

# 6720

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<p>Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR</p> <p><b>DESCRIPTIVE REPORT</b></p> <p><i>Tapestry</i> } Sheet No. <u>2341</u> <b>H-6720</b> <i>Hydrographic</i> }</p>	
<p><b>U.S. COAST &amp; GEODETIC SURVEY</b> LIBRARY AND ARCHIVES</p> <p>MAY 11 1942</p> <p>Acc. No. _____</p>	
<p>State <u>S.E. Alaska</u></p>	
<p>LOCALITY</p>	
<p><u>Gulf of Alaska</u></p>	
<p><u>Southern half of Yakutat Bay</u></p>	
<p>_____ 19<u>41</u></p>	
<p>CHIEF OF PARTY</p>	
<p><u>G. C. MATTISON</u></p>	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.  
H6720

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. 2341

REGISTER NO. H 6720

State S.E. Alaska

General locality Gulf of Alaska

Locality Southern half of Yakutat Bay

Scale 1/20,000 Date of survey June 2 to July 15 1941

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

Chief of Party G.C. Mattison

Surveyed by P.C. Doran, E.H. Brown, G.A. Nelson, V.M. Gibbens.

Protracted by H.C. Parsons

Soundings penciled by H.C. Parsons

Soundings in fathoms ~~XXXX~~ Fathoms

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated Feb. 2, 1940. Supplemental Apr. 1, 1941

Remarks: Smooth sheet and plotting by Seattle Processing Office.

## DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET FIELD No. 2341

THE SOUTHERN HALF OF YAKUTAT BAY

SOUTHEAST ALASKA

Scale 1:20,000

U.S.C. &amp; G.S.S. SURVEYOR - G. C. MATTISON, Com'd'g.

INSTRUCTIONS:

The authority for this survey is contained in the Director's Instructions dated February 2, 1940, Project HT-245 and Supplemental Instructions dated April 1, 1941, Project HT-245.

LIMITS:

This sheet covers the southern half of Yakutat Bay from the entrance to about a line drawn from Blizhni Point to about half way between Knight Island and Krutoi Island. It joins sheet Field No. 2241 (which is the northern half of Yakutat Bay) on the northwestern side. On the southeastern side it joins the launch inshore sheet Field No. 1141 and on the southwestern end the sheet joins sheet field no. 2441 (which covers the entrance to Yakutat Bay).

SURVEY METHODS:

Standard survey methods were used. The soundings lines were all controlled by three point fixes, and the Dorsey fathometer No. 3 was used entirely for obtaining the soundings. All fathometer soundings were corrected for temperature, salinity, etc., in accordance with instructions and a separate report on this subject has been submitted. A copy of the corrections will be found in the first volume of this sheet.

DISCREPANCIES:

The second sounding after position 34 B, latitude  $59^{\circ}42.1'$ , Longitude  $139^{\circ}52.9'$ , of 21 fathoms 1 foot is between soundings of 29 fathoms 5 feet and 32 fathoms 5 feet. The area of this sounding was covered on H day between positions 113 to 114 and 114 and 118 with no indication of sheal sounding, therefore the sounding was rejected.

*sdg was rejected.  
A 10fm error in sdg was suggested by Chief of Party at time of taking. There is no indication of sheal on an overlapping line or adjoining lines. Several other errors of 10 fms were found on the sheet.*

It is recommended that position 4 M day be rejected due to the large change of course after position 3 and only being able to obtain one angle on position 4.

4.21 was retained. Sdgs fall in very flat area and position was adequate

The first sounding after position 153 Q day <sup>3 1/4</sup> (latitude 59°36.26', longitude 139°58.5') is 33 fathoms with a miss on the position and a 41 fathom sounding after it. This area was covered on R day between position 117 to 123, and position 132 to 133, also on E day between positions 24 to 26 with no indication of the 33 fathom <sup>3 1/4</sup> sounding with the exception there was a miss half way between positions 122 and 123 R day which would fall almost on the 33 fathom sounding. It is recommended that further investigation is necessary to prove or disprove this sounding.

31 was omitted. Sdg is no danger to navigation. Doubt exists as to its accuracy because it occurs at the beginning of a line having a miss on the position, indicating temporary fath. trouble. Ship was maneuvering considerably and figures crossed out in sdg record indicates confusion as to time. Falls very close to 41 fm sdg. No sharp pinnacle ~~is~~ on other portions of the area.

The cross lines all check very well using predicted tides for reducing the soundings on the boat sheet.

SHOALS:

This sheet covers an area with a very irregular bottom with numerous shoals.

A shoal at Latitude 59°40.1', Longitude 139°47.95' with least depth of 6-4/6 fathoms, the second sounding before position 97 S day and the sixth sounding after position 44 M day, also 6-5/6 fathoms sounding the first sounding after position 88 S day and the fifth sounding after 90 Q day, should have further investigation.

Present development adequate

At latitude 59°39.7', longitude 139°51.3 a least depth of 10-1/8 fathoms, the second sounding after position 47 P day and 10-1/2 fathoms the first sounding after position 2 P day and at latitude 59°40.35', longitude 139°49.65' a least depth of 10-5/6 fathoms the fifth sounding after position 49 P day were found and should have more development. The area to the north of these soundings the lines should be split to the 30 fathom curve.

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A shoal with least depth of <sup>14 fms</sup> 13-5/6 fathoms, sixth sounding after position 74 C day, latitude 59°41.77', longitude 139°51.68; needs to be developed.

27 There is a long narrow shoal with depths ranging from 26 to 40 fathoms running nearly north and south from latitude 59°37.2' to latitude 59°38.6' and between longitude 139°54' and 139°55', surrounded with deep soundings from 70 to 80 fathoms. This should be developed.

Present development adequate

DANGERS:

There is a rocky reef extending north from Khantaak Island at about triangulation station "Plus" to about latitude  $59^{\circ}42'$ , longitude  $159^{\circ}43'$ . This area has not been surveyed but there are rocks breakers in moderate swells to the northern end of the reef.

A reef extends off the western end of Khantaak Island for about  $\frac{1}{2}$  mile at the entrance to Monti Bay. This reef shows on sheet 1141 and will be described in that report.

H-6718(1941)

ANCHORAGES:

There are no anchorages on this sheet. The SURVEYOR anchored mostly in Monti Bay at the mouth of Ankau Creek, shown on sheet 1141. H-6718(1941)

When the ship was working at the eastern end of the sheet it anchored about  $2\frac{1}{4}$  miles  $350^{\circ}$  true from the eastern end of Krutoi Island. This area has not been surveyed.

NOTE: The SURVEYOR would have completed the sheet except for emergency orders to relieve the Ship DISCOVERER, and had to leave this working ground July 15, 1941.

Respectfully submitted,



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

Approved and Forwarded:

G. C. MATTISON  
Commanding Ship SURVEYOR

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TABLE OF STATISTICS TO ACCOMPANY  
SHEET 2341

Date	Day Letter	Number of Soundings	Number of Positions	Statute miles of sounding lines
June 2	A	42	7	3.4
" 3	B	1196	178	94.8
" 4	C	420	62	33.6
" 5	D	599	66	38.7
" 6	E	1596	197	120.7
" 7	F	1340	166	86.5
" 9	G	90	15	6.4
" 10	H	1278	153	67.3
" 12	I	2090	233	122.0
" 13	K	547	81	41.2
" 14	L	164	23	11.5
" 19	M	1120	141	63.5
" 20	N	718	100	45.9
" 21	P	869	87	46.6
" 25	Q	1234	188	77.7
" 29	R	844	148	51.7
" 30	S	1367	167	65.0
July 8	T	6	6	0.0
" 9	U	47	8	3.2
" 10	V	179	34	12.6
" 15	W	107	19	6.0
<b>TOTALS</b>		<b>15853</b>	<b>2079</b>	<b>998.3</b>

Area - square statute miles 92.0

TIDAL DATA

HYDROGRAPHIC SHEET FIELD No. 2341

SOUTHERN HALF OF YAKUTAT BAY

SOUTHEAST ALASKA

Standard Tide Gage No. 362 - Yakutat, Alaska

Latitude 59°32.8'

Longitude 139°44.1'

MLLW on staff - - - - - 3.3feet

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.

Attention is called to the following shoals:

Latitude	Longitude	Position Number	Sounding Fathoms
59 39.85	139 50.95	82-83M	9 $\frac{1}{2}$ ✓ ✓ ✓
59 39.95	139 50.95	156-157 S	9 $\frac{1}{2}$ ✓ ✓ ✓
59 37.7	139 49.9	35-36M	6 2/6 ✓ ✓ ✓
59 35.35	139 51.35	1-2R	7 $\frac{1}{2}$ ✓ ✓ ✓ <i>shoaler sdg</i> (H-6718(A4))

3



Remarks:

Decisions

	Remarks:	Decisions
1		
2		595395 U.S.G.B
3		"
4		"
5		
6		
7		
8	off limits sheet: used in report	595395
9	" " "	" U.S.G.B
10	" " "	"
11	" " "	"
12		
13		
14	Location of tide staff	595395
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

**GEOGRAPHIC NAMES**  
 Survey No. **H6720**

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous charts	On U. S. quadrangle maps	From local information	On local maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
<u>Gulf of Alaska</u>										1
<u>Yakutat Bay</u>										2
<u>Knight I.</u>										3
<u>Khantak I.</u>										4
										5
										6
										7
<u>Monti Bay</u>										8
<u>Ankan creek</u>										9
<u>Blizhni Pt.</u>										10
<u>Krutoi I.</u>										11
										12
										13
<u>Yakutat</u>										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

Names included in red spot by collector 6/10/42

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6720**

Records accompanying survey:

Boat sheets ~~one~~; sounding vols. (10); 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	.2079
Number of positions checked	.28..
Number of positions revised	.None.
Number of soundings recorded	.15853
Number of soundings revised (refers to depth only)	.31... <i>112 - revised by change in tide reduction</i>
Number of soundings erroneously spaced	.13..
Number of signals erroneously plotted or transferred	.None.
Topographic details	Time .....
Junctions	Time .8...
Verification of soundings from graphic record	Time .....

Verification by *A.R. STIRNY*... Total time .100.. Date *June 8, 1942*

Review by *R.A. Coates*..... Time 21.<sup>hrs</sup>... Date *June 12, 1942*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTO STATION~~

No. H **H6720**  
~~MOORE~~

received **May 11, 1942**  
 registered **May 16, 1942**  
 verified  
 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			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Pg 2,386	HEP	Mr. Stone assigns for plotting.
88			
90			

RETURN TO

82	<b>R. W. Knox</b>
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ws  
HRC

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 20, 1942.

~~Division of Hydrography and Topography:~~

Division of Charts: Attention: Mr. H. R. Edmonston.

Plane of reference approved in  
10 volumes of sounding records for

HYDROGRAPHIC SHEET 6720

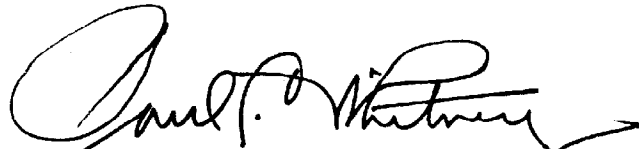
Locality Southern half of Yakutat Bay, Southeast Alaska

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:

Tide reducers and reduced soundings changed for "D" day (June 5)  
in Vol. 2.



Chief, Division of Tides and Currents.

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6720  
Field No. 2341

S. E. Alaska, Gulf of Alaska, Southern Half of Yakutat Bay  
Surveyed in June - July 1941, Scale 1:20,000  
Instructions dated February 2, 1940 and April 1, 1941

Soundings: Fathometer -  
Dorsey III

Control: Visual Fix on Shore  
Signals

Chief of Party - G. C. Mattison  
Surveyed by - P. C. Doran, E. H. Brown, G. A. Nelson and  
J. M. Gibbens  
Protracted by - H. C. Parsons  
Soundings plotted by - H. C. Parsons  
Verified and inked by - A. R. Stirni  
Reviewed by - R. H. Carstens, June 12, 1942  
Inspected by - H. R. Edmonston

1. Shoreline and Signals

No shoreline is shown on this sheet. The signals originate with triangulation of various years and with T-6831a&b (1941) and T-6830a&b (1941).

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

A satisfactory junction was made with H-6721 (1941) on the southwest. The junction on the northwest with H-6719 (1941) and on the southeast with H-6718 (1941) will be considered in the review of those surveys. The project surveys to the east and the west have not been accomplished at the present date.

5. Comparison with Prior Surveys.

H-2157 (1892) 1:20,000  
H-2158 (1892) 1:40,000  
H-2159 (1892) 1:40,000

The present survey is more closely developed and reveals the configuration of the bottom much more completely than the older surveys. New shoals were found and shoaler depths were established on all the previously known shoals. Depth agreement in general is fair except in certain of the deeper areas. In the deep in Lat.  $59^{\circ}36.0'$ , Long.  $139^{\circ}49.5'$  and to the southwest, the present survey shows depths 6-8 fms. shoaler than those on the earlier surveys. In Lat.  $59^{\circ}38.0'$ , Long.  $140^{\circ}01.5'$  there are differences in depth of 10-12 fms. in 85 fms. of water. In shoaler areas there are differences of 2-5 fms. in spots. The present survey is adequate to supersede the earlier surveys in the common area.

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

a. Hydrography

The charted hydrography within the area of the present survey originates with the following sources:

- (1) The previously listed surveys which need no further consideration. The area charted from this source lies to the north of Lat.  $59^{\circ}36.2'$ .
- (2) Blueprint 35554 which is a selection of soundings from the boat sheets of the present survey and of contemporary surveys of the area. These soundings were reduced, using predicted tides, and differ in certain instances from the final reduction by as much as one fathom. The charted hydrography is in good agreement with the blueprint except for a sounding of 18 fms. in Lat.  $59^{\circ}35.0'$ , Long.  $139^{\circ}55.2'$ , which is charted 130 m. northeast of its survey position and a sounding of 37 fms. in Lat.  $59^{\circ}35.3'$ , Long.  $139^{\circ}54.9'$  which is charted 290 m. north by west of its survey position.
- (3) Soundings from the present survey and from H-6719 (1941) which appear on the chart as hand corrections.

b. Aids to Navigation

No charted aids to navigation fall within the area of the present survey.

7. Condition of the Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory, except that bottom characteristics were not taken on the shoals. Only a few bottom characteristics were taken over the entire sheet.

9. Additional Field Work Recommended

When work is again resumed on this project it is desirable to have split lines run across the shoals in Lat.  $59^{\circ}39.6'$ , Long.  $139^{\circ}51.4'$ ; in Lat.  $59^{\circ}40.4'$ , Long.  $139^{\circ}49.6'$ ; in Lat.  $59^{\circ}41.8'$ , Long.  $139^{\circ}51.5'$  and in Lat.  $59^{\circ}43.0'$ , Long.  $139^{\circ}50.3'$ .


10. Superseded Surveys

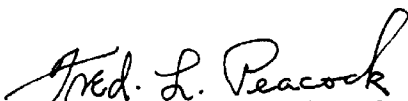
H-2157 (1892) in part  
H-2158 (1892) " "  
H-2159 (1892) " \*


Additional bottom characteristics should be retained from these surveys.

Examined and approved:

  
Chief, Surveys Section.

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of Coastal  
Surveys



Application to CIA 8455- July - 1942. J.K.S.