

# 7999

*Junctional Surveys*

- H-7997( ) on the N. & N.E.
- H-7996( ) " " S.E.
- H-8000( ) " " S.
- ✓H-8046( ) " " S.
- ✓H-8045( ) " " S.W.
- H-7998( ) " " N.W.

Diag. Cht. Nos. 8859 & 8700

Form 504

## U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

### DESCRIPTIVE REPORT

7957

Type of Survey Hydrographic

Field No. SU-4152 Office No. H-7999

#### LOCALITY

State Alaska

General locality Southwest Alaska

Locality Alaska Peninsula

South Side - Stepovak Bay

1952

CHIEF OF PARTY

J. C. Bose

LIBRARY & ARCHIVES

DATE MAR 24 1953

6662  
7999

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-7999

Field No. SU-4152

State Alaska ✓

General locality ~~Southwest Alaska~~ Alaska Peninsula ✓

Locality ~~Alaska Peninsula - South Side -~~ Stepovak Bay ✓

Scale 1:40,000 ✓ Date of survey June - September 1952 ✓

Instructions dated 8 March 1951

Vessel Ship SURVEYOR

Chief of party J. C. Bose ✓

Surveyed by A. N. Stewart, J. C. Bull, R. H. Tryon, D. H. Konichek ✓

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

Fathograms scaled by R. H. Tryon, W. R. Kachel, D. L. Wheeler

Fathograms checked by R. H. Tryon, W. R. Kachel, D. L. Wheeler

Protracted by D. H. Konichek

Soundings penciled by Clarence E. Pedersen

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

REMARKS: Corrections entered and positions protracted by personnel from

SURVEYOR. Transferred to Seattle Processing Office for completion.

Smooth sheet prepared and soundings plotted by Seattle Processing Office.

DESCRIPTIVE REPORT  
TO ACCOMPANY  
HYDROGRAPHIC SURVEY  
H-7999 (FIELD SU-4152)

A. PROJECT.

Work was executed by authority of instructions of 8 March 1951, Supp. 17 March 1952. ✓

B. SURVEY LIMITS AND DATES.

The area north of latitude  $55^{\circ} 34'$  lying in Stepovak Bay which is accessible for ship hydrography was completed June to September 1952. ✓

C. VESSEL AND EQUIPMENT.

The Ship SURVEYOR was used for all work. Soundings were taken with recording fathometers. ✓

D. TIDE AND CURRENT STATIONS.

The Fox Bay portable tide gage (Lat.  $55^{\circ} 37'.95$  Long.  $159^{\circ} 37'.25$ ) and the Dent Point portable tide gage (Lat.  $55^{\circ} 46'.97$  Long.  $159^{\circ} 52'.78$ ) were used to reduce soundings. No time or height correction was applied. No current observations were made. ✓

E. SMOOTH SHEET.

The smooth sheet projection was made by hand in the Seattle Processing Office. The shoreline and topographic detail were penciled and verified by the Seattle Processing Office. Shoreline and topographic details are from film positives of topographic manuscripts No. T-8462, T-8468, T-8469, T-8831, T-8832, and T-8833. ✓

F. CONTROL STATIONS.

Control stations were plotted using 1946 and 1947 triangulation and 1952\* (Topo. sheets No's. C, F, G) planetable graphic control locations. Station MUT, 1914 was also used after being corrected to 1927 datum.

\* *To be destroyed after verification & review of the surveys in this area*

G. SHORELINE AND TOPOGRAPHY.

See reports covering inshore sheets this area. ✓

H. SOUNDINGS.

Soundings were taken with 808J type fathometer number 128S with reeds calibrated at 800 fathoms per second.

Standard methods were used to apply index, initial, phase, and tide corrections to soundings. ✓

I. CONTROL OF HYDROGRAPHY.

Visual fix hydrography was used throughout. See page 8 (Field Work) of Season's Report, Project CS-344, 1952, Ship SURVEYOR, J. C. Bose, Chief of Party.

J. ADEQUACY OF SURVEY.

The survey is complete and adequate and supersedes prior surveys for charting. The survey complies strictly with requirements of the Hydrographic Manual and the project instructions. *Review, par. 9.*

K. CROSSLINES.

About 8 percent of the lines run were crosslines. Further data concerning crosslines will be added as a supplement to this report by the Seattle Processing Office after they have completed the sheet.

L. COMPARISON WITH PRIOR SURVEYS.

Prior surveys are obsolete and inadequate but were in good agreement with the 1952 work.

M. COMPARISON WITH CHART.

The chart and the 1952 work are in good general agreement.

N. DANGERS AND SHOALS.

No dangers to navigation within the area covered were found and none have previously been charted. The least depth recorded was 17.4 fathoms (reduced) between positions 72 and 73 on "J" day at approximately Lat.  $55^{\circ} 48'.0$  Long.  $159^{\circ} 42'.3$ .

O. COAST PILOT INFORMATION.

See "Coast Pilot Notes, Ship SURVEYOR, 1952" for Project CS-344.

P. AIDS TO NAVIGATION. No change.

Q. LANDMARKS FOR CHARTS.

Form No. 567, under this heading, will be submitted on an area basis as a separate report; however there are no landmarks in the area covered by this sheet. Landmarks for charts are included in reports for inshore launch sheets surrounding the area.

R. GEOGRAPHIC NAMES.

No change. The source for geographic names used are the topographic manuscripts listed in paragraph "E" of this report. The absence of any inhabitants made it impossible to obtain information about names.

S. SILTED AREAS. None.

T. BY-PRODUCT INFORMATION. None.

U-Y. MISCELLANEOUS. None.

Z. TABULATION OF APPLICABLE DATA.

Fathometer Report submitted November 1952.

Coast Pilot Notes submitted November 1952.


Season's Report, Project CS-344, submitted December 1952.

Landmarks for Charts to be submitted.

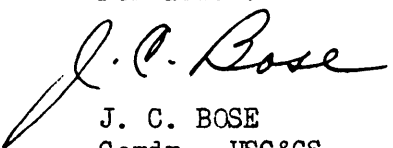
Tidal data for Fox Bay and Dent Point portable tide gages submitted November 1952.

Copy Director's letter 8 September 1952, subject "Tide Data, Alaska" attached.

Respectfully submitted,

  
D. H. Konichek  
Lt. Comdr., USC&GS

Forwarded:

  
J. C. BOSE  
Comdr., USC&GS  
Comdg., USC&GSS SURVEYOR

H 7999  
Su 4152

South side Alaska Peninsula.

Stepovak Bay.

Processing Office Notes.

The smooth sheet was prepared by the processing office, positions plotted by field party and soundings plotted by processing office. ✓

Smooth sheet.

The projection was made by hand on a cut sheet of D 117 paper. The shoreline was added in pencil. That east of meridian 159 50 is from inspected photo topo T 8831, T 8832 & T 8833. Shoreline west of this meridian is from uninspected photogrammetry. ✓

Topographic signals are from graphic control sheets Su-C-F-G-52. (*to be destroyed after the surveys in this area have been verified and reviewed*)

GP's for triangulation were found on lithographed pages

39  
110, 131  
345, 6, 7  
350, 4, 5, 6, 7, 8  
361, 2, 4, 5, 6  
434, 9  
440, 1, 5, 8, 9. ✓

Crossings.

Good. ✓

Dangers.

Within the sounded area there are no dangers to surface navigation. ✓

Rapid paper feed.

There are four places on this sheet where scanning templates show that the paper feed was too fast. A correction factor was determined and applied to the depths by the field party. When these corrected figures were used it became apparent that they were not suitable. The soundings as corrected were omitted from the smooth sheet but were plotted on an onionskin overlay tracing. On a second overlay tracing of linen the soundings were plotted without the speed (paper) corrections and it is recommended that these soundings be transferred to the smooth sheet. It is presumed that the circumstances described on Page 468 of the Manual, Par. 5233, occurred.

Reviewer  
concur;  
soundings  
utilized  
without  
speed correction

The two overlays are attached to the smooth sheet.

Character of bottom.

The central area of Stepovak Bay has very smooth, even bottom. There are areas of irregular bottom in the northeast and southwest parts of the sounded area. In many places the fathograms show a layer of soft material over harder bottom. It is remarkable that the bottom layer is indicated thru ten fathoms of overburden in places.

The overburden is possibly volcanic ash from the great Veniaminof Crater to northeast of Stepovak Bay.

A good example can be seen on the profiles of V-day, positions 15 - 28 and 34 - 57.

*Edgar E. Smith*  
Edgar E. Smith  
Capt. Engr.

3/11/53

Tidal Note.

H 7999  
Su 4152

South side Alaska Peninsula.

Gage.	Lat.	Long.	Staff reading MLLW	
Fox Bay Portable	55 37.95	159 37.25	3.6	
Dent Point Portable	55 46.97	159 52.78	2.5	Staff No. 1
			3.5	Staff No. 2



C O P Y

Refer to No. 36-rcb

AIR MAIL

8 September 1952

To: The Commanding Officer  
U.S.C. & G.S. Ship SURVEYOR  
705 Federal Office Building  
Seattle 4, Washington

Subject: Tide Data, Alaska

Tide data requested in your letter of 27 August 1952 are as follows:

Station	MLLW Feet 1952 staff	MTL Feet 1952 staff	Mean range Feet
Kupreanof Hbr.	4.2	8.3	5.6
Ivanof Bay	5.1	9.2	5.6
Fox Bay	3.6	7.7	5.5
Dent Point (staff #1)	2.5	6.5	5.4
(staff #2)	3.5	7.5	

In verification of the preliminary computations referred to in your letter, office computations show little difference in time or range of tide at these stations. Therefore, it will not be necessary to indicate areas to be controlled by the different gages. Tide reducers may be taken from the nearest gage. In case of missing or defective record at any station the records at the other station may be considered interchangeable without modification in either time or height.

/s/

F. L. Gallen  
Acting Director

H 7999  
Su 4152

South side Alaska Peninsula.

Stepovak Bay.

List of geographic names  
penciled on smooth sheet.

Stepovak Bay.

American Bay.

Orzinski Bay.

Clark Bay .

Grub Gulch .

Ramsey Bay .

Island Bay .

Fox Bay .

Boulder Bay.

Big River .

Gull Rock .

Little Norway .

Bales Landing .

Louies Corner .

~~Stepovak~~  
Stepanof Flats .

Granville Portage.

Blunt Point .

Elephant Point.

Waterfall Point .

Dent Point .

Cub Point.

Bluff Point.

Kupreanof Point\*

STATISTICS  
 FOR HYDROGRAPHIC SURVEY H-7999  
 (FIELD NO. SU-4152)  
 USC&GSS SURVEYOR  
 PROJECT CS-344

Day Letter	Volume Number	Unit	Date 1952	Number of Positions	Statute Miles Soundings
A	1	SURVEYOR	26 June	98	52.5
B	1 and 2	"	2 July	150	72.6
C	2	"	3 July	161	73.7
D	2	"	14 July	9	-
E	2 and 3	"	16 July	227	95.6
F	3 and 4	"	18 July	44	17.8
G	4	"	23 July	36	18.0
H	4	"	25 July	12	-
J	4	"	28 July	92	36.6
K	4 and 5	"	29 July	172	81.7
L	5	"	30 July	16	6.2
M	5	"	8 Aug	90	34.5
N	5 & 6	"	13 Aug	136	62.8
P	6	"	14 Aug	123	49.0
Q	7	"	15 Aug	36	16.4
R	7 & 8	"	18 Aug	199	90.7
S	8	"	21 Aug	73	31.9
T	8	"	1 Sept	88	36.6
U	8	"	2 Sept	13	-
V	8 & 9	"	3 Sept	147	59.1
W	9 & 10	"	4 Sept	206	71.1
X	10	"	5 Sept	90	24.3
Y	10	"	6 Sept	57	18.9
TOTALS				2275	950.00

*Total area 208.8 sq. Stat. Mi.*

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Survey~~

15 April 1953

Division of Charts: R. H. Carstens

Plane of reference approved in 10  
volumes of sounding records for

HYDROGRAPHIC SHEET 7999

Locality Alaska Peninsula, Alaska

Chief of Party: J. C. Bose in 1952

Plane of reference is mean lower low water, reading

4.2 ft. on tide staff at Kupreanof Harbor

10.6 ft. below B. M. 4 (1951)

3.6 ft. on tide staff at Fox Bay

12.6 ft. below B. M. 1 (1952)

2.5 ft. on tide staff at Dent Point

11.0 ft. below B. M. 1 (1952)

~~Condition of records satisfactory except as noted below:~~

Height of mean high water above plane of reference  
is as follows:

Kupreanof Harbor	=	6.9 feet
Fox Bay	=	6.9 feet
Dent Point	=	6.8 feet

*E. C. McKay*  
Section of Tides

Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. H-7999

Name on Survey										
	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		
<u>Alaska</u>										1
<u>Alaska Peninsula</u>									B.G.N	2
<u>Stepovak Bay</u>									"	3
<u>Kupreanof Point</u>									"	4
<u>Bluff Point</u>										5
<u>Boulder Bay</u>										6
<u>Cub Point</u>										7
<u>Fox Bay</u>									(location of tide gage)	8
<u>Island Bay</u>										9
<u>Granville Portage</u>										10
<u>Gull Rock</u>										11
<u>Stepanof Flats</u>										12
<u>Big River</u>										13
<u>Louies Corner</u>										14
<u>Bales Landing</u>										15
<u>Ramsey Bay</u>										16
<u>Dent Point</u>									(location of tide gage)	17
<u>Grub Gulch</u>										18
<u>Clark Bay</u>										19
<u>Little Norway</u>									(locality)	20
<u>Waterfall Point</u>										21
<u>Orzinski Bay</u>										22
<u>Elephant Point</u>										23
<u>American Bay</u>										24
<u>Blunt Point</u>										25
									Names underlined in red approval	26
									4-13-53. L. Heck	27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7999...

Records accompanying survey:

Boat sheets 1...; sounding vols. 10...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 2 Env.;  
 special reports, etc. 1 Smooth Sheet; 1 Descriptive Report;  
 ..... 1 fathometer Report, 1 Graphs of Serial Temperatures & Salinities  
 | Record of Serial Temperature & Salinities

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

Number of positions on sheet	.....	2275	Prelim. Verification
Number of positions checked	.....	16	296
Number of positions revised	.....	1	
Number of soundings revised (refers to depth only)	.....	3	
Number of soundings erroneously spaced	.....	6	
Number of signals erroneously plotted or transferred	.....	—	
Topographic details	Time	.....	—
Junctions	Time	.....	—
Verification of soundings from graphic record	Time	.....	4 hrs.
Prelim. Verif. by: J. A. Dinsmore	72 hrs.	5 June 1953	
Verification by: Paul E. Hanson	Total time 61 hrs	Date 7 JUNE 1956	
Reviewed by: J. A. Dinsmore	Time 24	Date 15 June 1953	
Addendum by J. P. Veir	34.0	3/7/63	

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7999

FIELD NO. SU-4152

Alaska, Alaska Peninsula, Stepovak Bay

Project No. CS-344

Surveyed in June - September 1952

Scale 1:40,000

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - J. C. Bose

Surveyed by - A. N. Stewart, J. C. Bull, R. H. Tryon & R. H. Konichek

Protracted by - D. H. Konichek

Soundings plotted by - C. E. Pedersen

Preliminary verification - T. A. Dinsmore

Verified and inked by - *P. E. Harrison*

Reviewed by - T. A. Dinsmore, 15 June 1953

Inspected by - R. H. Carstens

1. Shoreline and Signals

The inking of the shoreline on this offshore survey is deferred pending the complete verification of the survey.

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

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The bottom throughout the central part of Stepovak Bay is quite smooth and even. Areas of very irregular bottom are located in the northeast and southwest portions of the surveyed area. In several localities, the fathograms clearly record a substantial layer of soft material over harder bottom. It is remarkable that the hard bottom is indicated through as much as 10 fms. of overburden in places. Depths within the limits of this offshore survey generally range from 17 - 100 fms.

4. Junctions with Contemporary Surveys

Adjoining surveys of this project have not yet been received and registered in this office.

5. Comparison with Prior Surveys

H-3722 (1914) 1:100,000                      H-7169 (1946) 1:80,000

The present survey falls within an area partially covered by these prior reconnaissance surveys. Only a few lines of soundings from these prior surveys fall within the area covered by the present survey. A few differences of 2-5 fms. are noted between prior and present depths in the deeper parts of the bay.

The sparse hydrography on the prior surveys is entirely superseded by the present survey within the common area.

6. Comparison with Chart 8859 (Latest print date 8/27/51)

A. Hydrography

Charted hydrography originates with the previously discussed surveys supplemented by a reconnaissance survey by the U. S. Navy (Chart Letter 432, 1948).

The 39-fm. sounding charted in lat.  $55^{\circ} 46.8'$ , long.  $159^{\circ} 45.0'$ , from C.L. 432 (1948) should be disregarded. Falling in present depths of 65 fms., the 39 is considered to be out of position and probably falls near the 41-fm. sounding about 800 meters eastward on the present survey. It should be noted that the 41-fm. sounding is recommended for further development (par. 9).

The charted hydrography is entirely superseded by the present survey. Several detached shoals covered by depths of 17 to 21 fms. are among the uncharted features in this area.

B. Aids to Navigation

No aids to navigation are charted in the area. No dangers to navigation are revealed by this survey.

7. Condition of Survey

- a. The sounding records are complete; the Descriptive Report covers all matters of importance.
- b. The preliminary verification indicated that the smooth plotting was accurately done. The position numbers, however, were inked so close to the position dots that inking a legible sounding on the position will be interfered with.



c. Undeveloped shoal indications are discussed in paragraph 9.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work


From an inspection early this year of a copy of the boat sheet (Bp. 49420) of the present survey, a memorandum dated 16 February 1953, to the Division of Coastal Surveys recommended the following additional work on this survey:

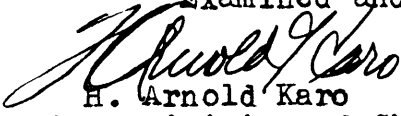
Lat.  $55^{\circ} 46.8'$ , long.  $159^{\circ} 44.1'$ , - 41 fm. - run split lines <sup>see H-7997</sup>


Lat.  $55^{\circ} 35.9'$ , long.  $160^{\circ} 05.9'$ , - 44 fm. - run split lines <sup>see H-8045</sup>

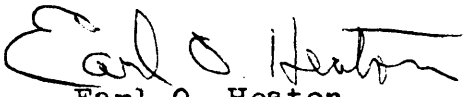
Instructions for this additional work were issued by Coastal Surveys 8 April 1953. No other undeveloped features requiring additional work were revealed during the present review.

Examined and approved:

  
H. R. Edmonston  
Chief, Nautical Chart Branch

  
H. Arnold Karo  
Chief, Division of Charts

  
G. R. Fish  
Chief, Section of Hydrography

  
Earl O. Heaton  
Chief, Division of Coastal Surveys

Addendum to Review

H-7999 (1952)

Verified and inked by - P. E. Harrison  
Review Addendum by - J. P. Weir 3/7/63  
Inspected by - I. M. Zeskind

The verification of this survey has been completed. Soundings, depth curves, and shoreline have been completely inked. The shoreline originates with reviewed air photographic surveys T-8832(1942-1946) and T-8833(1941-1945) and with unreviewed air photographic surveys T-8831(1941-42-1946), T-8834(1942-1950), and T-8835(1942-1950).

Junctions with Contemporary Surveys

Adequate junctions were effected with H-7997(1952-53) on the north and east, with H-7996(1952-53) on the east, with H-8000(1952-53) and H-8046(1953) on the south and with H-8045(1953) and H-7998(1952-53) on the west.

Comparison with Chart 8859 (print date 9/25/61)

The charted hydrography originates with the present survey after preliminary verification and review, and several critical depths from H-7997(1952-53) after verification and review. No disagreements with present depths were noted.

Condition of Survey

- (a) Completion of the verification reveals that the smooth plotting was well done.
- (b) The Descriptive Report is complete and comprehensive.

Approved:

Marvin T. Paulson  
Chief, Nautical Chart Division

160°30'

20'

10'

160°

50'

40'

Chart = 8859

