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

DESCRIPTIVE REPORT

Topographic } Sheet No. 1437
Hydrographic }

State S.E. ALASKA

LOCALITY

~~SOUTHEAST ALASKA~~

STEPHENS PASSAGE

HORSE AND COLT ISLANDS

1937

CHIEF OF PARTY

H. ARNOLD KARO

U. S. GOVERNMENT PRINTING OFFICE

7, 3, 48

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 1437

REGISTER NO. **HC269**

State ~~ALASKA~~ SOUTHERST ALASKA

General locality ~~SOUTHEAST ALASKA~~ STEPHENS PASSAGE

Locality ~~STEPHENS PASSAGE~~ HORSE AND COLT ISLANDS

Scale 1:10,000 Date of survey AUGUST - SEPTEMBER 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 ~~1000~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by _____

Inked by Leonard A. McGann

Verified by Leonard A. McGann

Instructions dated MAY 24, _____, 19 37

Remarks: _____

DESCRIPTIVE REPORT TO ACCOMPANY SHEET 1437 H-6269(1937)
STEPHENS PASSAGE
HORSE AND COLT ISLANDS
SOUTHEAST 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 with a 12 pound lead was done with the catamaran into such depths and areas that sounding from the Westdahl became more practical, and then the sheet was finished from the Westdahl. A 12 pound lead was used when hand leading from the Westdahl, and a 25 pound lead was used with the sounding machine.

(c) Discrepancies:

There are a few cases, where lines cross, when depths at a given place vary as much as one fathom. These differences occur on irregular bottom or steep slopes, where very little lateral movement in the position of the soundings could easily introduce such differences. None of the discrepancies are serious.

When lines were run over the edge of steep rock ledges with the catamaran it was found that the spacing of soundings by time between positions did not always conform exactly to locations of the edge of the ledge obtained by topography and sextant angles. This apparent discrepancy is due to the fact that the catamaran could not always be run at a constant speed over the ground. A very slight adjustment of the soundings between positions sufficed to make all the data conform.

(d) Dangers:

The shoals between the south end of Horse Island and triangulation station LION 1937 make this place unadvisable for an anchorage except for those having very special local information. There is a narrow channel with a least depth of $3\frac{1}{2}$ fathoms into the anchorage, but the fact that there are no beacons or ranges, and that current velocities are rather high, makes entering the cove from the south hazardous, even at low water.

Anyone entering the anchorage from the north must be careful to avoid the shoal at Latitude $58^{\circ} 17.'1$, Longitude $134^{\circ} 44.'3$, and then must beware of the other shoals and rocks shown on the sheet. A channel with a least depth of $4 \frac{2}{6}$ fathoms exists, but is very narrow west of hydrographic station "THREE", and local knowledge should be had before attempting to use it.

The off-lying shoals east of Horse Island, (Horse Island Shoals), of course present a great danger to navigation. There is not much that can be said concerning this hazard except that traffic through Stephens Passage lay courses so as to give the area a wide berth.

Refer Landmarks for Charts, dated October 15, 1937.

Refer Coast Pilot Notes letter dated December 6, 1937.

(e) Channels:

No particular channels except those mentioned under section(d).

(f) Anchorages:

The anchorage to the south of Horse Island gives good holding bottom and protection from all directions except the east. A strong easterly wind might raise a chop or slight swell, but heavy seas are broken by the shoals at the entrance. Swinging room is available to boats of moderate size. Temporary anchor-

age may be had to the west of Golt Island, but the water, in areas where there is good swinging room, is a little deep for anchoring small craft. This north anchorage is open to a north wind, and there are no shoals or shallows to break the swells.

See section (d).

(g) Comparison With Previous Surveys:

The latest hydrographic survey of the area shown on sheet 2055 - 1890 scale 1:40,000 is inadequate for comparison purposes.

The topography shown on sheet 3681 - 1917 scale 1:20,000 of this area compares with the features located by the hydrographer as follows: The general delineation of the reef and low water lines conform, but of course the great pains with which the work was done, the use of a 1:10,000 scale, and the combined information obtained by both the hydrographer and topographer make the 1937 work more accurate and more detailed. The rock shown on the 1917 topo sheet at Latitude $58^{\circ} 16.'5$ Longitude $134^{\circ} 43.'4$ is actually a low reef, the top of which was evidently located

in 1917. The rock at Latitude $58^{\circ} 16.'1$ Longitude $134^{\circ} 43.'1$ on the 1917 work was found and its position verified. The two

rocks spotted on the 1917 work at Latitude $58^{\circ} 15.'8$ Longitude $134^{\circ} 43.'5$ were not found as shown, but are no doubt a part of the rocky ledge indicated on the 1937 hydrographic sheet about 100 meters south of the 1917 location. The rock spotted on the 1917 topo at Latitude $58^{\circ} 15.'1$ Longitude $134^{\circ} 43.'1$ was apparently one of two rocks which were found and located by sextant angles on the 1937 sheet. The fact that the rock was originally spotted on a 1:20,000 scale would explain why the position does

The authority for the reef, of which this rock is the northern end, originates with Vol. 4, page 17 - #6269

25

✓

✓

not check exactly with either of the two rocks discovered.

The 1917 topography does not show the area ~~here at low water~~ between triangulation stations GROUSE 1917 and MARE 1937.

The reef and rock mentioned in the coast pilot notes were found. Any additional information needed can be taken from the smooth sheet.

The 2 1/2 fathom spot at Latitude 58° 14.'7 Longitude 134° 43.'0 shown on chart 8235 was not found. Chart 8235 needs to be completely revised in the vicinity of the south entrance to the cove south of Horse Island.

(i) Geographic Names: ✓ GHE

All geographic names in the area were obtained by the topographer, and are shown on topographic sheet CC-1937. (7-6593)

(j) Statistics:

Statistics for sheet, field no. 1437

1558 Positions

4997 Soundings

4408 Hand Lead

589 Wire

148.5 Statute miles of sounding line.

5.3 Square statute miles area.

[Handwritten Signature]
D. H. Konichek,
Aid.

Approved and forwarded

[Handwritten Signature]
H. Arnold Karo,
H. & G. E., Chief of Party.

Records examined and approved
[Handwritten Signature]

25
25
W

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6269**

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

Number of positions on sheet	.1558
Number of positions checked	...88
Number of positions revised	...14
Number of soundings recorded	.4997
Number of soundings revised	...11..
Number of signals erroneously plotted or transferred

Date: **September 21, 1938**

Verification by **Leonard A. McIsaac** Time: **64 hours.**

Review by **Leo Abtrac** Oct. 17, 1938 Time: **27 1/2 hours.**

HYDROGRAPHIC SURVEY NO. H6269

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 4 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

Approved by Chief of Party ~~None~~ Page 4 of D.R.

Recoverable Station Cards (Form 524) None

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

Hydrography: Total Days 12 ; Last Date Sept. 24, 1937

Remarks _____

Verifier's Report on H-6269 (1937).

The records conform to the requirements of the ^v
Hydrographic Manual Instructions.

The ^{topographic} signals and topography of H 6289 (1937) ^v
originate with plane table survey T-6593 (1937).

The hydrographic signals were established from ^v
intersections taken with the sextant at sea.
The position of hydro signal B16L is somewhat
weak but is sufficiently accurate for its purpose.

An unusually large number of weak fixes and ^{Part. Rev.}
"scurvy" fixes were encountered during the verification.

There is one cross line which is in poor agreement ^v
with other lines at lat. $58^{\circ} 15.0$, long. $134^{\circ} 44.3$, ^{Part. 4.}
on line 89-90 d (blue). Vol. 2, p. 32. This can ^{Rev.}
not be ironed out unless wide variation is
made from the boat sheet. Or could the lead-
man have been in error?

Junctions. The junction with H-6273 (1937) ^v
on the east will be made as soon as the verification
of H 6273 is completed.

~~There are no contemporaneous surveys
on the north and south of H-6269.~~

Leonard G. McGinnis
September 21, 1938.

Remarks

Decisions

	Remarks	Decisions
1	<i>For Title only</i>	
2	<i>Not necessary to ink on this sheet,</i>	
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GEOGRAPHIC NAMES

Survey No. **H6269**

Name on Survey	<div style="display: flex; justify-content: space-between; font-size: small;"> On Chart No. 8235-8302 On previous survey No. T-2017 On U. S. quadrangle Maps From local information On local Maps <i>Bakers Dict. P. O. Guide or Map</i> Rand McNally Atlas U. S. Light List </div>										<div style="font-size: x-small; text-align: center;">U.S.C.P.</div>
	A	B	C	D	E	F	G	H	K		
<u>Stephens Passage</u>	✓		✓			✓					1
<u>Admiralty Island</u>	✓		✓			✓					2
<u>Colt Island</u>	✓	✓	✓			✓					3
<u>Horse Shoal</u>	✓	✓				✓			✓		4
<u>Horse Island</u>	✓	✓	✓			✓			✓		5
<u>Mansfield Peninsula</u>	✓		✓			✓			✓		6
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Names underlined in red approved											25
by <u>GAE</u> on <u>4/15/38</u>											26
											27

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H -6269

~~NO. 1~~

{ received April 4, 1938
 registered April 8, 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	✓		Pages 2, 3 & 4
26			
30			
40			
62			
63			
82			
83	✓		Page 4
88			
90			

RETURN TO

82	T. B. Reed
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TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

April 19, 1938.

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

Plane of reference
~~xxxxxxxxxxxx~~ approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 6269

Locality Horse and Colt Islands, 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
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:

Aty. Ham
Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6269 (1937) FIELD NO. 1437

Horse and Colt Islands, Stephens Passage, Southeast Alaska
Surveyed in August-September, 1937, Scale 1:10,000
Instructions dated May 24, 1937 (WESTDAHL)

Hand Lead and Machine 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. It is noted, however, that a considerable number of positions were located by weak fixes or swingers, although no special trouble was experienced in the verification.

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.

The shoreline and signals originate with T-6593 (1937). Hydrographic signals ANY and BILL originate from cuts recorded in Volume 4 of the sounding volumes of this survey.

4. Sounding Line Crossings.

No system of cross lines was run; however, such crossings as result from the work are satisfactory. A difference of about one fathom in lat. $58^{\circ} 15.04'$, long. $134^{\circ} 44.26'$ is noted. No reasonable adjustment can be made and the apparent discrepancy is probably due to irregular bottom.

5. Depth Curves.

The usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

The junction with H-6273 (1937) on the east and south will be considered in the review of that survey.

The junction with hydrographic work at the northwest corner of the present survey will be considered when received from the field.

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 and shows a sketchy shoreline of Colt Island and adjacent shores of Douglas Island and Mansfield Peninsula. 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. The most important discrepancies are discussed in paragraph "g" on page 3 of the Descriptive Report.

Two 13 fathom, two 15 fathom, and one 17 fathom soundings from H-2056 (1890) shown on chart No. 8235 in approximate lat. $58^{\circ} 16.9'$, long. $134^{\circ} 44.7'$ fall in depths of 25 and 30 fathoms on the present survey. An examination of the old records reveals that these soundings were obtained by hand lead. The positions of the old lines check the recorded angles, and in view of the depths obtained by the present survey, these old soundings are undoubtedly the result of a leadsman's error. There are numerous differences in depth from one to two fathoms throughout the common area of the old and new surveys. These are probably due to 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.

c. H-3986 (1917), Wire Drag, Scale 1:20,000, and H-3987 (1917), Wire Drag, Scale 1:20,000.

These wire drag surveys overlap small portions of the present survey on the north and east. They contain no information which is in conflict with the present work.

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

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and chart letter No. 191 (1936). The rocky ledge symbol on the chart at the south end of Horse Island should be revised to conform to the information on the present survey.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Required.

No additional field work is recommended.

11. Superseding Old Surveys.


Within the area covered, the present survey supersedes the following surveys for charting purposes:

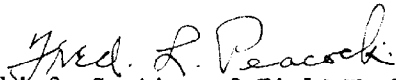
H-1602a (1884) in part
H-2055 (1890) in part
H-2056 (1890) in part


12. Reviewed by Leo S. Straw, October 17, 1938.


Inspected by E. P. Ellis.

Examined and approved:


Thos. B. Reed
Chief, Section of Field Records


Fred. L. Peacock
Chief, Section of Field Work


K.T. Adams
Chief, Division of Charts


G. H. Hude
Chief, Division of Hydrography
and Topography

Applied to chart 8235 J.M.A. Nov. 28, 1938 prior to signatures
" " " 8302 J.S.L. July 31, 1939

Applied to reconstruction of Chart 8235 Jan 18, 1940 Chas. R. Bush Jr.