

8159

Diag. Cht. Nos. 8700 and 8859.

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. SU-2.5/354 Office No. H-8159

LOCALITY

State Alaska

General locality Alaska Peninsula-South Side

Locality Northeast of Pavlof Islands

194/54-55

CHIEF OF PARTY

Frank G. Johnson

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DATE March 6, 1956

8-1870-1 (1)

8159

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.

REGISTER NO. H-8159

Field No. SU-2.5/354 - ~~SU-2.5/454~~

State Alaska

General locality Alaska Peninsula - South Side

Locality Northeast North of Pavlof Islands

Scale 1:25,000 Date of survey 7 July 1954 - 24 Sept. 1954
& 16 to 29 June 1955

Instructions dated Revised Instructions, dated 25 Jan. 1954, Amendment date
24 Feb. 1954

Vessel Ship SURVEYOR and Launches #1, 3 and 4

Chief of party F. G. Johnson

Surveyed by F. R. Gossett, V. R. Sobieralski, M. J. Tonkel, J. Dermody &
D. E. Westbrook

Soundings taken by fathometer, graphic recorder, hand lead, wire Fathometer

Fathograms scaled by V. R. Sobieralski, M. J. Tonkel, S. L. Hollis, O. H. Quade

Fathograms checked by " " " " " " " "

Protracted by S. L. Hollis

Soundings penciled by V. R. Sobieralski

Soundings in fathoms ~~xxx~~ at ~~MLLW~~ MLLW and are based on a velocity
of sound of 800 fms./sec.

REMARKS:
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DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H-8158 (1954)
(Field No. SU-2.5/354)
(Field No. SU-2.5/454)

ALASKA PENINSULA - SOUTH SIDE

Project CS-344
Scale: 1:25,000

USC&GS Ship SURVEYOR
F. G. Johnson, Chief of Party

A. PROJECT-

Revised Instructions to the Commanding Officer, USC&GS Ship SURVEYOR for Project CS-344, dated 25 January 1954, and Amended Instructions dated 24 February 1954 (Ref. 22/SRO, S-2-SU) were followed throughout.

B. SURVEY LIMITS AND DATES-

The survey includes that general area south of Seal Cape on the Alaska Peninsula and north of Wosnesenski Island included between Latitudes 55-24 N and 55-13 N, and Longitudes 161-05 W and 161-27 W. Field work on H-8159 (SU 2.5/354, SU 2.5/454) was commenced on 18 August 1954 and concluded on 20 September 1954.

This survey makes junction on the east with contemporary survey Sheet H-8158 (SU-2.5/254) and H-8157 (SU 2.5/154).
(1954) (1954)

Junction was made with prior survey H-3654 and H-6927 on the west. *Review #5*
There were no prior surveys to the south. (1913-39) (1943)

C. VESSELS AND EQUIPMENT-

The Ship SURVEYOR and Launches #1, 3, and 4 were used to accomplish this survey. All launches operated from the Ship as a base.

The SURVEYOR, equipped with Model 808 Depth Recorder No. 128S, was used for offshore hydrography. Its turning radius at sounding speed is approximately 400 meters.

Launches #1, 3, and 4, equipped with Model 808 Depth Recorders Nos. 158-SPX, 47-S and 69-S respectively, were used for inshore hydrography. The turning radius for all launches at sounding speed was approximately 20 meters.

D. TIDE AND CURRENT STATIONS-

Data obtained from portable tide gages at Sand Point (Lat 55°-20.2' N, Long 160°-30.1' W); Bay Point (Lat 55°-19.5' N, Long 160°-51.2' W); Coal Bay (Lat 55°-22.1' N, Long 159°-19.2' W) was used to reduce soundings on this sheet.
21.9 5

No corrections were made for time or height as directed by Director's letter (Ref. 36-rjb) dated 1 September 1954.

Two current stations were observed during this field season. The first station was south of Seal Cape Light (on the Alaska Peninsula), Lat 55° 17'-41" N and Long 161° 12'-05" W with observations made half-hourly commencing at 1000, 9 September 1954 and ending at 2400, 12 September 1954. The second station was also south of Seal Cape Light at Lat 55° 20'-15" N, Long 161° 14'-50" W, with observations made half-hourly commencing at 1645, 22 September 1954, and ending at 0400, 24 September 1954.

E. SMOOTH SHEET-

The smooth sheet projections for this survey was made in the Washington Office and is presumed to have been done by ruling machine. The shore-line and topographic detail were transferred, inked and verified by the *Review*, Seattle Processing Office in accordance with Paragraph 757 of the Hydro-graphic Manual. Transfer was made from bromoils of Topographic Sheets. #1

The smooth sheet, not completed in the field, will be completed by the Seattle Processing Office.

F. CONTROL STATIONS-

<u>Triangulation:</u>	<u>Relocated</u>	<u>New</u>
Seal Cape Light	Jude 1913-1954 (Lite) 1953-1954	Omega 1954 Seal 1954

Photo Hydro

Ant	- PH 0911
Lad	- Radial Plot in Field on T-11109
Bob	- Radial Plot in Field on T-11109
Cat	- Ph 0909
Ken	- Ph 090P
Poi	- T-11109
Jim	- Ph 0907
Ice	- Ph 0907, 8° 00' left from Seal Cape Lt. 26.2 m (86 ft.)
Hat	- Radial plot in field on T-11109
Gum	- Radial plot in field on T-11109
Dot	- Ph 0905
Cue	- Rock awash approx. 100 m SSW of PH-0904 on T-11109
Reef	- T-11119, high point of reef
Elf	- Radial plot in field T-11109
Maw	- Radial plot in field on T-11109
Nip	- PH 0912
Odd	- PH 0913, 90° 00' left from Nip (0912) dist. 6.5 m
Tax	- Radial Plot in field T-11109
Val	- T-11104
Don	- T-11108

No recoverable topographic stations were established. ✓

Two new control stations, Omega 1954 and Seal 1954, were established and two old stations, Jude 1913-1954 and Seal Cape Light 1954-1954, were relocated. ✓

Boat sheet positions of photo-hydro signals were either office selected points or field selected points radially plotted aboard the Ship SURVEYOR. ✓

G. SHORELINE AND TOPOGRAPHY-

The shoreline and topographic detail for the boat sheet were obtained by transfer from bromoils of Topographic Manuscripts T-11104, 11105, 11108, 11109, 11117, and 11118; Shoreline detail was verified both by the photogrammetrist and by the hydrographer. ✓
(from 1952 air-photos; field-inspected, 1954-55; unreviewed.)

The low water line is delineated by soundings except where rugged shoreline made sounding closer to shore impracticable. ✓

H. SOUNDINGS-

All soundings were obtained with Model 808 Depth Recorders equipped with tachometer reeds calibrated at 800 fathoms per second. Standard methods were followed to obtain initial, index, phase, and tide corrections. Reference may be made to the Fathometer Report, Ship SURVEYOR, 1954. ✓

I. CONTROL OF HYDROGRAPHY-

The majority of the hydrography was controlled by two shoran stations; Bay, located at TRAP 1913-1954 and SEAL located at SEAL 1954. However, that area within the limits of Lat 55°-19' N, Long 161°-05' W and Lat 55°-20' N, Long 161°-18' W on the south, and the Alaska Peninsula, South Side, on the north was along the base line and required other means for accurate control of hydrography. That area N and E of Lat 55°-19.8' N, Long 161°-55.5' W was surveyed using the shoran station at TRAP 1913-1954 (Bay) and the Ship SURVEYOR (SUR) anchored approx. 4 mi. SE of station SEAL 1954 as the second shoran station. The ship's position was fixed at 15 minute intervals using BAY and SEAL for control. ✓

That area N and W of Lat 55°-19.8' N and Long 161°-15.5' W was surveyed using standard methods of visual control. ✓

Visual check positions were taken for comparison with shoran fixes on 19 September 1954 (Pos. 5 p - 10 p).

Shoran control on this sheet on this date was obtained by using the Ship SURVEYOR and station BAY. Because of slight errors incurred by using the ship as a control station and the small number (5) of check positions obtained, it is felt that no definite comparison can be made. ✓

Comparisons made with this launch on Sheet SU-2.5/254 (H-8158) gave excellent results. (Positions 15h - 28h dated 20 August 1954).

J. ADEQUACY OF SURVEY-

This survey is approximately 85% complete. No hydrography was accomplished in the area north of Lat 55-20' N between Long 161-17.6 W and Long 161-27' W. It is anticipated that this area will be completed during the 1955 field season.

The junctions with adjoining surveys are satisfactory. All depth curves can be adequately drawn at the junctions.

Non-standard depth curves were not used on this sheet.

K. CROSSLINES-

Approximately 10% of the lines were crosslines. An examination of the boat sheet shows that all crosslines are satisfactory and fall within the requirements of Paragraphs 3571 and 7771 of the Hydrographic Manual.

Discrepancies at the crossings in percentage of depth can best be ascertained after the reduced soundings have been penciled on the smooth sheet. The soundings on the boat sheet were reduced with predicted tides and no other corrections were applied at that time.

L. COMPARISON WITH PRIOR SURVEYS-

Comparison with the boat sheets was made using Chart 8704, 2nd edition, 9/8/52 print and no marked discrepancies were found. Review, RP5

N. DANGERS AND SHOALS-

The following shoals are scaled from the boat sheet and reduced from predicted tides. They are to be verified ~~from~~ on the completed smooth sheet:

<u>Depth in fathoms</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Note:</u>
1.89	55° 20.58' N	161° 15.8' W	For final positions see pg. 3 of 1955 Report (attached)
2.7	55° 20.7' N	161° 17.4' W	
12.0	55° 18.3' N	161° 23.3' W	
9.85	55° 16.4' N	161° 24.7' W	
10.34	55° 16.5' N	161° 25.4' W	
12.0	55° 15.7' N	161° 25.9' W	
4.34	55° 16.0' N	161° 24.0' W	
8.67	55° 15.7' N	161° 20.8' W	
14.0	55° 15.6' N	161° 14.2' W	
11.0	55° 16.6' N	161° 12.5' W	
7.3	55° 19.0' N	161° 12.7' W	
2.017	55° 20.9' N	161° 13.8' W	
10.23	55° 20.7' N	161° 10.9' W	
13.0	55° 19.4' N	161° 08.7' W	
15.0	55° 17.5' N	161° 15.2' W	

checked the - 4 -
above shoal soundings
to see if any changes were
necessary to 8359- Reprint now in
Reproduction Br. No. changes made LSS 3/12/56.

O. COAST PILOT INFORMATION-

The general description of this area as given in the Coast Pilot, Part II - Yakutat to Arctic Ocean, is considered satisfactory. Some changes and corrections to existing coast pilot notes, effecting the area of this survey, were recommended in a separate letter to the Washington Office on 17 December 1954 (Pkg. No. 54-17 - Coast Pilot Notes, USC&GS Ship SURVEYOR, 1954). Reference is hereby made to this letter.

P. AIDS TO NAVIGATION-

Seal Cape Light (No. 2813 in U.S.C.G. Light List) was previously located by triangulation and was recovered and identified on photograph No. 39103 covering that area.

There are no other existing aids to navigation in the area covered by this survey.

Q. LANDMARKS FOR CHARTS-

There are no new landmarks recommended for this survey area.

R. GEOGRAPHIC NAMES-

No special report on geographic names was submitted for this area. Present names are considered correct and adequate.

S. SILTED AREAS-

There were no silted areas to be reported.

T. STATISTICS-

SU-2.5/354
Ship SURVEYOR

<u>Day</u> <u>Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of</u> <u>Positions</u>	<u>Statute Mi.</u> <u>of Soundings</u>
A	7/7/54	I	1	0.0
B	8/18/54	I	151	57.0
C	8/19/54	I & II	160	59.0
D	8/25/54	II	148	58.2
E	8/26/54	II & III	153	62.7
F	8/30/54	III	59	26.0
G	9/1/54	III	43	14.8
H	9/8/54	IV	175	66.1
J	9/9/54	IV	31	0.0
K	9/10/54	IV	35	0.0
L	9/11/54	IV	42	0.0

STATISTICS (Cont.)

<u>Day Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of Positions</u>	<u>Statute Mi. of Soundings</u>
M	9/12/54	V	34	0.0
N	9/15/54	V	104	35.7
P	9/16/54	V	29	9.0
Q	9/17/54	V	33	0.0
R	9/18/54	V	12	0.0
S	9/19/54	V & VI	81	24.6
T	9/20/54	VI	4	0.0
U	9/22/54	VI	0	0.0
TOTALS			1,291	404.1

Launch #1

<u>Day Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of Positions</u>	<u>Statute Mi. of Soundings</u>
a	9/12/54	I	13	0.0
b	9/17/54	I	74	17.0
c	9/19/54	I	50	9.8
d	9/23/54	I	99	9.3
Totals			236	36.1

Launch #3

<u>Day Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of Positions</u>	<u>Statute Mi. of Soundings</u>
a	8/27/54	I	33	9.1
b	9/9/54	I	101	32.7
c	9/10/54	I & II	126	40.8
d	9/11/54	II	129	28.6
e	9/12/54	II & III	118	35.0
f	9/17/54	III	23	1.8
TOTALS			530	148.0

Launch #4
STATISTICS (Cont.)

<u>Day Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of Positions</u>	<u>Statute Mi. of Soundings</u>
a	8/18/54	I	127	42.6
b	8/25/54	I & II	175	49.7
c	8/26/54	II & III	169	52.8
d	8/30/54	III	102	25.3
e	9/1/54	III	41	8.2
f	9/8/54	III & IV	129	36.7
g	9/9/54	IV	140	38.0
h	9/10/54	IV & V	147	51.2
j	9/11/54	V	139	24.3
k	9/12/54	VI	150	41.4
l	9/15/54	VI	59	11.7
m	9/16/54	VI	14	1.1
n	9/17/54	VII	155	36.3
p	9/19/54	VII	151	28.1
q	9/20/54	VIII	26	2.2
TOTALS			1,724	449.6

Sheet SU-2.5/454
Launch #3

<u>Day Letter</u>	<u>Date</u>	<u>Vol. No.</u>	<u>Number of Positions</u>	<u>Statute Miles of Soundings</u>
a	8/18/54	I	120	41.7
b	8/25/54	I & II	134	43.3
c	8/26/54	II	135	46.9
d	8/30/54	II	42	13.7
e	9/1/54	II & III	93	13.9
f	9/8/54	III	154	31.6
g	9/15/54	III	83	14.1
h	9/17/54	III	27	9.7
j	9/19/54	III & IV	130	29.1
k	9/20/54	IV	64	13.5
TOTALS			982	257.5

Grand total for both sheets - SU-2.5/354 and SU-2.5/454

No. of Positions - 4,684

Statute Miles of Soundings - 1,295.3

U. TABULATION OF APPLICABLE DATA-

1. Letter; Office of the Director; Subject: Tides -
dated 1 September 1954; Ref. 36-rjb
2. Report on Shore Calibration, USC&GSS SURVEYOR, 1954 Field Season
3. Fathometer Report 1954, USC&GSS SURVEYOR
4. Triangulation Report, USC&GSS SURVEYOR, Project CS-344, 1954
5. Photogrammetric Report, USC&GSS SURVEYOR, 1954
6. Coast Pilot Notes, USC&GSS SURVEYOR, 1954

12 April 1955

Respectfully submitted,

Steven L. Hollis
STEVEN L. HOLLIS, JR.
LIEUT., USC&GS

APPROVAL SHEET

The boat sheet was inspected at the end of each day's hydrography while the work was in progress.

The fathograms and record volumes have been given a final inspection of a general nature and have been approved.

One hundred per cent of the protracting has been accomplished on the smooth sheet.



FRANK G. JOHNSON
Commander, USC&GS
Commanding USC&GS SURVEYOR

Addenda Sheet to Descriptive Report
Hydrographic Survey H-8159 (1954)

(Combined SU-2.5/354 & SU-2.5/454)

Alaska Peninsula - South Side
North of Pavlof Islands

Project 1344 USC&GS Ship SURVEYOR

B. SURVEY LIMITS AND DATES

This addenda concerns field work on this survey done in 1955 and also contains a discussion and recommendations concerning certain discrepancies resulting between visual and Shoran control.

The survey in 1955 includes development of relatively shoal soundings in the general area northeast of Wosnesenski Island north of Lat. 55° 13' N and west of Long. 161° 09' W. Field work was begun on 16 June 1955 and finished on 29 June 1955.

(1955) Junction was made to the south with contemporary survey SU-2.5/155 (H-8089) done by this vessel.

C. VESSELS & EQUIPMENT

Ship based Launch No. 3, using 808 fathometer No. 47-S, and Launch No. 4 using 808 fathometer No. 69-S were used. Turning radius for these launches, at 7 knot sounding speed, is approximately 20 meters.

D. TIDE STATION

Data obtained from portable automatic tide gage at Sand Point (Lat. 55° 20.2' N and Long. 160° 30.1' W) was used to reduce soundings on this sheet.

No corrections were made for time or height, as directed by Director's letter (Ref. 36-rjb) dated 1 September 1954.

E. SMOOTH SHEET

The smooth sheet projection for this survey was made in the Washington Office, presumably on the ruling machine. Shoran curves were also inked in the Washington Office. In April 1955 the smooth sheet was returned to the Seattle Processing Office with 1954 positions plotted. After the 1955 work was completed, the sheet was sent back to the ship and the remaining positions were plotted and the soundings penciled.

A discussion of discrepancies found in the 1955 work is found in Paragraph J. ADEQUACY OF SURVEY.

G. SHORELINE AND TOPOGRAPHY

Shoreline and topographic details were transferred from advanced topographic manuscripts T-11104, 11105, 11108, 11109, 11117 and 11118. The (1952-55)

shoreline along the north edge of the survey was transferred, inked and verified by the Seattle Processing Office in 1954. Shoreline of Wosnesenski Island to the south was transferred in 1955. *Review, #1*

Very little of the low water line is delineated because of the rugged shoreline.

Reference may be made to the Fathometer Report, Ship SURVEYOR 1955.

I. CONTROL OF HYDROGRAPHY

All hydrography was controlled by Shoran, using "Bay" and "Seal" re-established at the 1954 sites. Reference may be made to Shoran Report, Ship SURVEYOR, 1955.

J. ADEQUACY OF SURVEY

With the addition in 1955 of development on the shoals in the area south of Lat. $55^{\circ} 15' N$ and east of Long. $161^{\circ} 21' W$, this survey is complete and adequate to supersede prior surveys. Coal Bay and its approaches are no longer included in this survey, as a 1:20,000 scale survey of that area was included in plans for the 1955 field season but was not accomplished.

Junctions with surveys H-8157⁽¹⁹⁵⁴⁾ and H-8158⁽¹⁹⁵⁴⁾ to the eastward have been checked and are in close agreement with this survey.

To the southward, the junction with H-8089⁽¹⁹⁵⁵⁾ was not completely satisfactory. A line of soundings along the approximate arc 9.05 miles from "SEAL" is included on each survey. The line on this survey was run in 1954 and the line on H-8089 was run in 1955, both lines by the same launch using the same fathometer and Shoran equipment. The discrepancy is probably caused by an error in position of the 1955 line due to errors discussed in Paragraph I of the Descriptive Report of H-8089 (1955).

The following was done in an effort to determine the cause of the discrepancy:

(a) Location of Shoran curves have been checked by computing and plotting positions on the 16 and 20 mile curves from "BAY". Distances between curves have been checked with a meter bar. Results indicate that although there are small errors in the location of the Shoran curves, these errors are not enough to appreciably affect the positions of the sounding lines.

(b) Positions 1a to 23a and 1b to 3b (Launch 3, 1955) on H-8089 have been replotted on tracing paper using the zero set values computed in 1954. The new locations result in a satisfactory junction between the two surveys with the following exceptions:

See Review of H-8089

	<u>Latitude</u>	<u>Longitude</u>	<u>Difference</u>	<u>Percent of Depth</u>	<u>Displacement of Depth Curve</u>
1)	55° 13.52'	161° 11.60'	0.8 fm	2.6	75 m.
2)	55° 13.47'	161° 11.90'	0.8	2.6	170 m.
3)	55° 13.40'	161° 12.60'	0.6	2.0	50 m.

The amount of displacement in the 30 fathom curve at (3) is questionable as it would fall between the two sounding lines.

(c) A short line of 1955 hydrography along the north shore of Wosnesenski Island from Lat. 55° 13.3' N, Long. 161° 19.8' W to Lat. 55° 13. N, Long. 161° 20.5' W does not agree with the shoreline. *170-210 brown*

This line however, was plotted using the 1954 zero sets and attenuation corrections discussed in Paragraph I of the Descriptive Report for H-8089 (1955). *Adjustments made are in harmony with adjustments made to 1955 work on H-8089*

SUMMARY

There were two places on this sheet where appreciable discrepancies existed. The first was at the junction between H-8159 and H-8089(55) and the second was a discrepancy between one line of 1955 work and the shoreline on the north side of Wosnesenski Island. The first discrepancy was alleviated by the new corrections on the 1955 hydrography on H-8089 and the second was alleviated by plotting the line using 1954 zero sets and attenuation corrections, because this line was a great distance from the Shoran calibration area.

If these discrepancies were not corrected in this way all the hydrography on this sheet, both 1954 and 1955 would have had to be re-plotted using 1954 calibration corrections and attenuation corrections as in Paragraph I of the Descriptive Report of H-8089. It is felt, however, that the greater accuracy produced by replotting the sheet would not balance the extra time and expense involved.

N. DANGERS AND SHOALS

The following least depths on shoals were scaled from the smooth sheet:

<u>Depth in Fathoms</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Position Number</u>
-0.38	55° 14.49'7	161° 20.22'16	115-116f (brown) ✓
-0.4	55° 14.93'0	161° 16.70'6	38g (brown) ✓
-1.1	55° 13.80'	161° 24.72'5	92j (brown) ✓
-1.7	55° 20.91'	161° 13.78'	76-77k (blue) ✓
-1.9	55° 20.58'	161° 15.81'	7c (green) ✓
-2.7	55° 20.67'	161° 17.45'	84d (green) ✓
-2.9	55° 13.28'	161° 15.25'	38-39k (brown) ✓
-3.6	55° 14.35'	161° 22.50'	123j (brown) ✓
-4.0	55° 14.70'	161° 16.53'2	30q (brown) ✓
-4.3	55° 13.98'	161° 24.17'	108j (brown) ✓
-4.3	55° 14.02 13.97	161° 09.26'9	24-25r (blue) ✓
-4.4	55° 14.37'	161° 21.90'	11k (brown) ✓

See Review of H-8089

<u>Depth in Fathoms</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Position Number</u>
- 4.4 ✓	55° 16.09'	161° 23.98'	14m (blue)
- 4.8 ✓	55° 14.72'	161° 25.96'	51j (brown)
- 7.1 ✓	55° 14.09'	161° 10.58'3	30r (blue)
- 7.28 ✓	55° 14.80'75	161° 21.19'11	5-6q (brown)
- 7.3 ✓	55° 19.02'	161° 12.77'19	7-8q (blue)
- 8.7 ✓	55° 15.73'	161° 20.82'	69b (blue)
- 9.5 ✓	55° 16.39'	161° 24.70'	95-96b (blue)
- 9.5 ✓	55° 22.46'	161° 05.92'	12-13ae (brown)
- 10.3 ✓	55° 20.67'	161° 10.88'	31-32p (blue)
- 10.4 ✓	55° 16.53'	161° 25.12'	64-65f (blue)
- 10.6 ✓	55° 16.59'	161° 25.40'	108-109b (blue)
- 11 ✓	55° 15.63'	161° 12.48'	14-15d (blue)
- 12 ✓	55° 18.30'	161° 23.25'	4-5p (blue)
- 12 ✓	55° 15.75'	161° 25.90'87	134-135p (blue)
- 12 ✓	55° 15.13'	161° 22.80'	102-103b (blue)
- 13 ✓	55° 14.65'	161° 10.80'	34-38r (blue)
- 13 ✓	55° 14.05'	161° 11.70'65	50-51r (blue)
- 14 ✓	55° 15.16'6	161° 14.20'	21-22d (blue), 67-68d (Ship)
- 15 ✓	55° 19.45'8	161° 08.70'	87-88ab, 113-114ae (brown)
- 15 ✓	55° 17.45'	161° 15.20'2	58-59S (Ship)
- 15 ✓	55° 17.60'	161° 22.15'	36b (blue)
- 15 ✓	55° 18.75'	161° 07.45'	92-93N (Ship)

Preliminary values for a majority of these depths were forwarded to the Washington Office on 25 September 1954 and 8 July 1955.

R. GEOGRAPHIC NAMES

Refer to Geographic Names Report, Ship SURVEYOR, 1955.

T. STATISTICS

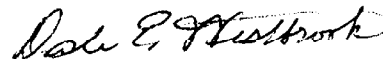
	<u>Day Letter</u>	<u>Date</u>	<u>Vol. Number</u>	<u>Number of Positions</u>	<u>Stat. Miles</u>
Launch 3	l	6/16/55	23	20	6.2
	m	6/23/55	23	26	6.8
	n	6/25/55	23	21	3.2
	p	6/26/55	23	60	11.1
	q	6/29/55	23	44	5.4
Launch 4	r	6/23/55	24	72	15.9
	s	6/26/55	24	8	Bottom samples
Ship SURVEYOR		6/26/55	24	1	Bottom samples
			<u>TOTALS</u>	<u>252</u>	<u>48.6</u>

U. TABULATION OF DATA

Letter of 21 July 1955 (Reference: SUR/PT/wkk, Subject: List of Least Depths.
Shoran Calibration Report, Ship SURVEYOR, 1955
Fathometer Correction Report, Ship SURVEYOR, 1955

Geographic Names Report, Ship SURVEYOR, 1955
Boat Sheet same as SU-2.5/155 (northern part)

Respectively submitted



DALE E. WESTBROOK
ENSIGN, C&GS

Approved and Forwarded:



FRANK G. JOHNSON, CAPT., C&GS
Chief of Party

APPROVAL SHEET

This survey is approved as complete and adequate for the area covered and no additional work is recommended.

The boat sheets were inspected at the end of each days hydrography while work was in progress. The smooth sheet was checked during the plotting and upon completion a thorough inspection was made of crossings, junctions and shoals.

Upon completion of processing an inspection was made of all records including record books, fathograms, etc. and all was found in good order.

Attention is directed to paragraph J (Adequacy of Survey). It is believed that the method of correction explained therein gives a satisfactory solution for clearing up the two discrepancies found in the survey. *OK - REE*

The hydrography at the extreme northwest corner of the sheet was done at the end of the 1954 season when as much as possible was attempted before the bad weather closed the season. In the area the intersection of shoran arcs are allowed to go less than 30 degrees. The use of attenuation corrections in an area such as this might tend to improve the positions.

The shoran attenuation corrections referred to are explained in Par. I (Control of Hydrography) of the Descriptive Report for H-8089:(55)

Frank G. Johnson
FRANK G. JOHNSON
Captain, C&GS

GEOGRAPHIC NAMES

Survey No. H - 8159

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
Alaska											1
Alaska Peninsula } for title											2
Pavlof Islands } for title											3
											4
Coal Bay ✓											5
Seal Cape ✓											6
Mino Creek ✓											7
Woshesenski Island ✓									Bay		8
Omega Island ✓											9
Jude Island ✓											10
Egg Island ✓											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

(most northern islet near N. shore Woshesenski I)

Names approved
3-26-56. L. Heck

Tide station (off sheet).
Sand Point

EAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys:~~

29 March 1956

Division of Charts: R. H. Carstens

Plane of reference approved in
24 volumes of sounding records for

HYDROGRAPHIC SHEET 8159

Locality Alaska Peninsula, South Side

Chief of Party: F. G. Johnson in 1954-1955
Plane of reference is mean lower low water, reading
1.7 ft. on tide staff at Seal Cape, Coal Bay
10.9 ft. below B. M. 1 (1954)
5.4 ft. on tide staff at Bay Point
8.7 ft. below B.M. 2 (1954)
3.9 ft. on tide staff at Sand Point
8.4 ft. below B.M. 7 (1950)
1.7 ft. on tide staff at Ukolnoi Island
13.0 ft. below B.M. 1 (1955)

Condition of records satisfactory except as noted below:
Height of mean high water above plane of reference is as follows:

Seal Cape, Coal Bay	=	6.4 ft.
Bay Point	=	6.6 ft.
Sand Point	=	6.6 ft.
Ukolnoi Island	=	6.2 ft.

William Hefner
Branch
Chief, ~~Division of~~ Tides and Currents.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ~~H. S. 159~~

Records accompanying survey:

Boat sheets 4.....; sounding vols. ~~..24..~~; wire drag vols.;
 bomb vols.; graphic recorder rolls ~~15-Envelopes~~,
 special reports, etc. ~~1-Descriptive report, 1-Smooth sheet, and 4-Shoran~~
~~Abstracts.~~.....

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

Number of positions on sheet		4043
Number of positions checked		70
Number of positions revised		25
Number of soundings revised (refers to depth only)		20
Number of soundings erroneously spaced		5
Number of signals erroneously plotted or transferred		0
Topographic details	Time	12
Junctions	Time	8
Verification of soundings from graphic record	Time	2
Verification by <i>D. L. Engle</i>	Total time	352
	Date	22 Dec 57
Reviewed by <i>J. A. Dinmore</i>	Time	40
	Date	19 Febr. 1958

DIVISION OF CHARTS
REVIEW SECTION - NAUTICAL CHART BRANCH
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8159

FIELD NO. SU-25-354

Alaska Peninsula-South Side, Northeast of Pavlof Islands

Surveyed: July - Sept. 1954 & June 1955 Scale 1:25,000

Project No. CS-344

Soundings:

808 Depth Recorder

Control:

Shoran

Sextant fixes on shore
signals

Chief of Party - F. G. Johnson

Surveyed by - F. R. Gossett, V. R. Sobieralski, M. H. Tonkel, J. Dermody
and D. E. Westbrook

Protracted by - V. R. Sobieralski & S. L. Hollis

Soundings plotted by - V. R. Sobieralski

Verified and inked by - D. R. Engle

Reviewed by - T. A. Dinsmore

Date: 19 February 1958

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with the unreviewed manuscripts of air-photographic surveys T-11104, T-11105, T-11108, T-11109, T-11117 and T-11118 of 1952-55.

The origin of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in very good agreement considering the irregularities in the bottom.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated except in inshore localities where the foul character of the bottom prevented the running of sounding lines.

The bottom for the most part is irregular. Numerous shoals, mounds and depressions contribute to the bottom irregularities.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-8158 (1954) on the southeast. The junctions with H-8157 (1954) on the east and H-8089 (1955) on the south will be considered in the reviews of those surveys.

There are no basic contemporary surveys registered at this time on the west and northwest.

5. Comparison with Prior Surveys

a. H-3654 (1913-39) 1:100,000

This small-scale reconnaissance survey consists of a sparse pattern of sounding lines covering the northern portion of the present survey. In comparing the prior and present depths, the following discrepancies are noted:

The 12-fm. sounding charted in lat. $55^{\circ}20.2'$, long. $161^{\circ}13.8'$, from H-3654 should be disregarded. Falling in smooth-bottom depths of 18 fms. on the present survey, the prior sounding is considered to be erroneous. Closely-spaced (50-meter) sounding lines on the present survey are adequate to discredit the prior sounding.

Other appreciable differences in depth are indicated in the following comparison:

<u>Latitude</u>	<u>Longitude</u>	<u>Prior Depth(charted)</u>	<u>Present Depth</u>
$55^{\circ}19.7'$	$161^{\circ}07.6'$	18	21 ✓
19.3	07.6	18	21 ✓
18.25	07.7	19	22 ✓
17.8	07.8	19	23 ✓
18.6	06.3	19	25 ✓
18.2	06.2	19	25 ✓
17.4	06.2	18	23 ✓

The above examples together with numerous other differences of 1 to 3 fms. are attributed to faulty pressure-tube soundings on the 1913-14 work of the prior survey.

b. H-6927 (1943) 1:40,000

This prior survey consists of widely-spaced sounding lines covering a portion of the present survey area. A comparison of the prior and present surveys reveals no appreciable

differences in depths. The sparse sounding lines on the prior survey fail to reveal the critical information disclosed by the close development on the present survey. However, a 15-fm. sounding has been retained in lat. $55^{\circ}19.7'$, long. $161^{\circ}23.5'$, from H-6927 where an undeveloped 17-fm. sounding was obtained on the present survey.

With the indicated addition, the present survey is adequate to supersede the prior surveys within the common areas.

6. Comparison with Chart 8704 (Latest print date 5/21/56)

A. Hydrography

Much of the charted hydrography originates with the prior surveys which need no further consideration. The present survey has been partially applied to the chart through advance information shown on blueprints 51952-55 (copies of the boat sheets). Numerous charted soundings differ from 1 to 3 fms. with the verified smooth-sheet soundings.

The following soundings which in some instances reveal uncharted bottom features from the present survey are listed for the consideration of the Chart Compilation Section:

<u>Latitude</u>	<u>Longitude</u>	<u>Survey Depth (fms)</u>
$55^{\circ}19.9'$	$161^{\circ}17.5'$	16 ✓
20.3	15.0	10.7 ✓
21.4	11.3	11 ✓
22.45	05.9	9.5 ✓
15.15	22.8	12 ✓

The present survey entirely supersedes the charted information.

B. Aids to Navigation

No floating aids to navigation are charted in this area. The survey and charted positions of Seal Cape Light are identical.

7. Condition of Survey

- a. The sounding records are complete; the Descriptive Report covers all matters of importance.
- b. The smooth plotting was accurately done.


8. Compliance with Project Instructions

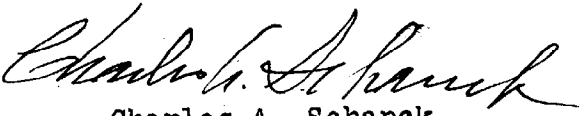
The survey adequately complies with the Project Instructions.

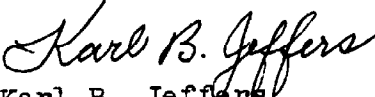
9. Additional Field Work

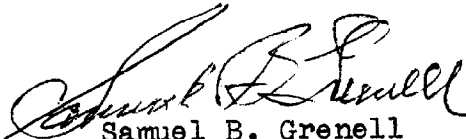
This is an excellent basic survey and no additional field work is required.

Examined and approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Charles A. Schanck
Chief, Division of Charts


Karl B. Jeffers
Chief, Hydrography Branch


Samuel B. Grenell
Chief, Division of Coastal Surveys

