

6721

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Form 504  
Rev. April 1935

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. 2441  
Hydrographic }

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REGISTER NO. 6721

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

MAR 27 1942

Acc. No. \_\_\_\_\_

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State S. E. ALASKA

LOCALITY

YAKUTAT BAY

~~EAST END OF YAKUTAT BAR~~

*Off Ocean Cape*

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1964

CHIEF OF PARTY

G. C. MATTISON

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6721

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. 2441

REGISTER NO. H-6721

State S.E. ALASKA

General locality YAKUTAT BAY

Locality Off Ocean Cape  
~~EAST END OF YAKUTAT BAR~~

Scale 1:20000 Date of survey July, 1941

Vessel STR. SURVEYOR

Chief of Party G. C. MATTISON

Surveyed by P. C. DORAN J. C. PARTINGTON

Protracted by R. M. Syler

Soundings penciled by R. M. Syler

Soundings in fathoms feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by Leary King May 14, 1942

Verified by Leary King " " "

Instructions dated Feb. 2, 1940 Sup. April 1, 1941

Remarks: Smooth sheet and plotting by Seattle Processing Office

# DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET

REGISTER NO. 6721

FIELD NO. 2441

EAST END OF YAKUTAT BAR

YAKUTAT BAY, ALASKA

STR. SURVEYOR

G. C. MATTISON, COM'D'G.

JULY - 1941

SCALE 1:20000

PROJECT HT-245

## INSTRUCTIONS:

This survey was made in accordance with the Directors Instructions dated Feb. 2, 1940 and Supplemental Instructions dated April 1, 1941 for Project HT-245.

## LIMITS OF SHEET:

The area covered by this sheet is bounded as follows: From a point about 1 mile southwest of Ocean Cape in Latitude  $59^{\circ} - 32'$  and Longitude  $139^{\circ} - 53'$  thence southwest to Latitude  $59^{\circ} - 29.6'$  and Longitude  $139^{\circ} - 58.8'$ , thence northwest to Latitude  $59^{\circ} - 31.7'$  and Longitude  $140^{\circ} - 02.3'$  thence northeast to Latitude  $59^{\circ} - 34.2'$  and Longitude  $139^{\circ} - 56.8'$ , thence southeast to original point.

It covers that portion of the Yakutat Bar in the vicinity of the entrance buoy.

## SURVEY METHODS:

Standard methods for ship hydrography were used in the execution of this survey. Soundings were obtained using the Borsey III fathometer and reduced in the usual manner for temperature and salinity corrections. (Correction indicated on Page 2 Volume 1)

Predicted tides for Sitka, with time and range corrections for Port Mulgrave, were used to reduce the soundings for boat sheet.

Arcs were constructed on the boat sheet using the triangulation stations S.W. Base, Ankau-2 and Near, (Hydrographic signals Base, An and Near), as it was anticipated that hydrography would be executed on the entire bar. For the most part signals on Ocean Cape and Khantaak Island were used and plotted with the protractor. The arcs were used for plotting positions  $37^{\circ}$  to  $104^{\circ}$  inclusive on the boat sheet. On the smooth sheet all positions were plotted with the protractor.

## CONTROL:

This survey was controlled by second and third order triangulation executed during the current season

supplemented by plane table traverses.

DISCREPENCIES:

There were no discrepancies in soundings noted while executing this survey. The soundings on cross lines checked closely with those on the regular system of lines.

JUNCTION WITH ADJOINING SHEETS:

Satisfactory junctions were made with Field Sheets 1141 and 2341 executed during the current season.

COMPARISON WITH PREVIOUS SURVEYS:

A satisfactory comparison <sup>(1892)</sup> could not be made with previous survey, Register No. 2158 due to the sparsity of soundings on the old survey. The soundings on the two sheets, where they can be compared, are in wide variance. See item 5 of review

In Latitude  $59^{\circ} - 31.8'$  and Longitude  $139^{\circ} - 59.4'$  a depth of ~~16~~ <sup>15</sup> fathoms is shown on old survey, which is shown as 76 fathoms on Chart 8455. In this vicinity depths of 28 fathoms were recorded by this survey.   
*Reduced sdg in records is 76 fm. Probably an error was made in recording*

SHOALS:

An uncharted shoal, in Latitude  $59^{\circ} - 32.8'$  and Longitude  $139^{\circ} - 55'$ , was developed. Least depth recorded was  $6 - \frac{2}{8}$  fathoms. This shoal lies at the junction with Field Sheet 1141 on which ~~same~~ <sup>7-6/8 (1892)</sup> least depth was obtained. 83  
29

An uncharted shoal lies northwest of entrance buoy with a depth of  $12 - \frac{4}{6}$  fathoms in Latitude  $59^{\circ} - 32.65'$  and Longitude  $139^{\circ} - 58.1'$ . On same shoal a depth of  $11 - \frac{2}{6}$  fathoms in Latitude  $59^{\circ} - 32.8'$  and Longitude  $139^{\circ} - 58.5'$ . The vicinity of the ~~12-4/6~~ fathom sounding requires additional development. Not dangerous and development is fairly good.

The location of entrance buoy is in error on Chart 8455. Correct location as determined by this survey is;

Latitude  $59^{\circ} - 32.24'$   
Longitude  $139^{\circ} - 57.58'$   
62

Respectfully submitted,

*A. C. Thorson*  
A. C. Thorson, H&GE

Approved and Forwarded;

*R. Mathison*

TABLE OF STATISTICS SHEET 2441

<u>Date</u>	<u>Day Letter</u>	<u>Number of Soundings</u>	<u>Number of Positions</u>	<u>Statute miles of Sounding Lines</u>
July 8	A	574	96	38.0
" 9	B	864	174	76.0
" 10	C	352	68	23.2
" 11	D	1107	195	65.0
" 12	E	540	104	35.7
<hr/>				
TOTALS	5	3437	637	237.9

Square statute miles of hydrography..... 16.0

T I D A L D E T A

Standard gage No. 403 - Yakutat, Alaska

Latitude  $59^{\circ} - 32.8'$   
Longitude  $139^{\circ} - 44.1'$

Mean Lower Low Water on Staff..... 3.3 Feet  
Highest tide on Staff .....  
Lowest Tide on Staff .....

YAKUTAT, ALASKA, 1941 SURVEYOR

Additional notes by Processing Office :

SURVEY METHODS:

As noted under this heading the predicted tides were used for the boat sheet. For the smooth sheet the actual tides as recorded on the Standard Gage on the cannery dock at Yakutat were used.

GEOGRAPHIC NAMES :

No new names are needed in this area. All names used are as shown on Coast Survey charts or Coast Pilots.

NOTES:

This report was written by Mr. Thorson while in the Processing Office and covers the matter very completely. Records were in good order.

SIGNALS:

Signal KAU is shown as a <sup>hydrographic</sup> ~~topographic~~ signal. It is the large tree mentioned in description of Triangulation Station Ankau-2 as being about 25 meters to the south of Ankau-2. The actual measurements are as follows : KAU lies 1 meter to the east of the range Ocean Cape-2 and Ankau-2 and is 17.4 meters (57 ft.) from Ankau-2. This gives a scaled value of KAU as Lat.. 59-32 and 399.7 meters.  
Long. 139-51 and 243.1 meters.

Descriptive card for KAU is made part of this report.

*Philip C. Doran*

Philip C. Doran,  
Officer in Charge,  
Seattle Processing Office.

56'

139° 55'

54'

OVERLAY SHEET N-6721 1:20,000 (2441)

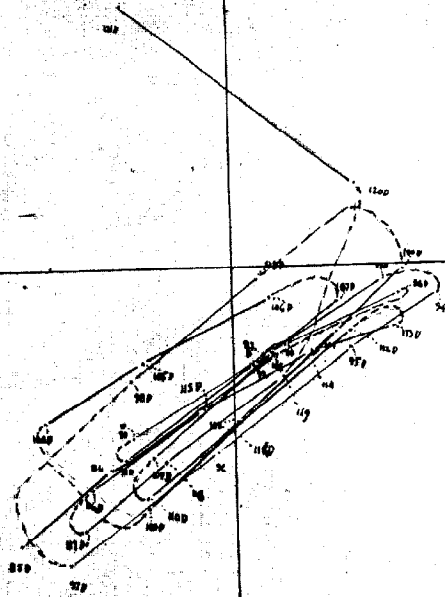
34'

34'

This sheet shows the position numbers and courses between positions 85D and 121 D. The critical soundings were plotted on the smooth sheet, but due to close development, most of the position numbers were not shown.

59° 33'

59° 33'



32'

32'

56'

139° 55'

54'

Remarks

Decisions

	Remarks	Decisions
1		
2		595395
3		" USGB
4		
5		
6	Location of tide staff.	"
7		
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27		



GEOGRAPHIC NAMES

Survey No. **H6721**

Name on Survey	Source										
	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.		
<u>Gulf of Alaska</u>											1
<u>Ocean Cape</u>											2
<u>Yakutat Bay</u>											3
											4
											5
<u>Yakutat</u>											6
											7
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											27
											M 234

Names underlined in red approved  
by \_\_\_\_\_ on \_\_\_\_\_

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6721**

Records accompanying survey:

Boat sheets ~~one~~; sounding vols. (3); wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls ....;  
 special reports, etc. 1 form #524 ~~one overlay tracing filed with~~  
~~descriptive report~~.....

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

Number of positions on sheet	.637.
Number of positions checked	.37..
Number of positions revised	..0..
Number of soundings recorded	3437.
Number of soundings revised (refers to depth only)	..12..
Number of soundings erroneously spaced	..0..
Number of signals erroneously plotted or transferred	..0..
Topographic details	Time .....
Junctions	Time .....
Verification of soundings from graphic record	Time .....

Verification by *Lucy King*..... Total time .69 hrs. Date *May 14, 1942*

Review by *A. H. Carstens*..... Time 13 hrs Date *May 22, 1942*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTO SURVEY~~

No. H H6721  
~~NO. 001~~

received April 6, 1942  
registered April 10, 1942  
verified May 14, 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			
24			
✓ 25	Pg 2	JR	A. J. M.
✓ 26	Pg 2		
30			
40			
62			
63			
82			
✓ 83	Pg 2	H. G.	M. H. M.
88			
90			

RETURN TO

82	R. W. Knox
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*✓ RWK*

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 10, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
3 volumes of sounding records for

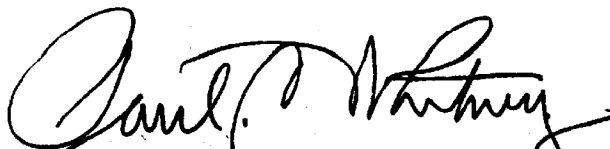
HYDROGRAPHIC SHEET 6721

Locality Off Ocean Cape, 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:

  
Chief, Division of Tides and Currents.

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6721

Field No. 2441

S. E. Alaska, Yakutat Bay, Off Ocean Cape  
Surveyed in July 1941, Scale 1:20,000  
Instructions dated February 2, 1940 and April 1, 1941

Soundings: Dorsey III  
Fathometer

Control: Fixed Position on  
Shore Signals

Chief of Party - G. C. Mattison  
Surveyed by - P. C. Doran and J. C. Partington  
Protracted by - R. M. Syler  
Soundings plotted by - R. M. Syler  
Verified and inked by - L. King  
Reviewed by - R. H. Carstens  
Inspected by - H. R. Edmonston

1. Shoreline and Signals

No shoreline was transferred to this offshore sheet.  
The topographic signals originate with T-6830b (1941).

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

The junctions with H-6720 (1941) and H-6718 (1941) on the east will be considered in the reviews of those surveys. The project surveys to the south, west and north have not been received in the office.

5. Comparison with Prior Surveys

H-2157 (1892) 1:20,000  
H-2158 (1892) 1:40,000  
H-2655 (1903) 1:600,000  
H-6579 (1940) 1:200,000

These surveys cover the entire area of the present survey. Agreement with the sparse development on H-2157 and H-2158 and with the track line soundings

from the small scaled surveys is good. There are differences in individual soundings of 3-4 fms. as, for example, in Lat.  $59^{\circ}32.9'$ , Long.  $139^{\circ}55.9'$  a 16-fm. sounding from H-2158 falls in depths of 12 fms. on the present survey.

The present survey should supersede the earlier surveys in the common area.

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

a. Hydrography

The soundings and depth curves on the chart within the area of the survey were taken from blueprint No. 35554, which is a selection of soundings from the boat sheet. These soundings are based on predicted tides and in certain cases differ from those shown on the smooth sheet by as much as 1 fathom.

The depth curves on the chart in Lat.  $59^{\circ}32.5'$ , Long.  $139^{\circ}55.05'$  and in Lat.  $59^{\circ}32.0'$ , Long.  $140^{\circ}00.0'$  are somewhat different than those shown on the smooth sheet and should be corrected.

b. Aids to Navigation

The charted position of the lighted buoy in Lat.  $59^{\circ}32.05'$ , Long.  $139^{\circ}57.1'$  is about 1/4 mile to the southeast of the position determined by this survey. However, it still satisfactorily marks the feature intended.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory except for the following items:

- A. Only two bottom characteristics were taken within the area.
- B. The number of miles of crosslines totaled only 2% of the regular system of sounding lines instead of 5% to 8% as specified in the instructions.

9. Additional Field Work Recommended

None.

10. Superseded Surveys

H-2157	(1892)	in part
H-2158	(1892)	" "
H-2655	(1903)	" "
H-6579	(1940)	" "

Examined and approved:

*Robert W. Knaf*  
Chief, Surveys Section

*Fred. L. Peacock*  
Chief, Section of Hydrography

*J. S. Borden*  
Chief, Division of Charts

*G. W. Rude*  
Chief, Division of Coastal  
Surveys

applied to car 8455 - July - 1902. D. B. B.