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Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~XXXXXXXXXX~~ } Sheet No. H-6578
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

JUN 25 1941

Acc. No.

State Alaska

LOCALITY

Gulf of Alaska

Approaches to Cross Sound

1940

CHIEF OF PARTY

Ray L. Schoppe

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.

H6578

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. 4140

REGISTER NO. I-6578

State Alaska

General locality Gulf of Alaska

Locality Approaches to Cross Sound

Scale 1:40,000 Date of survey June & July, 1940

Vessel SURVEYOR

Chief of Party Ray L. Schoppe

Surveyed by R. W. Knox and G. A. Nelson

Protracted by W. M. Martin

Soundings penciled by W. M. Martin

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated Feb. 2, 1940, 19

Remarks: Projection and signals prepared by ship.
Plotting by Seattle Processing Office.

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet Register No. H-6578

(Field No. 4140)

USC & GSS SURVEYOR, R.L.Schoppe, Comdg.

Season of 1940

INSTRUCTIONS

This survey was made under the Director's instructions dated February 2, 1940, Paragraph 17 (b) and (c).

SURVEY METHODS

Standard; fathometer soundings; three-point visual fixes.

CONTROL

All signals but Sugarloaf Island Summit are triangulation stations. The Office informed the field party that no position of this station was available, although it is shown as a triangulation station on the photostat of the topo sheet*. It was transferred from the photostat. Transfer checked against T-4238 (1926)

Note:
Sugarloaf Island Summit originals with T-4238 (1926) it is shown thereon as a spot elevation locating the highest point of the island (715 feet).

* Probably confused with a sugar-loaf which is at the southern tip of the island and which, according to the Boat sheet and records, was not used. HES

TIDES

Sitka tides, furnished by the Office, were used reducing the soundings. The hourly heights are included herewith. (Not in this report)

Sugarloaf Island Summit is shown as a station on H-4648, (1926) but no position for it is available in the office.

Notes for descriptive report furnished without signature to Seattle Processing Office by Ship SURVEYOR.

ADDITIONAL NOTES BY SEATTLE PROCESSING OFFICE

DATUM

Datum differences from Southeast Alaska datum to North American 1927 datum were derived from stations CAD and GAFF and applied to stations CAPE SPENCER L.H. 1923 and EVE 1901.

		Meters	Diff. Meters	Corr. used-applied to SE Alaska
CAD (SE Alaska) (NA 1927)	58° 05'	105.7	+245.6	
		351.3		
(SE Alaska) (N.A. 1927)	136° 33'	641.7	-17.2	
		624.5		
GAFF (SE Alaska) (N.A. 1927)	58° 11'	860.1	+244.4	+245.0
		1104.5		
(SE Alaska) (N.A. 1927)	136° 25'	55.1	-21.6	-19.0
		33.5		

		Meters SE Alaska	Corr. Met.	Meters NA 1927	Meters NA 1927
CAPE <u>SPENCER</u> L.H. 1923	58° 11'	1547.1 ³	+245.0	1792.1 ³	1795.1
	136° 38'	331.7	-19.0	312.7	312.0
EVE 1901	58° 12'	1256.3	+245.0	1501.3	1503.6
	136° 35'	251.5	-19.0	232.5	230.8

Positions accepted as plotted; the error is negligible at the scale of this survey.
H.F.S.

Edgar E. Smith
Assoc. Cart. Engr.

Forwarded:

Geo. L. Bean

Geo. L. Bean
Officer in Charge
Seattle Processing Office.

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TIDE NOTE FOR HYDROGRAPHIC SHEET

July 1, 1941

Coastal Surveys

Division of ~~Hydrography and Topography~~

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

Plane of reference approved in
2 volumes of sounding records for


HYDROGRAPHIC SHEET 6578

Locality Approaches to Cross Sound, Alaska

Chief of Party: Ray L. Schoppe in 1940
Plane of reference is mean lower low water reading
5.0 ft. on tide staff at Sitka
15.5 ft. below B. M. 5

Height of mean high water above plane of reference is 9.1 feet

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Remarks

Decisions

	Remarks	Decisions
1		
2		580365
3	Location of tide staff.	
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GEOGRAPHIC NAMES
Survey No. **H6578**

Name on Survey											K	
	A,	B,	C,	D	E	F	G	H				
<u>Gulf of Alaska</u>												1
<u>Cross Sound</u>												2
<u>Sitka</u>												3
												4
												5
												6
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												27

Names underlined in red approved
by L. Heck on 8-22-41

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6578**

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

Number of positions on sheet	...439.
Number of positions checked	...6...
Number of positions revised	...None.
Number of soundings recorded	...2578.
Number of soundings revised	...None.
Number of soundings erroneously spaced	...9...
Number of signals erroneously plotted or transferred	...None.

Date: *Aug 12, 1941*

Verification by *A. R. STIRN*

Time: *24 hrs*

Review by *H. F. Stegman*
Aug. 20, 1941

Time: *10³/₄ hrs*

HYDROGRAPHIC SURVEY NO. H6578

Smooth Sheet One

Boat Sheet One

Records; Sounding 2 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics No

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service
(Circular Nov.30, 1933)

Hydrography: Total Days ; Last Date

Remarks

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H **H6578**
~~No. I~~

received June 25, 1941
 registered June 26, 1941
 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		
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63		
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83		
88		
90		

RETURN TO

82	T. B. Reed
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✓ JBR

Verified and Inked by A. R. STIRNI

Date Aug 12, 1941

1. The descriptive report was consulted and appropriate action taken. ✓
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓ *None*
3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓
4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓ *Pencil only*
5. All items effecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken. ✓
6. All positions verified instrumentally were check marked in the sounding records. ✓
7. All critical soundings are clear and legible. ✓
8. The metal protractor has been checked within the last three months. ✓
9. The protracting and plotting of all bad crossings were verified. ✓
10. All detached positions locating critical soundings, rocks or buoys were verified. ✓
11. The boat sheet was compared with the smooth sheet. ✓
12. The spacing of soundings as recorded in the records was closely followed. ✓
13. The bottom characteristics were shown on outstanding shoals. ✓ *Where necessary*
14. The reduction and plotting of doubtful soundings were checked. ✓

15. The transfer of contemporary topographic information was carefully examined. *None*
16. All junctions were transferred. ✓
17. The notation "JOINS H" was added for all contemporary adjoining or overlapping sheets now registered. ✓
18. The depth curves have been drawn to include the significant depths. ✓
19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party. ✓
20. Heights of rocks were checked against range of tide. *None*
21. Rocks transferred from topographic survey have a dotted curve where shown thereon. *None*
22. Unnecessary pencil notes have been removed. ✓
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet. ✓ *None*
24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934). *None*
25. Degree and minutes values and symbols have been checked. ✓
26. Source of shoreline and signals (When not given in report). ✓
27. Depth curves were satisfactory except as follows: ✓

28. Sounding line crossings were satisfactory except as follows:

29. Junctions with contemporary surveys were satisfactory except as follows: ✓

30. Condition of sounding records was satisfactory ~~except as follows:~~

31. The protracting was satisfactory ~~except as follows:~~

32. The field plotting of soundings was satisfactory ~~except as follows:~~

33. Notes to reviewer:

*Soundings from H-4648 (1926) were transferred
on 1927 NAD to agree with this sheet [H-6578 (1940)] ✓
Tracings of the overlapping soundings from H 4648 (1928)
were made and are included with this sheet [H-6578 (1940)] ✓*

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. H-6578 FIELD NO. 4140

Gulf of Alaska - Approaches to Cross Sound
Surveyed in June and July 1940, Scale 1:40,000
Instructions dated February 2, 1940 (SURVEYOR)

Soundings: Dorsey
Fathometer

Control: Sextant Fixes on
Shore Signals

Chief of Party - R. L. Schoppe
Surveyed by - R. W. Knox, G. A. Nelson
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - A. R. Stirni
Reviewed by - H. F. Stegman, August 19, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

- (a) This is an offshore survey and no shoreline is shown.
- (b) The origin of the signals used as control is noted in the Descriptive Report, pages 1 and 2.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Surveys

- (a) The present survey consists of the examination of two areas within the limits of H-4648 (1926), scale 1:100,000, as follows:

- 1. A development about 10 sq. mi. in area, with sounding line spacing of 100 to 150 meters, in the vicinity of a shoal on H-4648 with least depth of 56 fathoms in Lat. 58° 16.3',

Long. $137^{\circ} 02.8'$. The purpose of this examination was to determine whether this shoal was the correct position of the 42-fathom sounding reported by the Lighthouse Tender CEDAR in 1921 about 4 miles southwest (Chart Letter 87, 1921).

As delineated on the present survey this feature is a long flat shoal running in a N.E. - S.W. direction and about $1/2$ mile wide at its N.E. extremity where several 56-fathom soundings were obtained, substantiating the 56-fm. depth of H-4648. Depths on this feature are 56 to 59 fms. with a gradual deepening to the southwestward and comparatively steep slopes to depths of 80 to 100 fathoms on the north, east, and southeast.

Since there is no indication of irregular or lumpy bottom on this shoal, it is considered that the present survey has adequately disproved the existence of the 42-fm. depth in the area of this investigation.

- (2) Examination of an area of about 7 sq. mi. in the vicinity of two 38-fm. soundings on H-4648 in Lat. $58^{\circ} 07.4'$, Long. $136^{\circ} 43.7'$. This area of irregular bottom was adequately developed with sounding line spacing of 60 to 150 meters. The 38-fm. soundings of H-4648 were substantiated and, in addition, two shoals were located with least depths of 34 fms. in Lat. $58^{\circ} 07.5'$, Long. $136^{\circ} 43.5'$ and 35 fms. in Lat. $58^{\circ} 07.9'$, Long. $136^{\circ} 42.5'$.

- (b) Agreement of the soundings of H-4648 with those of the present survey is very good. However, the common areas are more closely and accurately developed on H-6578 (1940) and it should, therefore, supersede the earlier survey, H-4648. Bottom characteristics shall be retained where necessary.

5. Comparison with Prior Surveys

- a. H-4004 (1917) scale 1:200,000

This small scale survey contains a few soundings

within each of the areas of the present survey. The agreement of depths is within two to four fathoms which is believed to be satisfactory in view of the differences in time of the surveys, scale, method of sounding, and irregularity of the bottom. The only necessary comment is concerning the 57-fathom shoal on H-4004 in Lat. $58^{\circ} 16.4'$, Long. $137^{\circ} 04.4'$ which falls in depths of 58 to 60 fathoms on the present survey. For the reasons mentioned above this sounding has not been carried forward. The present survey supersedes H-4004.

b. Comparison with Wire Drag Surveys

H-4318 (1923) W.D., scale 1:40,000

A portion of the area of the present survey, in the vicinity of Lat. $58^{\circ} 08'$, Long. $136^{\circ} 42'$, was covered with an effective depth of 85 feet. No soundings or groundings were obtained.

6. Comparison with Chart 8002 (Latest print dated 1- 8-41)

Chart 8202	("	"	"	4-25-40)
Chart 8304	("	"	"	6- 3-40)
Chart 8410	("	"	"	6-19-37)

a. Hydrography

With the exception of the 42-fm. sounding mentioned in paragraph 4 above, soundings on the charts originate with H-4004 (1917) and H-4648 (1926). It was noted that the soundings on chart 8304 in the vicinity of Lat. $58^{\circ} 08'$, Long. $136^{\circ} 40'$ originate with the small scale survey H-4004, only. The portion of H-4648 not superseded by the present survey should be applied to chart 8304.

*applied to Chrt. 8304
2-M.A.
5/1/42*

b. Aids to Navigation

There are no charted aids to navigation within the area of the present survey.

7. Condition of Survey

a. Sounding Records

The records are neat and legible and conform to the requirements of the hydrographic manual.

b. Descriptive Report

The Descriptive Report is very brief and contains

no mention of the scope and purpose of the survey or recommendation concerning the existence of the 42-fm. depth mentioned in paragraph 4 above. It was not signed by the chief of party but is satisfactory in ^{all} other respects.

c. Field Plotting

Excellent.

8. Compliance with Instructions for the Project

Satisfactory.

9. Additional Field Work Recommended

This survey is satisfactory and no additional field work is required. The 42-fm. depth in Lat. $58^{\circ} 14'$, Long. $137^{\circ} 09'$ on chart 8002 was reported in 1921 (erroneously stated as 1931 in the instructions for the present survey). Chart Letter 87, of 1921, states that several casts of 42 to 45 fathoms were obtained while approaching Cross Sound from the westward in thick weather. Since this indicates a shoal area of some extent, it is highly improbable that the 42-fm. depth exists within the area of the present survey. It is recommended that it be retained on chart 8002 with the notation P.D.

10. Superseded Surveys

H-4004 (1917) in part
H-4648 (1926) in part

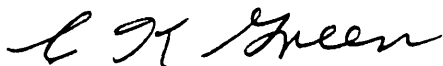
Examined and approved:



Chief, Surveys Section



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. 6578

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/19/47	8402	LAM per H72	Before After Verification and Review <i>through 8202</i>
			<i>in part.</i>
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Applied to Cht. 8304 7/23/41 L.R.

Examined Cht. 8304 after review (before verification + review) May 1, 1942 Z.M.A.

Applied to chart. 8410 Sept. 12, 1941 L.A.M.
a few minor changes " Apr. 30, 1942 Z.M.A.

" " 8002 Apr. 10, 1942 - J.W.

Applied to Cht. 8202 May 1, 1942 Z.M.A.