

6273

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES  
APR 12 1938  
Acc. No. \_\_\_\_\_

Form 504  
Rev. April 1935  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

*Topographic* }  
*Hydrographic* } Sheet No. 2037

---

State ~~ALASKA~~ S.E. Alaska

LOCALITY

~~SOUTHEAST ALASKA~~

STEPHENS PASSAGE

~~COULD ISLAND~~

Outer Point to Young Bay

1937

CHIEF OF PARTY

H. Arnold Karo

U. S. GOVERNMENT PRINTING OFFICE

68

6273

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 2037

REGISTER NO. H6273

State SOUTHEAST ALASKA

General locality STEPHENS PASSAGE

Locality ~~SOUL ISLAND~~ Outer Point to Young Bay

Scale 1 : 20 000 Date of survey Aug. Sept., 1937

Vessel M. V. Westdahl

Chief of Party H. Arnold Karo

Surveyed by D. H. Konichek

Protracted by D. H. Konichek

Soundings penciled by D. H. Konichek

Soundings in fathoms ~~feet~~

Plane of reference MLLW

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

Inked by Leonard A. McGann

Verified by Leonard A. McGann

Instructions dated May 24, 1937

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT TO ACCOMPANY SHEET 2037

STEPHENS PASSAGE - SCULL ISLAND

ALASKA

(a) Date of Instructions:

Work was done under instructions dated May 24, 1937, Project HT 216.

(b) Survey Methods:

Standard methods of obtaining depths and positions were used. Hand lead sounding was done with a 12 pound lead. The work close inshore, and such other sounding as could be handled by that method was done from the catamaran. The Westdahl did some hand lead work on the inshore lines, and the remainder of the soundings were gotten with the wire sounding machine using a 25 pound lead, and with the fathometer. The ends of steep sided reefs were located by sextant fixes or by distances and bearings noted in the record while doing hydrography.

Great difficulty was experienced in obtaining satisfactory soundings with the fathometer, but it is thought that those retained, and not rejected in the record, are dependable. For a further discussion on the fathometer soundings refer to the report on Fathometer Corrections, 1937, Project 213, Taku Inlet, Project 216, Stephens Passage, M. V. Westdahl.

The inshore depth curves were put on the boat sheets only so far as was possible without transferring depths from one boat sheet to another. Economical execution of the work demanded that three boat sheets be used.

(c) Discrepancies:

There are no discrepancies. The bottom was found to be very irregular, especially at the north end of the area covered by this sheet.

Steep slopes were encountered where very little lateral displacement would change the depth a great deal. There are a few places on the sheet where soundings close together vary by two or three fathoms, but these spots are in deep water, and the apparent differences are undoubtedly due to the uneven character of the bottom or the steep slopes. At position 3c day, catamaran sounding, the position plots slightly above the H. W. line. The location was retained because the shore line was taken from a bromide and distortion may have accounted for the difference.

*Shoreline & soundings satisfactorily adjusted. L.S.S.*

(d) Dangers:

Scull Island naturally presents a danger to navigators who are intending to enter Young Bay. North and south bound traffic should be well clear of this island. A ~~2 1/2~~ fathoms depth was found 230 meters south of triangulation station Scull<sub>2</sub> 1917. Navigators should beware of the island and the reef, especially at night.

The south end of Young Bay presents a good anchorage for large craft, with good holding bottom at a depth of about 22 fathoms. The water shoals very rapidly from a depth of about 13 fathoms at the head of the bay, and ships intending to anchor should be careful not to overrun into the shoal water. They should also check the depth to assure of enough swinging room when anchoring in less than 20 fathoms.

Middle Point lighted buoy <sup>420m</sup> ~~42~~ off of triangulation station DEER 1917 marks the extremity of shoal water at this point, and, of course, all traffic should pass to seaward of this buoy.

There is a reef, bare 9 feet at M.L.L.W., at latitude 58°17.'6 ✓ longitude 134°40.'9 ✓ which has a 9 1/2 fathoms depth about 75 meters

25

25

to the westward. Ships following the beach close in must be careful to pass this danger to seaward. Small craft often follow the shore line in this area when the weather is foggy. The reef just mentioned presents a special danger to them. The same applies to the offlying rock at  $58^{\circ}16.'8$  latitude,  $134^{\circ}40.'4$  longitude, on the old datum, shown on topographic sheet 3681, but not found in 1937. Refer to section (g) of this report.

*shown in red on present survey.*

Refer Landmarks for Charts, dated October 15, 1937.

Refer to Coast Pilot Notes letter dated December 6, 1937

(e) Channels:

There are no particular channels.

(f) Anchorages:

Refer to section (d) of this report.

Young Bay furnishes good protection from a southerly or westerly wind, but is open to a northerly or easterly one. There are no shoals to break the seas when the wind is from the north or east, and the anchorage is not recommended when these winds prevail.

(g) Comparison With Previous Surveys:

The rock shown on topographic sheet 3681 at latitude  $58^{\circ}16.'8$ , longitude  $134^{\circ}40.'4$ , on the old datum, was not found. A  $4 \frac{1}{6}$  fathom spot was found on the new work at this point. The rock undoubtedly exists as shown on sheet 3681, but the time was not available before it was necessary to close the field season for further development to be done in this area in 1937.

The reef at latitude  $58^{\circ}17.'6$ , longitude  $134^{\circ}40.'9$  agrees in position on topographic sheet 3681 and sheet ~~2087~~ *A-6273(1937)*

The depths found in 1937 agree with the descriptions noted in the appendix to the Descriptive Report No. 3987, January 19, 1918

*For effective depths of drag - see par. 8a & b of this report.*

-4-  
Name of the depths listed in this appendix fall within the limits of H-6273 (1937). L.S.S.

wire drag work, as well as the appendix to the Descriptive Report No. 3986, wire drag work, with the following exception; refer Directors letter January 7, 1938, Coast Pilot Notes Reference 25 - AB 360 and reply.

All depths are in agreement when differences in datum are accounted for.  
L.S.S.

The hydrographic survey of the area executed in 1890, scale 1:40,000, sheet 2055, conforms in general to the 1937 work. There are areas where the depths of water vary by a few fathoms, where the 1890 soundings are transferred to the 1937 sheet, but no great differences were discovered. The lack of detail on the 1890 sheet prevents any further comparison being made.

(i) Geographic Names:

No new names were used in the area. All names are shown on topographic sheet BB - 1937.

(j) Statistics:

Statistics for sheet, field No. 2037.

2001 Positions

5964 Soundings

3264 Hand lead

833 Fathometer

1867 Wire

376.4 Statute miles of sounding line.

18.5 Square statute miles area.

Respectfully submitted,

D. H. Konichek, Aid.

Approved and forwarded,

H. Arnold Karo, H. and G. E.,  
Chief of Party.

400

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 28, 1938.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis.

Tide Reducers are approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6273

Locality Outer Point to Young Bay, Stephens Passage, S. E. Alaska.

Chief of Party: H. Arnold Karo in 1937.

Plane of reference is mean lower low water reading

-0.9 ft. on tide staff at Auke Bay off limit of H-6273  
19.6 ft. below B.M. 1

Height of mean high water above plane of reference is 15.6 feet.

Condition of records satisfactory except as noted below:

*P. Schureman*

Acting Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. H-6273

On Chart  
No. **8235**

On previous survey  
No. **T-2017**

On U. S. quadrangle  
Maps

From local  
information

On local Maps

**Baker**  
**P.O. Guide or Map**  
**Dict.**

Rand McNally Atlas

U. S. Light List

Name on Survey

A

B

C

D

E

F

G

H

K

**USCP**

<u>Douglas Island</u>	✓									1
<u>Stephens Passage</u>	✓									2
<u>Outer Point</u>	✓	✓	✓			✓				3
<u>Middle Point</u>	✓		✓					✓	✓	4
<u>Point Hilda</u>	✓	✓	✓			✓				5
<u>Admiralty Island</u>	✓									6
<u>Young Bay</u>	✓									7
<u>Scull Island</u>	✓									8
<u>Inner Point</u>	✓		✓						✓	9
Mansfield Peninsula										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
Names underlined in red approved										26
by <i>JHE</i> on <i>5/9/38</i>										27



Remarks

Decisions

1		see T-6518
2	For Title Only	see H-6269
3		
4	Several duplications in Alaska (see Baker)	
5		
6		see H-6268
7		see H-6268
8		USGB decision
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6273** .....

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

Number of positions on sheet	<b>200!</b>
Number of positions checked	<b>81</b>
Number of positions revised	<b>33</b>
Number of soundings recorded	<b>516.4</b>
Number of soundings revised	<b>5</b>
Number of signals erroneously plotted or transferred	<b>—</b>

Date: *October 18, 1938.*

Verification by *Lennard A. McSann*

Time: *69 hours.*

Review by *Leo Braun*

Time: *33½ hr.*

HYDROGRAPHIC SURVEY NO. H-6273

Smooth Sheet Yes

Boat Sheet Yes (3)

Records; Sounding 7 Vols., Wire Drag      Vols., Bomb      Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) None

Statistics None Page 3 of DR.

Approved by Chief of Party None yes Page 4. DR.

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service None  
(Circular Nov.30, 1933)

Hydrography: Total Days 18 ; Last Date Oct. 1, 1937

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H-6273  
~~No. 11~~

received April 12, 1938  
 registered April 22, 1938  
 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	✓	JBR	Pages 2, 3 and 4
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

*JBR*

Verifiers Report on H-6273(1937).

The soundings records conform to the requirements of the Hydrographic Manual Instructions.

The signals (topographic) shown on H 6273(1937) originate with graphic Control survey T-6592(1937) topographic surveys T-6591(1937) and T-6593(1937).

The shoreline of H 6273(1937) was transferred from T-3682(1917), T-3848(1921) and from T-6592(1937) (graphic control). T-3681(1917)

No boat sheet is available for a small portion of the work of this survey, at latitude  $58^{\circ} 12.5$ , longitude  $134^{\circ} 29.5$ . to lat  $58^{\circ} 12.5$  long.  $134^{\circ} 31.2$ .

Two sections of lines were incorrectly plotted one on "f" day (blue) between positions 47-65. <sup>REV.</sup> latitude of pos. 47,  $58^{\circ} 16.4$ , long.  $134^{\circ} 39.3$ . The other line is between 1 to 4 "c" (blue) lat. of "1c"  $58^{\circ} 10.4$ ;  $134^{\circ} 36.5$ . <sub>3 SWINGER FIXES.</sub>

The agreement of soundings at cross lines is satisfactory. ~~At lat.  $58^{\circ} 16.3$ , long  $134^{\circ} 42.2$  there is a 3 fathom discrepancy, 41 fathoms on K day as opposed to 38 fathoms on A day. (red).~~

The junctions with H 6268(1937) and H 6269(1937) are completed and in agreement with H 6273.

Leonard A. McGowan  
October 18, 1938.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6273 (1937) FIELD NO. 2037

Outer Point to Young Bay, Stephens Passage, Southeast Alaska  
Surveyed in August - September 1937, Scale 1:20,000  
Instructions dated May 24, 1937 (WESTDAHL)

Hand Lead and Machine Soundings.  
Fathometer Soundings.

3 Point fixes on shore signals.

Chief of Party - H. A. Karo.  
Surveyed by - D. H. Konichek.  
Protracted by - D. H. Konichek.  
Soundings plotted by - D. H. Konichek.  
Verified and inked by - L. A. McGann.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

The Descriptive Report is clear and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

3. Shoreline and Signals.

a. The shoreline was transferred by the field party from bromides of T-3681 (1917), T-3682 (1917), and T-3848 (1921). The shoreline of Scull Island and short sections of the main shoreline including the piling off Middle Point are from Graphic Control Survey T-6592 (1937). The shoreline from triangulation stations "Young Bay East Base 1917" to "Ray 1937" which had been transferred incorrectly in the field, due to distortion of the bromide, was corrected to agree with Topographic survey T-3848 (1921). This correction eliminated the conflict with the hydrographic work mentioned under "discrepancies", page 3 of the Descriptive Report.

b. The signals are from T-6592 (1937) Graphic Control, T-6593 (1937) and T-6591 (1937). Hydrographic signal ANY is located by cuts recorded in Vol. 4 of H-6269 (1937).

4. Sounding Line Crossings.

The agreement of sounding line crossings is satisfactory.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Surveys.

The junction with contemporary survey H-6269 (1937) on the northwest is satisfactory.

The eastern limit of the present survey is the eastern extent of the present project. No difficulty will be experienced in effecting a junction with the charted hydrography originating with H-2055 (1890).

Junctions with contemporary surveys to the north will be considered in the reviews of those surveys.

7. Comparison with Prior Surveys.

a. H-1602a (1884) Scale 1:40,000.

This is a reconnaissance survey which contains no hydrography within the limits of the present survey. The drawing of the shoreline is generalized to the extent that no adequate comparison can be made with the present survey. Within the common area with the present survey, H-1602a (1884) should be disregarded in future charting.

b. H-2055 (1890) Scale 1:40,000 and H-2056 (1890), Scale 1:40,000.

Parts of these surveys combined cover the area of the present survey. There are some differences in the location of topographic detail, but there are no reefs or rocks on the old survey which are not shown in greater detail and more accurately on the present survey.

There are numerous differences in depth from one to two fathoms throughout the common area of the old and new surveys. These discrepancies are undoubtedly due to irregular bottom, some displacement of lines as well as errors in sounding on the old surveys.

The present survey adequately covers the area, and within the common combined area of H-2055 (1890) and H-2056 (1890) should supersede the old surveys for charting purposes.

8. Comparison with Wire Drag Surveys.

a. H-3986 (1917) Wire Drag, Scale 1:20,000.

This survey extends northward from triangulation stations BIB (1890) and EAGLE (1917) past the limits of the present survey. The effective depths shown thereon do not conflict with the depths obtained by the present survey. However, in lat.  $58^{\circ} 16.8'$ , long.  $134^{\circ} 42.04'$ , an effective depth of 87 feet is shown on this survey, which indicates that the drag passed over the 13 fathom (78 foot) sounding from H-3987 (1917) Wire Drag survey. The development on the

present work shows this to be an isolated 20 fathom shoal and the least depth of 13 fathoms as well as the 16 fathom sounding is carried forward from H-3987 (1917) Wire Drag and shown in red on the present survey.

b. H-3987 (1917) Wire Drag, Scale 1:20,000.

This survey covers about 60 percent of the present survey. The effective drag depths shown are not in conflict with the present survey depths, except as mentioned in paragraph "a" above and in lat.  $58^{\circ} 16.45'$ , long.  $134^{\circ} 40.05'$  where an effective depth of 52 feet is shown over an 8-1/4 fathom (50 foot) sounding. All supplementary soundings from H-3987 (1917) W.D. are in good agreement with the present work, and where possible to show soundings from the Wire Drag survey without congestion, they have been added to the present survey in red.

c. H-4147 (1920-21) Wire Drag, Scale 1:40,000.

A small portion of this survey extends into the area of the present survey at Point Hilda. No conflict exists between the effective drag depths and the depths found on the present survey. The 17 fathom sounding (charted) in lat.  $58^{\circ} 12.5'$ , long.  $134^{\circ} 31.1'$  falls in depths of 34 fathoms on the present survey. This sounding is shown in green with the appropriate note on H-6273 (1937).

9. Comparison with Chart 8235 (New Print dated Aug. 3, 1937).  
and Chart 8302 (New Print dated Sept. 22, 1938).

a. Hydrography.

The rock awash (charted) from T-3681 (1917) in lat.  $58^{\circ} 17.6'$ , long.  $134^{\circ} 40.9'$ , agrees with the position of a reef bare 9 feet M.L.L.W. on the present survey.

The two sunken rocks in lat.  $58^{\circ} 16.9'$ , long.  $134^{\circ} 40.35'$  originate with T-3681 (1917). The soundings on the present survey indicate that the sunken rock close inshore is part of the submerged rocky ledge running parallel with the shore.

The offshore sunken rock was not found by the present survey party (Par. "g" of the Descriptive Report). In accordance with the recommendation of the field party it has been carried forward in red from T-3681 (1917) to the present survey.

All other charted information originates with surveys discussed in paragraphs 7 and 8 of this review and no further consideration is necessary.



b. Aids to Navigation.

The lighted buoy (authority - Graphic Control Survey T-6592 (1937) shown on the present survey about 400 meters SW x W of Middle Point is in substantial agreement with the charted position.

10. Field Plotting.

The field protracting and plotting are satisfactory, but more than the average number of positions were revised by the verifier.

11. Additional Field Work Recommended.

This survey is complete and no additional field work is required.

12. Superseded Prior Surveys.

The present survey, with the indicated additions from previous surveys, supersedes the following surveys:

H-1602a (1884) in part  
H-2055 (1890) in part  
H-2056 (1890) in part.

13. Reviewed by - Leo S. Straw, Nov. 1, 1938.

Inspected by - E. P. Ellis.

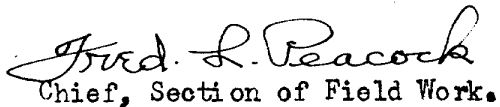
Examined and approved:



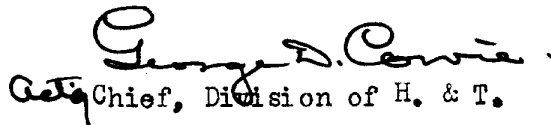
T. B. Reed,  
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Actg Chief, Division of H. & T.

Applied to chart 8235 F.M.A. Nov. 26, 1938. (Review in pencil and  
inspected & approved.)  
" " " 8302 J.S.L., July, 31 1938  
Applied to Reconstruction of Chart 8235 270-60 by C.R.B. Jr.