

6825

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. 2M-243 Office No. 6825

LOCALITY

State S. E. Alaska

General locality Wrangell Narrows

Locality Off Danger Pt

194 3

CHIEF OF PARTY

Charles Pierce

LIBRARY & ARCHIVES

DATE JUN 9 1943

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 6825  
H6825

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. 2M 213

REGISTER NO. 6825

State Southeast Alaska

General locality Wrangell Narrows

Locality Off Danger Pt  
~~Vicinity buoys No. 20 and No. 20A~~

Scale 1-2000 Date of survey April 20 to May 11 1943

Vessel WESTDAHL

Chief of Party Charles Pierce

Surveyed by Curtis Le Fever

Protracted by Curtis Le Fever R. J. Christman

Soundings ~~measured~~ <sup>inked</sup> by Curtis Le Fever R. J. Christman

Soundings in ~~1000~~ feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by R. H. Carstens

Verified by R. H. Carstens

Instructions dated September 12, 1942  
Feb 13, 1943  
H-6822 (1943)

Remarks: Best sheet only, see pipe drag survey of same area  
by this party.

H6825

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET OF INVESTIGATION OF SHOAL-  
ING IN WRANGELL NARROWS

Sheet No. Field 2M-243  
H-6825

Instructions dated September 12, 1942 (1995 WEI) Feb. 13, 1943  
(1975 SE 4) and wire dated April 28, 1943.

SURVEY METHODS:

Launch No. 88 with a portable depth recorder type No. 808A was used almost entirely for this survey. The hydrography was all accomplished at or near slack water. Bar checks and lead line comparisons were taken only at slack water and so were usually during the sounding period rather than at the beginning of the day's work. Part of one day on sheet 2M-243 the lead line was used instead of the fathometer. The lead line was also used for a short period on sheet 2M-443. The speed of the recording stylus on the fathometer was checked by a stop watch as the tachometer was not functioning properly.

AUTHORITY FOR SURVEYS:

Original instructions dated Sept. 12, 1942 and letter dated Feb. 13, 1943.

LIMITS:

Ship channel from about 300 feet south of South Green Rock Beacon to abeam of Beacon FG 21A. This covers the area in the vicinity of buoys 20A and 20 where the YUKON was reported to have touched bottom July 15, 1942.

COMPARISON WITH PREVIOUS SURVEYS:

The present depths in this channel are in some parts one to three feet less than those <sup>depths on chart of latest print date are in agreement.</sup> shown on the chart. The depths on the eastern side of the channel in the vicinity of buoy N 20B have decreased some and indicate a silting in from the adjoining sand and mud flats. The least depth obtained is 15-<sup>25</sup>/<sub>4</sub> feet at MLLW and is <sup>200</sup>/<sub>200</sub> feet south of Buoy N 20B and about 30 feet into the channel from the line between buoys N 20B and N 20A. Directly west and across the channel from Buoy N 20B there is a 17<sup>25</sup>/<sub>4</sub> foot sounding at MLLW. This sounding is only <sup>200</sup>/<sub>200</sub> feet west of the 20 foot curve on the eastern side of the channel. This restricts the navigable channel at this point to a width of <sup>200</sup>/<sub>200</sub> feet. Buoy N 20B should be moved 100 feet west and N 20A, 50 feet west to

83  
250 feet is the charted width of channel at M.L.W.

116825

2.

The 20 foot curve. The least depths obtained in midchannel in this area was 19 feet at MLLW. This limits the effective depth of the channel to 19 feet rather than 21 as shown on the chart. This area is well covered by the pipe drag accomplished at this time by the personnel of the PATTON and WESTDAHL. New shown as 19' on chart

TIDE REDUCERS:

An automatic portable gage was maintained at Anchor Point throughout the surveys in the Narrows. In this area it was noted that the water raised or lowered as much as 5 feet in one hour. It was not feasible to install the gage where it would get all the minus tides without making a crib off shore. A secondary staff was installed on a single driven pipe, about 200 feet outside the main staff, and the relation between the two staffs determined. A tide observer read the auxiliary staff at any time when work was being done and the water level was below the main staff. 30

Some of the reducers from the hydrography and drag strips were determined by taking the highs and lows from the marigram and interpolating between them. The crossing of lines and the comparison with depths of pipe drag and hydrography will no doubt be closer in agreement when all reducers are taken directly from the marigrams for the smooth sheets. ✓

Respectfully submitted,

Curtis Le Fever,  
H. & G. Engr.

Approved and Forwarded:

Charles Pierce,  
Chief of Party,  
Comdg., WESDAHL

H6825

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H6825

Records accompanying survey:

Boat sheets ...<sup>1</sup>; sounding vols.<sup>2</sup>.....; wire drag vols.<sup>0</sup>.....;
bomb vols. <sup>0</sup>.....; graphic recorder rolls <sup>3 1/2</sup>.....;
special reports, etc. ...<sup>No</sup>.....

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

Number of positions on sheet 581
Number of positions checked 14
Number of positions revised 7
Number of soundings recorded 3496
Number of soundings revised (refers to depth only) 0
Number of soundings erroneously spaced 0
Number of signals erroneously plotted or transferred 0
Topographic details Time 0
Junctions Time 0
Verification of soundings from graphic record Time 0

Verification by R.H. Carstens Total time 43.4r Date March 6, 1944

Review by R.H. Carstens Time .9... Date March 15, 1944

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Remarks

Decisions

|    | Remarks                | Decisions       |
|----|------------------------|-----------------|
| 1  |                        |                 |
| 2  |                        | 565 325 U.S.A.B |
| 3  |                        | "               |
| 4  |                        |                 |
| 5  |                        |                 |
| 6  |                        |                 |
| 7  |                        |                 |
| 8  |                        |                 |
| 9  |                        |                 |
| 10 | Location of tide staff | 565325          |
| 11 |                        |                 |
| 12 |                        |                 |
| 13 |                        |                 |
| 14 |                        |                 |
| 15 |                        |                 |
| 16 |                        |                 |
| 17 |                        |                 |
| 18 |                        |                 |
| 19 |                        |                 |
| 20 |                        |                 |
| 21 |                        |                 |
| 22 |                        |                 |
| 23 |                        |                 |
| 24 |                        |                 |
| 25 |                        |                 |
| 26 |                        |                 |
| 27 |                        |                 |

GEOGRAPHIC NAMES  
 Survey No. **H6825**

| Name on Survey          | Source |   |   |   |   |   |   |   |   |  |    |
|-------------------------|--------|---|---|---|---|---|---|---|---|--|----|
|                         | A      | B | C | D | E | F | G | H | K |  |    |
| <u>S.E. Alaska</u>      |        |   |   |   |   |   |   |   |   |  | 1  |
| <u>Wrangell Narrows</u> |        |   |   |   |   |   |   |   |   |  | 2  |
| <u>Danger Point</u>     |        |   |   |   |   |   |   |   |   |  | 3  |
|                         |        |   |   |   |   |   |   |   |   |  | 4  |
|                         |        |   |   |   |   |   |   |   |   |  | 5  |
|                         |        |   |   |   |   |   |   |   |   |  | 6  |
|                         |        |   |   |   |   |   |   |   |   |  | 7  |
|                         |        |   |   |   |   |   |   |   |   |  | 8  |
|                         |        |   |   |   |   |   |   |   |   |  | 9  |
| <u>Anchor Point</u>     |        |   |   |   |   |   |   |   |   |  | 10 |
|                         |        |   |   |   |   |   |   |   |   |  | 11 |
|                         |        |   |   |   |   |   |   |   |   |  | 12 |
|                         |        |   |   |   |   |   |   |   |   |  | 13 |
|                         |        |   |   |   |   |   |   |   |   |  | 14 |
|                         |        |   |   |   |   |   |   |   |   |  | 15 |
|                         |        |   |   |   |   |   |   |   |   |  | 16 |
|                         |        |   |   |   |   |   |   |   |   |  | 17 |
|                         |        |   |   |   |   |   |   |   |   |  | 18 |
|                         |        |   |   |   |   |   |   |   |   |  | 19 |
|                         |        |   |   |   |   |   |   |   |   |  | 20 |
|                         |        |   |   |   |   |   |   |   |   |  | 21 |
|                         |        |   |   |   |   |   |   |   |   |  | 22 |
|                         |        |   |   |   |   |   |   |   |   |  | 23 |
|                         |        |   |   |   |   |   |   |   |   |  | 24 |
|                         |        |   |   |   |   |   |   |   |   |  | 25 |
|                         |        |   |   |   |   |   |   |   |   |  | 26 |
|                         |        |   |   |   |   |   |   |   |   |  | 27 |

Names underlined in red approved  
 by L. Heck on 3/24/64

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

No. H **H6825**  
No. T

received June 8, 1943  
registered JUN 22 1943  
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  | Pa 2 | CKG     |                     |
| 40    |      |         |                     |
| 62    |      |         |                     |
| 63    |      |         |                     |
| 82    |      |         |                     |
| ✓ 83  | Pa 1 | RBC     |                     |
| 88    |      |         |                     |
| 90    |      |         |                     |
|       |      |         |                     |
|       |      |         |                     |

RETURN TO

|    |          |
|----|----------|
| 82 | R.W.Knox |
|----|----------|



EOC  
HRC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

June 17, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6825

Locality Wrangell Narrows, S.E. Alaska

Chief of Party: Charles Pierce in 1943  
Plane of reference is mean lower low water reading  
0.9 ft. on tide staff at Anchor Point  
15.7 ft. below B. M. 1

Height of mean high water above plane of reference is 15.0 feet.

Condition of records satisfactory except as noted below:

*B. K. Green*

Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6825

Field No. 2M-243

S. E. Alaska; Wrangell Narrows, Off Danger Point  
Surveyed April - May 1943; Scale 1:2,000  
Instructions dated September 12, 1942 and February 13, 1943

Soundings:

Control:

Hand lead  
808 Fathometer

Three-point fix on shore signals

Chief of Party - Charles Pierce  
Surveyed by - Curtis LeFever  
Protracted by - Curtis LeFever, R. J. Christman  
Soundings plotted by - Curtis LeFever, R. J. Christman  
Verified and inked by - R. H. Carstens  
Reviewed by - R. H. Carstens  
Inspected by - H. R. Edmonston, March 25, 1944

1. Shoreline and Signals

There are no contemporary topographic surveys of this area. Signals originate with triangulation of 1929-43.

2. Sounding Line Crossings

Satisfactory.

3. Submarine Relief

No outstanding features of submarine relief were revealed by the present survey.

The usual depth curves were satisfactorily drawn.

4. Junctions with Contemporary Surveys

There are no contemporary adjoining surveys.

5. Comparison with Prior Surveys

a. H-1525b (1881) 1:25,550  
H-1616 (1884) 1:20,000  
H-1737 (1886) 1:30,000

These early reconnaissance surveys contain only a few channel depths and are in general agreement with the present survey. They should be superseded by the present survey within the common area.

- b. H-2270 (1896) 1:5,000  
H-3212 (1910) 1:5,000  
H-3213 (1910) 1:5,000

Channel depths have been increased as much as 10 feet, by dredging, since these earlier surveys were accomplished. The present survey should supersede these prior surveys within the common area.

- c. H-4960 (1929) 1:5,000  
H-5004 (1929) 1:5,000

Agreement with these prior surveys is fairly good, being in general within 1 - 3 feet. The present survey reveals all the necessary hydrographic information and is adequate to supersede these prior surveys within the common area.

6. Comparison with Chart 8170 (latest print date 7-2-43)

a. Hydrography

Only the controlling depth taken from the present survey is charted.

b. Aids to Navigation

The present survey position of buoy 20 in Lat.  $56^{\circ}39'30''$ , Long.  $132^{\circ}55'33''$  is about 55 meters northwest of its charted position. It still satisfactorily marks the channel. The present survey positions of the other aids to navigation are in satisfactory agreement with the charted positions and adequately mark the features intended, except that buoy 20-B in Lat.  $56^{\circ}39'52''$ , Long.  $132^{\circ}55'40''$  should be moved about 50 feet west of its charted position in order to provide a channel depth of 19 feet.

The charted position of the beacon in Lat.  $56^{\circ}40'00''$ , Long.  $132^{\circ}55'50''$  is noticeably different on the two sections of the chart.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory.

9. Additional Field Work Recommended

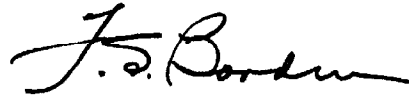
None. No indication was found of dangerous shoaling within the channel.

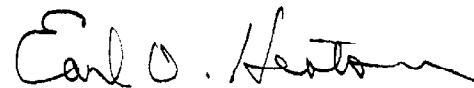
10. Superseded Surveys


|         |        |         |            |        |                 |   |   |   |   |
|---------|--------|---------|------------|--------|-----------------|---|---|---|---|
| H-1525b | (1881) | in part |            |        |                 |   |   |   |   |
| H-1616  | (1884) | " "     |            |        |                 |   |   |   |   |
| H-1737  | (1886) | " "     |            |        |                 |   |   |   |   |
| H-2270  | (1894) | " "     |            |        |                 |   |   |   |   |
| H-3212  | (1910) | " "     |            |        |                 |   |   |   |   |
| H-3213  | (1910) | " "     |            |        |                 |   |   |   |   |
| H-4960  | (1929) | in part | except for | bottom | characteristics |   |   |   |   |
| H-5004  | (1929) | " "     | "          | "      | "               | " | " | " | " |

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of  
Coastal Surveys

Applied to chart 8170

J. M. A. July 29, 1944