferred to B.S. from old Topo. A.S.

(10) A few soundings are questionable. The 135th sounding East of Δ If - not unlikely. A.S. Note the 55th sounding 150-m. S.W. of O'gat, there is only one angle for the ins. bar position. Note that the time between 109-110-g is $\frac{1}{2}$ of the time between 110-111-g yet the distance between 109-110-g is more than $\frac{1}{2}$ of that between 110-111 which seems unlikely.

It does not seem as if the position of the 55 can be altered any appreciable amount. Accepted or plotted. A.S.

Report on 31.4961

(10)

Note the 61-foot sounding Lat. $56^{\circ} 43'.25$ West Shore
There is no sounding on the old 1910 survey sufficiently
close to this to be of value in making a deduction.

Observe a 57 ft sounding 300-m. S.W. of Δ But ✓

Note a 20 ft sounding in the channel West of Seon Bay
Long. $132^{\circ} 58'.45$ - this sounding is slightly North West
of the shoal shown in the same area on chart 5170 O.K.

In approx. lat $56^{\circ} 42'.9$ on the chart is a $3\frac{1}{2}$ fms) This is
sounding which reduced to M.L.L.W. is 36 feet. } the 34
fathoms
m H-3209
A.L.S.

This sounding is mentioned in the D.P. in the
same area is a 43 ft sounding which is the
40 ft sounding on 3209.

Immediately below this 40 ft sounding
H 3209 is a 34 ft which was not mentioned.

The approx. position of these soundings is shown on
this sheet for the purpose of comparison
with the present Hydrography.

The pos of other shoal spots on the chart are
also indicated - ✓

Note a discrepancy in the soundings between $44-45.9$
and adjacent soundings. Perhaps the line should be made
to swing an arc between these two positions ✓

The effective depth off Green Point appears to
be 23 ft (within the limits of this sheet) ~~and~~ ✓
considering overlap. - 23 ft appears to be the controlling
depth for the ^{latitude} ~~area~~ covered by this sheet.

Mar. 27th 1938

Respectfully Submitted,
John Fleming

Section of Field Records

March 13, 1930.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4961

Locality: Wrangell Narrows (Green Point to ^{Turn} Twin Point) Alaska

Chief of Party: H. A. Cotton and E. W. Eickelburg in 1929

Plane of reference is mean lower low water, reading

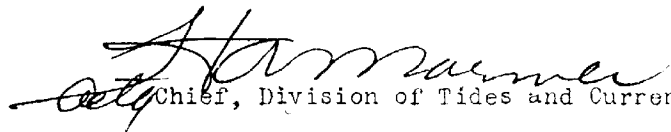
5.7 ft. on tide staff at Finger Point

~~5.0 ft. on tide staff at Petersburg~~

5.0 ft. on tide staff at Petersburg

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.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
4961

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. 6

REGISTER NO. 4961

State ALASKA

General locality S. E. ALASKA Frederick Sound

Wrangell Narrows
Locality GREEN POINT to TURN POINT

Scale 1:10,000 Date of survey May 6 - Sept. 24, 1929

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party E. W. Eickelberg

Surveyed by THOMAS B. REED

Protracted by JAMES N. JONES

Soundings penciled by JAMES N. JONES

Soundings in ~~fathoms~~ feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by ~~J. N. Jones.~~ J. Fleming

Verified by B.G. Jones.

Instructions dated FEBRUARY 19 1929²⁹

Remarks:

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4961

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	. 1074
Number of positions checked	. 256
Number of positions revised	. . 12
Number of soundings recorded	. 4648
Number of soundings revised	. . 92
Number of signals erroneously plotted or transferred None

Date: -- Mar. 28, 1930 --
Cartographer: -- John Fleming --