

7727

Diag. Cht. No. 8864-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
PI-2149
Field No. PI-2349 Office No. H-7727

LOCALITY

State ALASKA-ALEUTIAN ISLANDS
General locality RAT ISLANDS
Locality NORTH SIDE SEMISOPOCHNOI ISLAND

1949

CHIEF OF PARTY

H. E. Finnegan

LIBRARY & ARCHIVES

DATE FEBRUARY 21, 1950

7727

FEB 21 1950

Form 537
(Ed. June 1946)

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-7727

Field No. PI-2149, PI-2349

Alaska-
State ALEUTIAN ISLANDS

General locality RAT ISLANDS

North Side
Locality SEMISOPOCHNOI ISLAND

Scale 1:20,000 Date of survey 11 June - 13 Sept, 1949

Instructions dated SEE LIST OF INSTRUCTIONS ATTACHED

Vessel SHIP PIONEER

Chief of party H.E. FINNEGAN

Surveyed by SHIP'S OFFICER

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

Fathograms scaled by PAW, LEW, DGR, AEG, REK, BCS, CHB, RSD, WCF

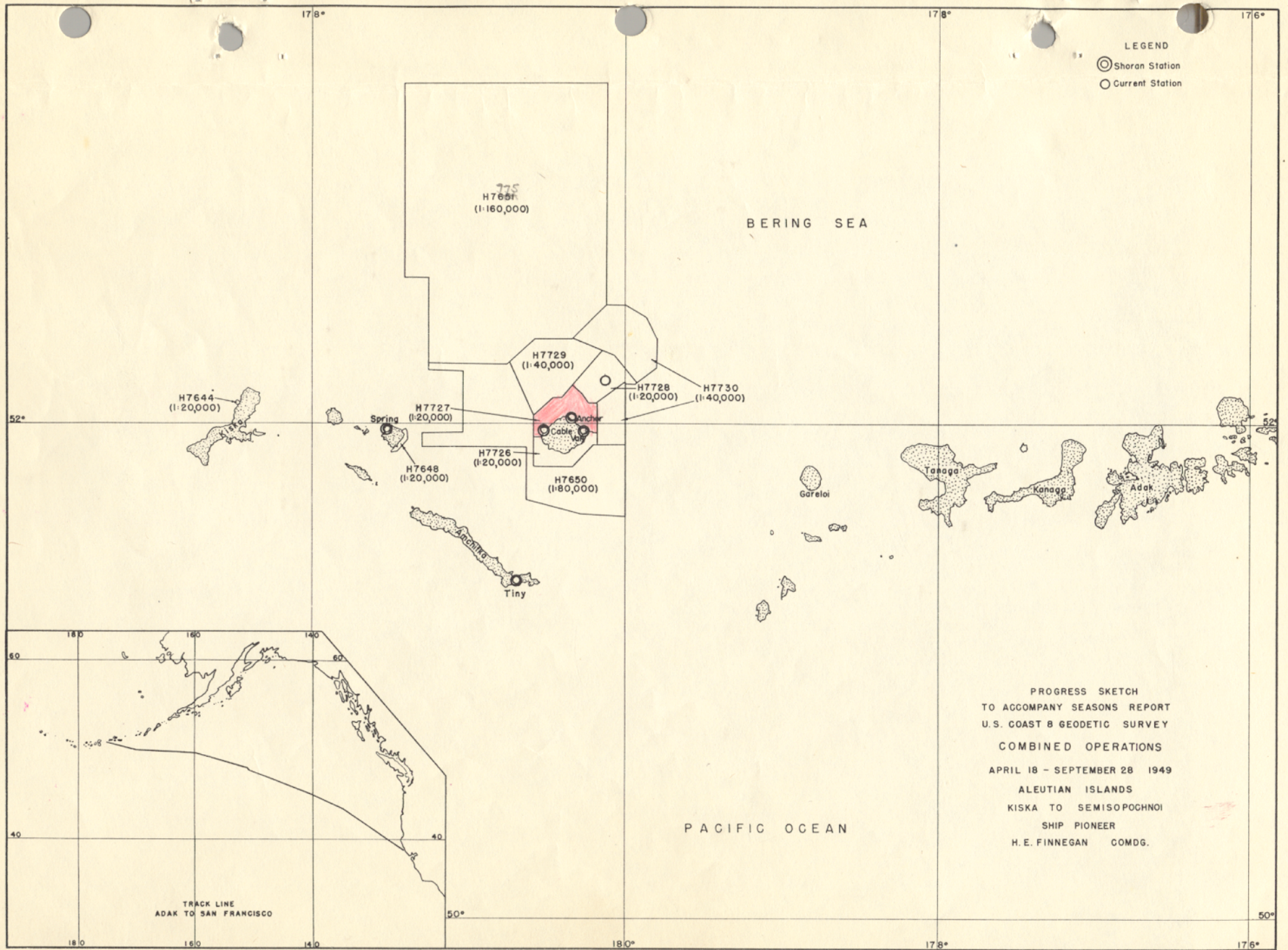
Fathograms checked by PAW, LEW, DGR, AEG, WCF, BCS

Protracted by A.E. GREAVES

Soundings penciled by A.E. GREAVES

Soundings in fathoms ~~feet~~ at ~~MLLW~~ and are true depths

REMARKS: _____



LEGEND

- ⊙ Shoran Station
- Current Station

BERING SEA

PACIFIC OCEAN

PROGRESS SKETCH
 TO ACCOMPANY SEASONS REPORT
 U.S. COAST & GEODETIC SURVEY
 COMBINED OPERATIONS
 APRIL 18 - SEPTEMBER 28 1949
 ALEUTIAN ISLANDS
 KISKA TO SEMISOPCHNOI
 SHIP PIONEER
 H. E. FINNEGAN COMDG.

TRACK LINE
 ADAK TO SAN FRANCISCO

LIST OF INSTRUCTIONS AND SUPPLEMENTAL INSTRUCTIONS
FOR PROJECT CS-218

(To Season of 1949)

-
1. Supplemental Instructions dated 28 February 1936.
 2. Instructions dated 3 February 1938.
 3. Supplemental Instructions dated 28 February 1938.
 4. Amended Instructions dated 1 March 1938.
 5. Supplemental Instructions dated 3 April 1939.
 6. Amendment to Instructions dated 8 May 1940.
 7. Revised Instructions dated 16 April 1943.
 8. Supplemental Instructions dated 1 February 1944.
 9. Supplemental Instructions, Shoreline Inspection, 18 March 1944.
 10. Supplemental Instructions, dated 10 February 1948.
 11. Supplemental Instructions, Photogrammetric Field Surveys, 8 April 1948.
 12. Detail Instructions for Operation of the K-20 Camera (Reference Paragraph 16-D of Instructions dated 8 April 1948).
 13. Report on Experimental Use of Photographs for Establishing Elevations in Alaska. Division of Photogrammetry, April 1949.
 14. Brief Instructions for Operation of the K-20 Camera (Reference Paragraph 16-D of Instruction dated 8 April 1948).
 15. Supplemental Instructions dated 11 April 1949 (To C.O. EXPLORER).

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

H-7727

(Field PI-2149, PI-2349)

SEMISOPOCHNOI ISLAND

Project CS-218
Ship PIONEER
Scale 1:20,000

Season of 1949
Henry E. Finnegan, Chief of Party
Surveyed by: Ship's Officers

A. PROJECT

The work was done in accordance with the following instructions for Project CS-218.

Original Instructions dated 3 February 1938
Amended Instructions dated 1 March 1938
Supplemental Instructions dated 10 February 1948
Supplemental Instructions dated 8 April 1948

B. SURVEY LIMITS AND DATES

The general locality is in the Aleutian Islands: This survey covers the inshore hydrography around the north side of Semisopchnoi Island to a distance of 2 to 7 miles off shore.

Junctions are made with surveys as shown on accompanying sketch.

Field work began on 11 June 1949 and ended on 13 September 1949.

C. VESSELS AND EQUIPMENT

The hydrography was done by the Ship PIONEER and Launches No. 1, No. 3 and No. 4 operating from the ship. The following sounding equipment was used.

Ship PIONEER	808J No. 108 and NMC-2 No. 115
Launch No. 1	808J No. 103-S
Launch No. 3	808J No. 129-S
Launch No. 4	808J No. 107-S

D. TIDE AND CURRENT STATIONS

Tide reducers were obtained from the tide gage at Constantine Harbor, Amchitka Island. No time or range corrections were applied.

Sweeper Cove Gage also used. (See Tide Note)

No current stations were occupied.

A tidal note is included with this report.

E. SMOOTH SHEET

The projection was made by hand on the Ship PIONEER and signals were transferred from graphic control sheets.

(PI-A, B & C-49) ✓

Graphic control sheets PI-A, B & C-49 have been destroyed.

F. CONTROL STATIONS

All of the triangulation stations used for control on this survey were located by the Coast and Geodetic Survey and are on the NA 1927 Datum.

Shoran stations VALY, CABLE, AND TINY were located by triangulation by the Ship PIONEER. Stations HART, and CAPE were located by triangulation by the Ship EXPLORER. Shoran station ANCHOR was located using sextant angles and plotted on graphic control sheet No. ~~T-7077~~. PI-A-49

Some of the signals used for hydrographic control were located by planetable, some by sextant cuts, and some by a combination of both. All of the signals used were plotted on aluminum mounted graphic control sheets Nos. ~~T-7077~~, ~~T-7078~~, and ~~T-7079~~ for 1949. A statement as to the method of locating the various signals is included in the descriptive reports accompanying the control sheets.

PI-A, B and C-49

A list of stations is included with this report.

G. SHORELINE AND TOPOGRAPHY

No shoreline or topographic work was done in this survey.

H. SOUNDINGS

Depths were obtained by the fathometers enumerated in Paragraph C. All soundings were scanned from the graphs and then verified. No draft or settlement corrections were applied. A list of these corrections, fathometer and velocity (which were applied), is included with this report.

I. CONTROL OF HYDROGRAPHY

All ship work with the exception of K, L, N, P, R, S, and W days was controlled by shoran. Elsewhere, all work was controlled by sextant fixes.

J. ADEQUACY OF SURVEY

This survey is considered adequate to supersede prior surveys for charting.

Junctions with all adjoining sheets are satisfactory.

K. CROSSLINES

Cross lines consist of approximately 12% of the total lines run.

All crossings are in good agreement.

L. COMPARISON WITH PRIOR SURVEYS

There are no prior surveys of this area.
(H-6906(1935) USN covers this area)

M. COMPARISON WITH CHARTS

Chart No. 8864 (April 1948):

This chart covers the area of this survey. There are few charted soundings for comparison; in general shoaler depths were found on the current work. Inasmuch as the hydrography on this sheet is well controlled throughout, it is recommended that it supersede all prior work for charting.

N. DANGERS AND SHOALS

Lat. $51^{\circ}57.97'$ N., Long. $179^{\circ}28.7'$ E. An off-lying rock, triangulation station RUG 1949, is approximately 150 meters from the shore and uncovers 12 ft. at MLLW. ⁶⁸ 9 ft. MLLW

Lat. $51^{\circ}00.44'$ N., Long. $179^{\circ}42.42'$ E. A rock, hydrographic station TOT, lies approximately 150 meters from the shore and uncovers 25 ft. at MLLW. ² 22 ft MLLW

Lat. $51^{\circ}58.22'$ N., Long. $179^{\circ}27.45'$ E. A rocky shoal extending out .7 mile north of west from triangulation station RUG was extensively developed taking drift fathometer soundings. The shoalest depth recorded was ¹³ ~~6.9~~ ^{7.80} fathoms. *Hand/lead verification needed*

Lat. $52^{\circ}00.0'$ N., Long. $179^{\circ}29.0'$ E. to Lat. $52^{\circ}03.8'$ N., Long. $179^{\circ}34.8'$ E. Beginning approximately 1 mile north of Tuman Point a very irregular bank from 1/2 to 1 mile in width extends for five miles in a northeasterly direction. On either side the bank falls away quite rapidly to deeper water, the inshore depths being 10 to 15 fathoms deeper.

The following depths were recorded:

Lat. $52^{\circ}00.3'$ N., Long. $179^{\circ}29.05'$ E.	¹⁸ 17.5 fathoms ✓
Lat. $52^{\circ}01.3'$ N., Long. $179^{\circ}30.85'$ E.	20 fathoms ✓
Lat. $52^{\circ}02.25'$ N., Long. $179^{\circ}31.74'$ E.	20.7 fathoms ✓
Lat. $52^{\circ}03.50'$ N., Long. $179^{\circ}34.43'$ E.	26.7 fathoms ✓

N. DANGERS AND SHOALS (Continued)

Lat. 52 01.25' N., Long. 179 33.6' E. Offshore from triangulation station HEAD 1949 a rocky shoal extends .7 mile in a north westerly direction, and considerably shoaler than the general depth in that area.

Lat. 52 01.13' N., Long. 179 33.71' E. 9 fathoms at shoalest point.
Lat. 52 01.25³' N., Long. 179 33.67' E. 10² fathoms near end of shoal

O. COAST PILOT INFORMATION

See "Coast Pilot Notes, 1949", submitted 14 November 1949.

Q. LANDMARKS FOR CHARTS

Only one landmark in the area covered by this survey was located by topography on graphic control sheet T-7077.

Data for this landmark were submitted with "Air Photo Report, Field Inspection" Ship PIONEER, Rat Islands 1949.

R. GEOGRAPHIC NAMES

There are no new geographic names in the area covered by this survey. *l X*

U. VELOCITY CORRECTIONS

An abstract of Velocity Corrections is included with this report. Abstracts for phase corrections for the depth recorders used on this survey are also included with this report.

For the determination of this data see the special report, "Report on Fathometer and Velocity Corrections", Ship PIONEER, 1949. (*Filed with H-7730 (1949)*)

V. SHORAN CORRECTIONS

An abstract of Shoran Zero Settings is included with this report. For determination of these values see the special report "Report on Determination of Shoran Zero Settings" for 1948 records and also for 1949 records. (*Filed with H-7730 (1949)*)

Filed with H-7645

W. REDUCERS

Velocity corrections were entered as follows:

- 0.1 fm. units to 31 fms. depth
- 0.2 fm. units to 101 fms. depth
- 0.5 fm. units to 800 fms. depth

Tide reducers were entered as follows:

- 0.1 fm. units to 31 fms. depth
- 0.2 fm. units to 800 fms. depth

X. MISCELLANEOUS

The following data are included with this report:

1. Title Sheet
2. Index of Sheets
3. List of Instructions
4. Tidal Notes
5. List of Stations
6. Velocity Corrections
7. Initial and Phase Corrections
8. Advance Report of Shoals to be Charted
9. Shoran Zero Settings
10. Abstract of Statistics
11. Approval Sheet

Respectfully submitted:

Arthur E. Greaves, Jr.
Arthur E. Greaves, Jr.
Ensign USC&GS.

Forwarded:

Thos. B. Reed
Thos. B. Reed
CDR USC&GS.
Comdg. Ship PIONEER

APPROVAL SHEET TO ACCOMPANY


SURVEY H-7727

(Field No. PI-2149
PI-2349)

The field work was supervised closely and the boat sheet was inspected daily.

The records and smooth sheet have been inspected and approved.

The survey is considered adequate.


Henry E. Finnegan
Comdr. USC&GS
Comdg. Ship PIONEER

TIDE NOTE

Project CS-218 SHIP PIONEER

Field Season - 1949

The tide gage at Constantine Harbor, Amchitka Island, Aleutian Islands, Alaska, latitude $51^{\circ} 24.8'$ north and longitude $179^{\circ} 16.8'$ east was used for the reduction of all soundings except as indicated below. On the following days when the gage was inoperative at Constantine Harbor, tides were inferred from observed tides at Sweeper Cove:

(30 June;)(1 July;)(8 - 12, 17 August;)(12, 13 September)

A height of 2.5 feet on the tide staff at Constantine Harbor corresponds to mean lower low water. No corrections for time or height differences were applied to the observed tides. For tides inferred from observed tides at Sweeper Cove all time and range corrections were made by the Washington Office.

Hourly heights were obtained from the Ship EXPLORER and from the Washington Office.

LIST OF STATIONS ON SHEET H-7727

Hydrographic Name	Origin
AGO	T-7079
AMI	T-7077
ANCHOR	T-7077
ARCH	Arch 1949
ATE	T-7079
BAR	T-7078
BAT	T-7079
BEACH	Beach 1949
BOB	T-7079
CABLE	Cable 1949
CAP	T-7077
CAPE	Cape 1949
CAW	T-7079
COD	T-7077
COR	T-7078
DAD	T-7079
DENT	Indent 1949
DID	T-7077
DIG	T-7077
DIN	T-7077
DIT	T-7078
DOT	T-7078
DOWN	Down 1949
DRY	T-7078
DUN	T-7077
ELM	T-7079
EMA	T-7077
EVE	T-7078
FAL	T-7077
FAN	T-7079
FIL	T-7078
FIT	T-7077
GAP	T-7077
GOB	T-7079
HAG	T-7078
HART	HART 1949
HAY	T-7078
HEAD	HEAD 1949
HOP	T-7077
HUN	T-7079

*graphic Control Sheets
destroyed after review
of hydrographic surveys*

LIST OF STATIONS ON SHEET H-7727 (Cont'd)

Hydrographic Name	Origin
JET	T-7077
JIM	T-7078
JOB	T-7079
KNO	T-7079
LAB	T-7077
LED	T-7077
LEW	T-7077
LIL	T-7078
LOOK	LOOK 1949
MEG	T-7077
MUT	T-7078
NAG	T-7077
NOI	POCHNOI 1948
NUT	T-7078
OAT	T-7078
OLD	T-7079
PAW	T-7077
PET	T-7077
POT	T-7077
PUN	T-7078
QUA	T-7078
RAB	T-7079
RAG	T-7077
RAW	T-7078
REL	T-7078
RHINO	Rhino 1949
RIP	T-7077
ROY	T-7077
RUG	Rug 1949
RUP	T-7077
SAM	T-7077
SIT	T-7078
SLIP	Slip 1949
SOB	T-7077
SOL	T-7078
SUP	T-7079

LIST OF STATIONS ON SHEET H-7727 (Cont'd)

Hydrographic Name	Origin
TAN	T-7077
TINY	Tiny 1949
TOT ✓	T-7079
TUF	T-7077
TUM	T-7078
TUT	T-7078
VALY	Valy 1949
VAN	T-7078
VET	T-7078
WAP	T-7077
WAY	T-7079
WING	T-7079
WON	T-7078

VELOCITY CORRECTIONS
1949

NMC & NMC-2 FATHOMETERS

NMC & NMC-2 FATHOMETERS

<u>Corr'n. fms.</u>	<u>Depth fms.</u>		<u>Corr'n. fms.</u>	<u>Depth fms.</u>
	0.0	to		1836
	6.0	to	plus 32	1860
	65.1	to	plus 33	1861 to 1865
	103	to	plus 34	1866 to 1910
plus 0.5	251	to	plus 35	1911 to 1930
plus 1.0	371	to	plus 36	1931 to 1955
plus 1.5	451	to	plus 37	1956 to 1980
plus 2.0	511	to	plus 38	1981 to 2010
plus 2.5	581	to	plus 40	2011 to 2120
plus 3.0	631	to	plus 45	2121 to 2225
plus 3.5	671	to	plus 50	2226 to 2330
plus 4.0	721	to	plus 55	2331 to 2430
plus 4.5	761	to	plus 60	2431 to 2520
plus 5.0	811	to	plus 65	2521 to 2615
plus 6	871	to	plus 70	2616 to 2700
plus 7	931	to	plus 75	2701 to 2785
plus 8	1001	to	plus 80	2786 to 2865
plus 9	1051	to	plus 85	2866 to 2945
plus 10	1096	to	plus 90	2946 to 3025
plus 11	1146	to	plus 95	3026 to 3100
plus 12	1191	to	plus 100	3101 to 3170
plus 13	1236	to	plus 105	3171 to 3245
plus 14	1276	to	plus 110	3246 to 3315
plus 15	1316	to	plus 115	3316 to 3385
plus 16	1356	to	plus 120	3386 to 3450
plus 17	1396	to	plus 125	3451 to 3520
plus 18	1431	to	plus 130	3521 to 3580
plus 19	1461	to	plus 135	3581 to 3645
plus 20	1491	to	plus 140	3646 to 3710
plus 21	1526	to	plus 145	3711 to 3770
plus 22	1556	to	plus 150	3771 to 3830
plus 23	1591	to	plus 155	3831 to 3890
plus 24	1621	to	plus 160	3891 to 3945
plus 25	1651	to	plus 165	3946 to 4010
plus 26	1676	to		
plus 27	1706	to		
plus 28	1731	to		
plus 29	1761	to		
plus 30	1786	to		
plus 31	1811	to		

VELOCITY CORRECTIONS

1949

808 Fath. Ship & Launches

<u>Corr'n. fms.</u>	<u>Depth fms.</u>
0.0	0.0 to 4.0
-0.1	4.1 to 8.3
-0.2	8.4 to 12.4
-0.3	12.5 to 17.0
-0.4	17.1 to 20.9
-0.5	21.0 to 24.9
-0.6	25.0 to 28.3
-0.7	28.4 to 32.0
-0.8	32.1 to 35.6
-1.0	35.7 to 43.2
-1.2	43.3 to 51.0
-1.4	51.1 to 59.2
-1.6	59.3 to 67.4
-1.8	67.5 to 75.0
-2.0	75.1 to 83.0
-2.2	83.1 to 90.9
-2.4	91.0 to 98.1
-2.6	98.2 to 105.8
-3.0	105.9 to 124.7
-3.5	124.8 to 146.7
-4.0	146.8 to 170.0
-4.5	170.1 to 196.0

INITIAL AND PHASE CORRECTIONS
TO
Ship's Fathometers

PIONEER

Season of 1949

FATHOMETER
NMC & NMC-2

INITIAL CORRECTION

- 0.1 fms.

808 J #S-108

- 0.1 fms

PHASE CORRECTION

<u>FATHOMETER</u>	<u>SCALE</u>	<u>CORRECTION</u>
808-A	B	- 0.3
ship 69-S	C	- 0.4
	D	- 0.6
<hr style="border-top: 1px dashed black;"/>		
808-J	B	- 0.9
ship #108	C	- 0.8
	D	- 0.3
<hr style="border-top: 1px dashed black;"/>		
909-J	B	- 0.6
Launch #4 #107-S	C	- 0.0
	D	/ 0.3
<hr style="border-top: 1px dashed black;"/>		
808-J	B	- 1.4
Launch #3 #129-S	C	- 0.4
	D	/ 1.5

Sheet No. 3

SHORAN ZERO SETTINGS

Season of 1949

SHIP SETS						
SHORE SETS	PIONEER				EXPLORER	
#	SHIP SET #3		SHIP SET #6		Launch Set #4	
	Rate	Drift	Rate	Drift	Rate	Drift
#1 VALY	99.816	99.816	99.817	99.796		99.816
#2 HART	99.803	99.813	99.809	99.803	99.791	99.828
#3 TINY & SPRING	99.800	99.800	99.795	99.786		99.809
#4 CAPE & BIRD	99.769	99.772	99.777	99.777	99.823	99.822
#5 STEM	Mean 99.792*		Mean 99.792*			99.807
#6 CABLE	99.817	99.820	99.834	99.827		99.811
# ANCHOR				99.818		

* From comparison with EXPLORER'S values see report.

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. **H7728** Datum **NA 1927** Locality **Semisopochnoi Id.** State **Alaska** Date **18 October 1949**

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by **DGR & PAW**

H.E. Finnegan

Chief of Party.

TYPE OF DANGER	DEPTH (FEET) *		LATITUDE AND LONGITUDE		FROM CHARTED OBJECT OR NATURAL FEATURE †			CHART USED ‡		DATE OF LOCATION	REMARKS
	FATHOMETER	LEAD-LINE		SECONDS (IN METERS)	TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	No.	PRINT DATE		
Shoal		9.9 fms.	51 52 179 40	886 326 E	136 T	3160	South Volcano Semisopochnoi Id.	8864	March 1948 (4th Ed.)	1949	Shoalest part of area ESE of Sugarloaf Head.
"		21½ fms.	52 13 179 53	1566 574 E	39 T	16 naut. miles.	Petrel Point	"	"	"	Shoalest part of Petrel Bank.
"		26 fms. <i>H-7727</i>	52 03 179 34	794 312 E	314 T	4770	"	"	"	"	High spots on NE-SW SHOAL LYING 2 miles off NW side of Semisopochnoi Island.
"		20 fms. <i>H-7727</i>	52 01 179 30	732 72 E	267 T	8344	"	"	"	"	"
"		20 fms. <i>H-7727</i>	52 01 179 30	564 926 E	264 T	7540	"	"	"	"	"
"		21 fms. <i>H-7727</i>	52 02 179 31	330 ⁴¹⁰ 828 E	278 T	6466	"	"	"	"	"
"		24 fms. <i>H-7727</i>	52 03 179 33	000 50 E	296 T	5496	"	"	"	"	"
"		18 fms. <i>H-7727</i>	52 00 179 29	358 ⁴⁵⁸ 76 E	008 T	2331	Tuman Point	"	"	"	High spot of shoal area NW of Tuman Pt.

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.
† Record location both by geographic position and by true bearing with distance from object or natural feature shown on chart.
‡ Use largest-scale chart and note print date given in lower left corner of chart.

NOTE.—This form to be used during the season for prompt reports of uncharted dangers. If reports have been sent by wire, fill out this form and mail with confirmations. Enter dates of wires under "Remarks." Copies of reports on this form should be retained and submitted with the descriptive report.

STATISTICS FOR HYDROGRAPHIC SURVEY H-7727

Ship PIONEER

Project CS-218

Ship PIONEER

Day	Vol No.	Date	No. Pos.	No. Stat. Mi.
A	1	29 June	236	78.1
*B	2	30 June	277	96.9
*C	2,3,4	1 July	360	150.7
D	4	6 July	17	9.9
E	4	7 July	6	4.6
F	4	8 July	24	11.5
G	4	9 July	31	14.8
H	4,5	12 July	167	56.5
J	5	13 July	71	30.8
K'	5,6	14 July	97	35.1
L	6	19 July	193	69.9
M	7	27 July	137	46.7
N	7	28 July	93	45.6
P	8	29 July	194	91.2
Q	8,9	30 July	38	17.9
R	10	29 August	107	49.3
*S	10	12 Sept.	79	22.9
*T	10,11	13 Sept.	137	42.8
U	11	1 July	1	----
V	11	7 July	1	----
W	9	25 August	3 (bottom samples)	

TOTAL	11		2269	875.2
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LAUNCH NO. 1

a	12	27 July	49	11.6
b	12	28 July	209	46.3
c	13	29 July	217	35.6

TOTAL	2		475	93.5
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LAUNCH NO. 3

a	14	11 June	125	27.6
b	14	13 June	163	39.1
c	14,15	23 June	88	19.0
d	15	25 June	123	29.1
e	15	29 June	6	2.1
*f	16	1 July	143	25.5
g	16	8 July	203	39.3
h	17	12 July	198	38.0
j	17	22 July	58	9.9
k	17	26 July	23	3.2
l	17,18	27 July	129	21.5
m	18	29 July	120	30.00
n	18	29 August	66	14.1

Total	5		1445	298.4
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* Sweeper Cove like Sta. used - all others Constantine Harbor - see Table note.
 (3.7 ft) (28 ft)

STATISTICS FOR HYDROGRAPHIC SURVEY H-7727 (Cont'd)

LAUNCH NO. 4

Day	Vol. No.	Date	No. Pos.	No. Stat. Mi.
a	19	23 June	86	12.3
b	19	25 June	70	13.5
c	19	29 June	132	23.0
*d	19,20	1 July	121	21.0
e	20	8 July	169	30.6
f	21	12 July	134	25.8
g	21	26 July	6	1.2
h	21	27 July	88	17.0
<hr/>				
TOTAL	3		806	144.4
<hr/>				
SHEET				
TOTALS	21		4995	1411.5

Area Square Statute Miles 137.7

BAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

13 March 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
21 volumes of sounding records for

HYDROGRAPHIC SHEET 7727

Locality Rat Islands, Aleutian Islands

Chief of Party: H. E. Finnegan in 1949

Plane of reference is mean lower low water, reading

2.5 ft. on tide staff at Constantine Harbor

9.9 ft. below B. M. 1 (1944)

3.0 ft. on tide staff at Sweeper Cove

7.0 ft. below B. M. 1 (1943)

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

Constantine Harbor = 2.8 feet

Sweeper Cove = 3.7 feet

Condition of records satisfactory except as noted below:

E. C. McKay
Section

Chief, ~~Division of Tides and Currents.~~

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Alaska</u>				(for title)							1
<u>Aleutian Islands</u>				" "							2
<u>Rat Islands</u>				" "							3
											4
<u>Bering Sea</u>									USHB		5
<u>Semisopochnoi Island</u>									"		6
<u>Petrel Point</u>									"		7
<u>Tuman Point</u>									"		8
											9
											10
											11
											12
											13
											14
											15
<u>Constantine Harbor</u>				(location of tide gage)					USHB		16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red are approved.
 3-13-50 L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7727

Records accompanying survey:

Boat sheets³; sounding vols.. ²¹.....; wire drag vols.;
 bomb vols.; graphic recorder rolls ³⁹ envel.....;
 special reports, etc. ⁷² Shoran Abstract Sheets

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

Number of positions on sheet	.....	4995
Number of positions checked	.....	32
Number of positions revised	.....	9
Number of soundings revised (refers to depth only)	.....	37
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	71 0
Junctions	Time	2
Verification of soundings from graphic record	Time	5

Preliminary Verif: Rudzinski

Verification by *Norfolk Processing Office* Total time *26* Date *12-28-52*
Ver. completion Gallahan *215* *5/14/73*

Reviewed by *Rudzinski* Time *59* Date *1-2-53*

" *John T. Gallahan* *3240* *5-19-73*
inspected D. R. Engle *16* *7-12-73*

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

REGISTRY No. ~~9-7077~~

Field No. PI-A-49

Scale 1 : 20,000

State Alaska, Aleutian Islands General locality Rat Islands

Specific locality North Coast of Semisopochnoi Island

Dates: Survey began 19 May 1949 Completed 30 June 1949

Photography....., Supplemented by ground surveys to.....

Project No. CS-218 Instructions dated 3 February 1938

Vessel } or PIONEER Chief of party H. K. Finnegan
~~ALBATROSS~~

Field work by Ship's Officers Office work by Ship's Officers

Final inking by L. F. Woodcock

Ground elevations } in feet above { M. H. W.
Treetop elevations } or {

Contours } by { Planetable } Interval ft.
Approximate contours } Multiplex }
Form lines } {

REMARKS Graphic Control Sheet - No Shoreline.

Applied to H-7730 (1949)
and then destroyed.

No declinatoire observation made.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

Registry No. ~~T-7075~~

Field No. **PI-B-49**

Scale **1 : 20,000**

State **Alaska, Aleutian Islands** General locality **Rat Islands**

Specific locality **West Coast of Semisopochnoi Island**

Dates: Survey began **19 May 1949** Completed **30 June 1949**

Photography....., Supplemented by ground surveys to

Project No. **CS-218** Instructions dated **3 February 1938**

Vessel } or **PIONEER** Chief of party **H. E. Finnegan**

Field work by **Ship's Officers** Office work by **Ship's Officers**

Final inking by **L. F. Woodcock**

Ground elevations } in feet above { M. H. W.
Treetop elevations } or {

Contours } by { Planetable } Interval ft.
Approximate contours } Multiplex }
Form lines }

REMARKS **Graphic Control Sheet - No Shoreline.**

Applied to H-7726 (1949) & H-7727 (1949) and then destroyed.

No declinatoire observation made.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

REGISTRY No. ~~H-7726~~.....

Field No. PI-C-49.....

Scale 1 : 20,000.....

State Alaska, Aleutian Islands..... General locality Rat Islands.....

Specific locality East Coast of Semiseopobnoi Island.....

Dates: Survey began 19 May 1949..... Completed 30 June 1949.....

Photography....., Supplemented by ground surveys to.....

Project No. CS-218..... Instructions dated 3 February 1938.....

Vessel } or PIONEER..... Chief of party H. E. Finnegan
~~ANNEX~~

Field work by Ship's Officers..... Office work by Ship's Officers.....

Final inking by L. F. Woodcock.....

Ground elevations } in feet above { M. H. W.
Treetop elevations } or {

Contours } by { Planetable } Interval ft.
Approximate contours } Multiplex }
Form lines }

REMARKS Graphic Control Sheet - No Shoreline......

Applied to

H-7726 (1949)

H-7727 (1949)

H-7730 (1949)

and then destroyed.

No declinoire observation made.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

REGISTRY No. ~~3-5000~~

Field No. **PI-D-49**

Scale **1 : 20,000**

State **Alaska, Aleutian Islands** General locality **Rat Islands**

Specific locality **South Coast of Semisopochnoi Island**

Dates: Survey began **19 May 1949** Completed **30 June 1949**

Photography....., Supplemented by ground surveys to.....

Project No. **CS-218** Instructions dated **3 February 1938**

Vessel } or **PIONEER** Chief of party **H. E. Finnegan**
~~EGG~~

Field work by **Ship's Officers** Office work by **Ship's Officers**

Final inking by **L. F. Woodcock**

Ground elevations } in feet above { M. H. W.
Treetop elevations } or {

Contours } by { Planetable } Interval ft.
Approximate contours } Multiplex }
Form lines }

REMARKS **Graphic Control Sheet - No Shoreline.**

*Applied to H-7726 (1949)
and then destroyed.*

No declinatoire observation made.

DESCRIPTIVE REPORT TO ACCOMPANY GRAPHIC CONTROL SHEETS T-7077(PI-A-49),
T-7078(PI-B-49), T-7079(PI-C-49) and T-7080(PI-D-49)

Project CS-218

Field Season 1949

Ship PIONEER

H. E. Finnegan, Chief of Party

Aleutian Islands

Rat Islands

Semisopochnoi Island

INSTRUCTIONS:

Original instructions were dated 3 February 1938 and applicable supplemental instructions were dated 1 March 1938 and 10 February 1948.

LIMITS:

These surveys were made for the purpose of locating the hydrographic signals around the entire shoreline of Semisopochnoi Island. The respective limits of the individual surveys are as follows:

- T-7077 (PI-A-49) - North coast of Semisopochnoi Island
- T-7078 (PI-B-49) - West coast of Semisopochnoi Island
- T-7079 (PI-C-49) - East coast of Semisopochnoi Island
- T-7080 (PI-D-49) - South coast of Semisopochnoi Island

CONTROL USED:

At the beginning of the 1949 field season, the only prior triangulation on Semisopochnoi Island was the station SEMISOPOCHNOI 1944 and an azimuth mark, POCH AZIMUTH MARK 1944. Additional triangulation stations were established in 1949 to furnish control for air photographs and the graphic control sheets. In addition, a number of natural objects were located by triangulation cuts, computed and plotted on the graphic control sheets to furnish supplemental control for the location of hydrographic signals.

METHODS OF LOCATING SIGNALS:

Most of the hydrographic signals were located by sextant observations from offshore. Ship positions were determined by sextant observations on triangulation stations, taken simultaneously with sextant cuts to the various hydrographic signals. The cuts were plotted graphically and signal locations determined by intersection of cuts. This method was supplemented by theodolite cuts from triangulation stations, which have been plotted graphically, and by plane-table traverse. On sheet ~~T-7079~~ (PI-C-49), the signals in the bight south of Pochnoi Point (signals Den to Ice inclusive), were located by plane-table traverse.

On sheet ~~T-7077~~ (PI-A-49), it was found necessary to use signal Pet in determining ship positions for sextant cuts. Signal Pet had also been located by sextant cuts. To verify its position, a plane-table traverse was run from triangulation station HEAD to signal Pet. The same location was obtained by traverse and by sextant cuts. Signals Fal and Sam were located in the same manner.

INDEX OF CUTS:

All sextant cuts taken from the Ship PIONEER for these sheets are contained in the sounding volume entitled "Cuts to Hydrographic Signals, All Sheets, Season 1949", pages 3 to 36 inclusive. Cuts to supplemental signals taken from the launches are contained in the launch sounding volumes and have been indexed in the front of each volume. Theodolite cuts from the various triangulation stations are shown on the List of Directions for each station.

LANDMARKS:

See special report "AIR-PHOTO REPORT 1949"

LIST OF NEW NAMES:

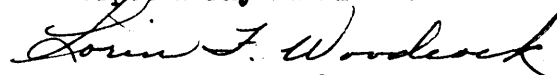
See special report on "Geographic Names".

PERSONNEL AND DATES OF FIELD WORK:

The plane-table work on the north coast of Semisopochnoi Island, sheet ~~T-7077~~ (PI-A-49) was by Lieut. Comdr. Ernest B. Lewey. The plane-table work on the east coast of Semisopochnoi Island, sheet ~~T-7077~~ (PI-C-49) was by Comdr. George A. Nelson. The sextant and theodolite cuts to locate hydrographic stations were taken by various ship's officers.


Most of the field work on these sheets was accomplished in May and June 1949.

Respectfully submitted



Lorin F. Woodcock
Lieut. USC&GS

Approved:



Henry E. Finnegan
Comdr. USC&GS
Chief of Party

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7727

PI-2149
FIELD NO. PI-2349

Alaska-Aleutian Islands, Rat Islands, North Side Semisopchnoi
Island
Project No. CS-218

Surveyed - June - September 1949

Scale 1:20,000

Soundings:

808 Fathometer
NMC-2 Fathometer

Control:

Shoran
Sextant fixes on shore signals

Chief of Party - H. E. Finnegan
Surveyed by - G. A. Nelson, E. B. Lewey, C. J. Beyma, P. A.
Weber and L. F. Woodcock
Protracted by - A. E. Greaves
Soundings plotted by - A. E. Greaves
Preliminary verification - I. M. Zeskind
Verified and inked by - Norfolk Processing Office
Reviewed by - I. M. Zeskind, 5 January 1953
Inspected by - R. H. Carstens

1. Shoreline and Control

Contemporary air-photographic surveys of Semisopchnoi Island have not been completed.

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

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated, except in depths less than 5 fms. where foul areas and heavy kelp in some areas prevented development to the low-water line.

The survey covers an area whose offshore limits extend two to six miles from the northern shore of Semisopchnoi Island. A conspicuous ridge revealed by the fathograms to be covered with sand waves 4-8 fms. in height extends

northeasterly from Tuman Point. Several offlying shoals are found in this area, the most prominent of which are the 9.3-fm. sounding in lat. $51^{\circ} 58.17'$, long. $179^{\circ} 27.78'$, the 18-fm. sounding in lat. $52^{\circ} 00.25'$, long. $179^{\circ} 29.05'$, and the 9-fm. sounding in lat. $52^{\circ} 01.12'$, long. $179^{\circ} 33.72'$. The inshore area is generally rocky and foul. Except for the above irregularities, the bottom is generally smooth.

4. Junctions with Contemporary Surveys *(Comparison only at this stage)*

Adequate junctions were effected with H-7650 (1948-49) on the west, with H-7729 (1949) on the north, with H-7728 (1949) on the northeast, with H-7730 (1949) on the east, and with H-7726 (1949) on the south.

5. Comparison with Prior Surveys

H-6906 (1935) USN 1:150,000

The present survey falls within the limits of this small-scale U.S. Navy reconnaissance survey. A comparison between the present survey and the few sounding lines controlled by dead reckoning on this prior survey reveals nothing of cartographic importance.

The present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 8864 (Latest print date 9/29/52)

A. Hydrography

The charted hydrography originates with the present survey prior to verification and review. Except as noted below only minor difference of 1-2 fms. were found between the charted and present depths.

The $6-3/4$ -fm. least depth on the shoal in lat. $51^{\circ} 58.2'$, long. $179^{\circ} 27.7'$, has been revised to 9.3 fm. *(charted 92)* during verification and review of the present survey.

B. Aids to Navigation

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

7. Condition of Survey

a. The survey has been given only a preliminary verification in accordance with recently adopted procedure. However, it is noted that practically all the position numbers were placed so close to the position dots by the smooth plotter as to interfere with the inking of the soundings on the positions. A complete statement

concerning the condition of the survey will be made after the survey has been completely verified and inked.


- b. Few bottom characteristics were obtained in the area of the present survey.

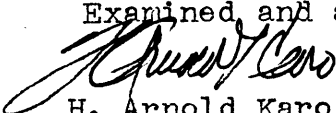
8. Compliance with Project Instructions


The present survey adequately complies with the Project Instructions, except as noted in paragraph 7b.

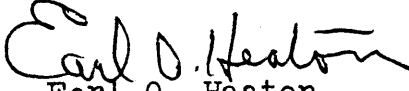
9. Additional Field Work Recommended

This is a basic survey. As a matter of record, however, it is noted that the least depth ^{91 (vol. 18 p. 5)} on the shoal in lat. $58^{\circ} 58.2'$, long. $179^{\circ} 27.7'$, was read in kelp traces on the fathograms. Substantiation of this reading by hand lead investigation would be desirable at an opportune time. Attention is also directed to the lack of bottom characteristics noted in paragraph 7b above.


H. R. Edmonston
Chief, Nautical Chart Branch

Examined and approved:

H. Arnold Karo
Chief, Division of Charts


L. S. Hubbard
Chief, Section of Hydrography


Earl O. Heaton
Chief, Division of Coastal Surveys

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

ADDENDUM TO HYDROGRAPHIC SURVEY H-7727 (1949)

Verification and inking completed.....	Norfolk Processing Office
Curves inked by.....	J. T. Gallahan
Topography inked by.....	J. T. Gallahan
Review addendum by.....	J. T. Gallahan
.....	Date: July 12, 1973
Inspected by.....	D. R. Engle

The verification of this survey has been completed. Soundings and depth curves have been completely inked and junctional soundings have been transferred.

Shoreline

The shoreline originates with reviewed photogrammetric survey T-8560 (1953), T-8561 (1953), and T-8562 (1953) and was added subsequent to preliminary verification and review. Many changes were made by the reviewer to the shoreline that had been originally applied.

Junctions with Contemporary Surveys

Adequate junctions were effected with H-7650 on the west, H-7729 (1949) on the north, H-7728 (1949) on the northeast, H-7730 (1949) on the east, and H-7726 (1949) on the south.

Comparison with Chart 8864 (print date August 7, 1971)


A. Hydrography

The charted hydrography originates with the present survey subsequent to preliminary verification and review and is in substantial agreement with the present survey except for the omission of a 28-fathom shoal on the present survey in lat. $52^{\circ} 00.35'$, long. $179^{\circ} 43.86'$ which falls outside the charted 30-fathom curve.

Condition of the Survey

A. Completion of the verification reveals that the smooth plotting was well done except as noted in the Review paragraph 7.

B. The Descriptive Report is complete and comprehensive.



Chief, Marine Chart Division

H-7727

Items for Future Presurvey Review

Handlead verification of least depth on 9.3-fathom shoal in lat. $51^{\circ}58.2'$, long. $179^{\circ}27.2'$ is desirable.

Position Index Lat.	Bottom Change Long. (East) Index	Use Index	Resurvey Cycle (yrs.)	
515	1792	1	0	50
515	1793	1	0	50
515	1794	1	0	50
520	1792	1	0	50
520	1793	1	0	50
520	1794	1	0	50

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7727

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
May 1, 1950	8863 8864	D.H. Benson	Before After Verification and Review
Dec 1955	8863	A.F. Stegman	Before After ^{Preliminary} Verification and Review <i>Completely</i>
May 13, 1957	9102	C.R. Wittmann	Before After ^{Preliminary} Verification and Review <i>Completely</i> <small>VER. via Aug 8863 3ma</small>
11/61	8864	<i>J.E.</i>	Before After Verification and Review -
12/29/77	8863	K.A.U.D.	Before After Verification and Review - <i>signature</i> <i>Examined D.R. for critical corr. - no corr.</i>
12/09/92	16450	Don Corbett	Before After Verification and Review <i>Fully app'd</i> <i>New Metric Chart</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			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.