

6719

6719

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic } 7-6719
Hydrographic } Sheet No. 2241

U.S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAY 11 1942

Acc. No. _____

State ^{SE} Alaska

LOCALITY

Northern side Yakutat Bay

Gulf of Alaska

1934

CHIEF OF PARTY

G. C. MATTISON

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.
H6719

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. 2241

REGISTER NO.H-6719

State S.E. ALASKA

General locality GULF OF ALASKA

Locality NORTH SIDE OF YAKUTAT BAY

Scale 1/20 000 Date of survey June 2 to June 20, 19 41

Vessel U.S.C. & G.S. SURVEYOR

Chief of Party G.C. Mattison
P.C. Doran, V.M. Gibbens, E.H. Brown,
Surveyed by J.C. Partington, G.W. Moore.

Protracted by W.M. Martin

Soundings penciled by W.M. Martin

Soundings in fathoms ~~Feet~~ Fathoms

Plane of reference M L L W

Subdivision of wire dragged areas by _____

Inked by Leroy King July 11, 1942

Verified by " " " " "

Instructions dated Feb. 2, 1940. Sup April 1, 19 41

Remarks: Smooth sheet and plotting by Seattle Processing Office.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET FIELD NO. 2241
NORTHERN SIDE OF YAKUTAT BAY

SOUTHEAST ALASKA

SCALE 1:20000

U.S.C. & G.S.S. SURVEYOR

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G. C. MATTISON, Com'd'g.

INSTRUCTIONS:

The authority for this is contained in The Directors instructions dated Feb 2, 1940 Project HT245 and Supplemental instructions dated April 1, 1941 Project HT245.

SURVEY METHODS:

Standard Survey methods were used for the entire sheet. All the soundings were taken with the Dorsey No. 3 Fathometer and corrected in the usual way for temperature and salinity. A separate report is being forwarded of the fathometer corrections, and a list of corrections is pasted in the front of the first volume.

LIMITS:

This sheet covers about the Northwestern half of Yakutat Bay to within about $1\frac{1}{2}$ miles of the beach from Lat. $59^{\circ}48'5''$; Long. $139^{\circ}46'$ to Lat $59^{\circ}42'$; Long. $140^{\circ}11'$ thence on a line Southwestward to Lat. $59^{\circ}37'$ Long. $140^{\circ}04.5$; thence on a line Northeastward to Lat. $59^{\circ}46.2'$, Long. $139^{\circ}43.3'$. From Long $139^{\circ}50'$ to the northeastern end of the sheet the hydrography is only about $\frac{1}{2}$ completed, and there are 3 lines in about the center of the sheet that have not been finished to Long. $140^{\circ}00$, and several short inshore lines to be run at the northeastern end of sheet. This end of sheet would have been completed except there were so many days that the ice flow extended down the Bay over this area and prevented ship hydrography.

Note that Surveyor left Yakutat Bay 7/15/41 to relieve the Discoverer and so did not complete the Yakutat work.

DISCREPANCIES:

There are no discrepancies on the sheet except the 2nd. sounding after position 126 C, Lat. 59°42.94' Long. 139°51.25' which is ²⁴ ~~25~~ fathoms between ³³ ~~35~~ fathoms and ³³ ~~34~~ fathoms 4 feet. Position 149 J has a sounding of ³³ ~~34~~ fathoms ^{100 m from} on this sounding. It is recommended that the ²⁴ ~~25~~ fathom sounding after position 126 C be rejected, and also recommended that a further development be made to eliminate all doubt. *24 ft sdg was unchecked in the records while other unusual soundings were consistently checked. The sounding was rejected and no additional work is considered necessary to disprove it.*

The cross lines all check very closely, using predicted tides of Sitka corrected for Yakutat, Alaska.

DANGERS:

There are no dangers on this sheet except for the ice flows. The ice flows come from Disenchantment Bay and with a strong Northwesterly around to Easterly wind and a strong outrunning tide the ice flows accumulate in the upper end of the Bay, and a few of the larger bergs reach the entrance to Yakutat Bay. If the wind is in the Northwesterly direction around to Southeasterly the ice flows and bergs ground North of Point Blizhni.

CHANNELS:

There are no particular channels on this sheet and navigation in this area is safe except for occasional ice flows and bergs.

ANCHORAGES:

On the northern side of Yakutat Bay there are no usual anchorages, you may anchor along the coast in suitable depth, except for a strong Southwesterly and Southern swell which is muchely modified inside the Bay.

COMPARISON WITH PREVIOUS SURVEYS:

The comparison with previous surveys was very good.

Chart 8455 corrected to March 9, 1940 shows shoal of 26 fathoms at Lat. ⁵49°44.2', Long 139°50.45', which is about 0.6 miles

26 fm sdg falls between present depths of 24-30 fm

West of shoal shown on sheet. Also shoal (chart 8455 corrected to March 9, 1941) shows shoal 33 fathoms, Lat. 59°40', Long.

33 fm sdg is 200 m from present depth of 32 fm

140°05.95', which is $\frac{1}{4}$ mile South of shoal on sheet and is the 4th. sounding after position 90 J day. Least depth is 30 fathoms, 1 foot reduced for tide and fathometer correction.

SHOALS:

A shoal at Lat. 59°45.42', Long. 139°46.00', least depth obtained 22 fathoms 2 feet. It should have more development.

Items 9 in Review

A ⁸27 fathom 5 feet shoal at Lat. 59°43.², Long. 139°50.69',

The first sounding after position 127-C-day, should be developed.

considering general depths and spacing of lines additional development would be of little value

At Lat. 59°42.16', Long. 139°53.6', a shoal least depth 22 fathoms, the second sounding after position 28-H-day, probably should have more development.

A large flat shoal between Lat. 59°40' and 41' and Long. 140°06' and 07' probably has enough development. A shoal Lat. 59°42.85', Long. 140°07.25', least depth 10 fathoms, The third sounding after position 164 K day has been well developed

Approved and Forwarded

Respectfully submitted,

G. C. MATTISON
Commanding SURVEYOR

V. M. Gibbens
V. M. Gibbens
Jr. H. & G. Engr.

Table of Statistics Sheet No. 2241

<u>Date</u>	<u>Day Letter</u>	<u>No. Soundings</u>	<u>No. of Pos.</u>	<u>Statute Miles Sounding Lines</u>
June 2	A	693	115	60.0
June 3	B	73	14	5.5
June 4	C	979	170	89.2
June 5	D	1737	224	134.0
June 9	E	1240	198	91.7
June 10	F	968	146	74.1
June 11	G	1	1	0.0
June 13	H	1441	253	139.6
June 14	J	1119	150	77.2
June 20	K	1136	200	83.5
Totals		9387	1471	754.8

Area --- Square Statute Miles 84.8

H6719

TIDAL DATA

HYDROGRAPHIC SHEET FIELD NO. 2241

NORTHERN SIDE YAKUTAT BAY

SOUTHEAST ALASKA

Standard Tide Gage - No. 362 - Yakutat, Alaska

Latitude 59° 32.8'

Longitude 139° 44.1'

M. L. L. W. on staff ----- 3.3 feet.

Highest Tide on Staff -----

Lowest Tide on Staff -----

For reducing the soundings on the boat sheet predicted
tides of Sitka corrected for Yakutat Bay were used.

Processing Office notes on H-6719(2241)

YAKUTAT BAY

Northern Side .

Questionable soundings.

Latitude	Longitude	Position Number	Sounding Fathoms	Remarks
59 42.95	139 51.2	126-127c	23 5/6	sdg not checked in record - probably erroneous sdg - not plotted ✓ Between 33 4/6 & 33 2/6
59 ⁴ 30.4 ³ 5	140 07.9	68 -6 ⁵ 7 ⁶ D	45 2/6	sdg checked in record by field party - sdg retained ✓ " 55 4/6 & 54 2/6
59 38.7	140 02.0	75-76D	79 ¹ / ₂ &79 5/6	sdgs checked in record by field party - sdg retained ✓ " 59 4/6 & 60 1/6
59 38.8	140 01.5	76-77D	84 5/6	sdg checked in record by field party - sdg retained ✓ " 70 ¹ / ₂ & 80 ¹ / ₂
59 39.4	140 03.9	113-114A	57 2/6	sdg checked in record by field party - sdg retained ✓ In deeper area.

Bad Crossings

59 42.6	139 54.7	91-92F 120-121C	40 53 to 46	crossing not bad considering slope of bottom ✓
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Signals. The topographic position of Blizhni was used instead of the three point triangulation fix. That fix was unsatisfactory, being close to the circle of the three points observed upon.

Blizhni changed to triangulation position to conform with topographic sheet. Topographic position checked triangulation position satisfactorily for all plotting purposes

rae
HRC

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 18, 1942.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: Mr. H. E. Edmonston.

Plane of reference approved in
6 volumes of sounding records for

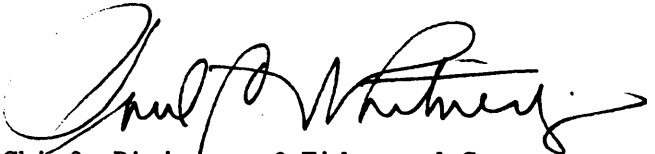
HYDROGRAPHIC SHEET 6719

Locality North side of Yakutat Bay, Gulf of Alaska, Southeast Alaska.

Chief of Party: G. C. Mattison in 1941
Plane of reference is mean lower low water reading
3.3 ft. on tide staff at Yakutat
28.3 ft. below B. M. 1

Height of mean high water above plane of reference is 9.2 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H6719**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Yakutat Bay</u>											1
<u>Blizhni Pt.</u>											2
											3
											4
											5
<u>Yakutat</u>											6
											7
											8
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Names underlined in red approved
by L. HECK on 10/26/42

Remarks

Decisions

1		595395 U.S.G.B
2		"
3		
4		
5		
6	Location of tide staff.	595395
7		
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6719**

Records accompanying survey:

Boat sheets ^{one}...; sounding vols. ⁽⁶⁾...; wire drag vols.;
 bomb vols.; graphic recorder rolls;
 special reports, etc.

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

Number of positions on sheet	.1471.
Number of positions checked	..32..
Number of positions revised	..6..
Number of soundings recorded	..9387.
Number of soundings revised (refers to depth only)	..42..
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time ..8 hrs
Verification of soundings from graphic record	Time

Verification by *Leroy King* Total time 157 Hrs. Date *July 11, 1942*

Review by *R. H. Carstens* Time 20 hr Date *Aug 20, 1942*

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY }
 DESCRIPTIVE REPORT } No. H **H6719**
~~PHOTO STAT OF~~ } ~~No. **T**~~

{ received **May 11, 1942**
 { registered **May 15, 1942**
 { verified *July 11, 1942*
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
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62			
63			
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83			
88			
90			

RETURN TO

82	R. W. Knox
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WRK

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6719

Field No. 2241

S. E. Alaska, Gulf of Alaska, North Side of Yakutat Bay
Surveyed in June 1941, Scale 1:20,000
Instructions dated February 2, 1940; April 11, 1941

Soundings: Fathometer
Dorsey III

Control: Visual Fixes on
Shore Signals

Chief of Party - G. C. Mattison, Commanding Ship SURVEYOR
Surveyed by - Ship's Officers
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - L. King
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The short segments of shoreline available from contemporary surveys and the topographic signals originate with T-6832a&b (1941). One hydrographic signal was located by cuts recorded in Vol. 1 of the sounding records.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

A satisfactory junction was made with H-6720 (1941) on the southeast. The project surveys joining on the north, west and east have not been completed.

5. Comparison with Prior Surveys

H-2158 (1892) 1:40,000

H-2159 (1892) 1:40,000

Soundings from these surveys are widely spaced and give only a very generalized representation of the bottom. The depths differ from present survey depths

by as much as 10 fms. as, for example, in Lat. $59^{\circ}45.5'$, Long. $139^{\circ}54.0'$ a sounding of 44 fms. falls among present survey soundings of 34 fms. In general, shoaler depths are found on the present survey which should supersede the earlier surveys in the common area.

The present survey is adequate to disprove the following soundings from H-2158:

- a. A sounding (chart 8455) of 62 fms. falls in depths of 66-70 fms. on the present survey in Lat. $59^{\circ}40.42'$, Long. $140^{\circ}00.4'$. Similar depths on the present survey, 250 meters to the southwest, are considered adequate for charting.
- b. An uncharted sounding of 81 fms. in Lat. $59^{\circ}40.12'$, Long. $139^{\circ}58.7'$ falls in present survey depths of 86-87 fms. The sounding falls in a deep and is probably erroneous.
- c. An uncharted sounding of 68 fms. falls in present survey depths of 73 fms. in Lat. $59^{\circ}40.4'$, Long. $140^{\circ}02.9'$. Similar survey depths found 220 meters to the northeast on the present survey are considered adequate for charting.
- d. A sounding of 49 fms. (chart 8455) falls in depths of 53-54 fms. on the present survey in Lat. $59^{\circ}43.28'$, Long. $140^{\circ}00.8'$. The sounding distorts the 50-fm. curve on the original survey and is probably erroneous.

6. Comparison with Chart 8455 (Latest print date 12-19-41)

The charted hydrography within the area of the present survey originates with the previously discussed surveys and needs no further consideration except for the sounding of 27 fms. charted in Lat. $59^{\circ}44.0'$, Long. $140^{\circ}01.5'$ and the sounding of 87 fms. charted in Lat. $59^{\circ}43.6'$, Long. $140^{\circ}03.5'$. The 27-fm. sounding is charted 0.3 mile east of its true position. When it is plotted correctly it is in agreement with the present survey. The 87-fm. sounding is charted 0.6 mile northeast of its true position. It falls in present depths of 35-45 fathoms and it is probably incorrect.

There are no aids to navigation within the limits of the survey.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory except that few bottom characteristics were taken.

9. Additional Field Work Recommended

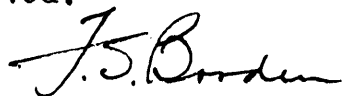
When work is again resumed in this area the northeast portion of the sheet should be completed and sounding lines should be run in the several holidays extending as far west as Long. 140°00'. Split lines should be run in Lat. 59°45.55', Long. 139°46.0' in the vicinity of the 22-fm. shoal.


10. Superseded Surveys


H-2158 (1892) in part, with the exception of bottom characteristics;
H-2159 (1892) in part, with the exception of bottom characteristics.

Examined and approved:


Chief, Surveys Section


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

Applica T CNV 8455. July 1942. N.P.B.
Examined after review in relation to
application to cht. 8455.
No correction

4-10-45 P.M.

Compared with chart 8002 after review - no correction 5/9/47 X.H.B.