8438

Diag. Cht. No. 8862.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. EK-2357 Office No. H-8438

LOCALITY

State ALASKA

General locality ALEUTIAN ISLANDS

Locality FENIMORE PASS & ATKA PASS

19 57 & 1958

CHIEF OF PARTY

E. H. KIRSCH AND G. C. MAST

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DATE MAR 4 - 1959

USCOMM-DC 5087

8438

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-8438

Field No. EX-2357

State Alaska

General locality Aleutian Islands - Andreanof Islands

Locality Fenimore Pass to Atka Pass

Scale 1: 20,000 Date of survey July 12 to Sept 3, 1957
July 21 to Aug 25, 1958

Instructions dated 16 December 1954; Revised 16 October 1957

Vessel USC&GSS EXPLORER

Chief of party E. H. KIRSCH (1957) - G.C. MAST (1958)

Surveyed by ANS, JTJ, HDR, JOP, LLP, AL, CIH, LFW, EWR, and LDT.

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

Fathograms scaled by Fathometer Readers

Fathograms checked by Ships Officers

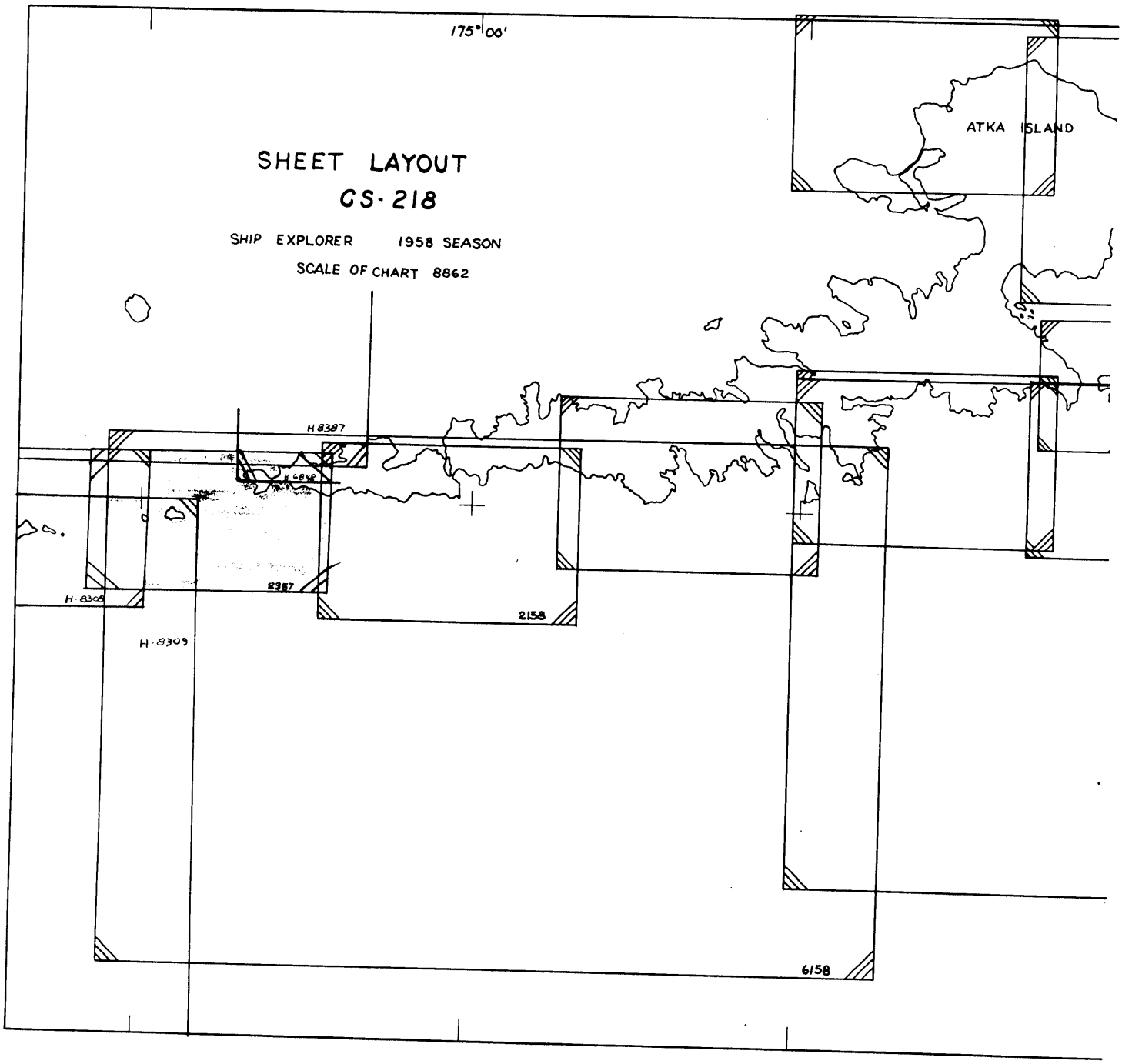
Protracted by C.I. HARDING (1957) - J.K. RICHARDS, G. DeGROOT (1958)

Soundings penciled by C.I. HARDING (1957) - G.DeGROOT (1958)

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 777032


175°00'
ATKA ISLAND
SHEET LAYOUT
CS-218
SHIP EXPLORER 1958 SEASON
SCALE OF CHART 8862
H 8387
H 8308
8367
2158
H-8309
6158

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SURVEY

H-8438 (Field No. EX-2357)

FENIMORE PASS TO ATKA PASS

ALEUTIAN ISLANDS, ALASKA

1957 - 1958

SCALE OF SURVEY - 1: 20,000

USC&GSS EXPLORER

E.H. KIRSCH, COMDG., 1957

G.C. MAST, COMDG., 1958

SURVEYED BY: A.N. STEWART, J.T. JARMAN, H.D. REED Jr., J.O. PHILLIPS, L.L. POSEY, A. LARSEN Jr., C.I. HARDING, L.F. WOODCOCK, E.W. RICHARDS, and L.D. THURMAN.

A. PROJECT

This survey was executed in accordance with revised instructions, Project CS-218, Aleutian Islands, Alaska, dated 19 December 1954; and revised instructions, Project CS-218, dated 16 October 1957.

B. SURVEY LIMITS AND DATES

This survey covers the in-shore area around FENIMORE ROCK, IKIGINAK ISLAND, OGLODAK ISLAND, and the west end of ATKA ISLAND. Hydrography extends from Lat. 51° 55' N to 52° 03' N and Long. 175° 13' W to 175° 34' W.

Junctions were made with the following contemporary surveys: H-8387, 1:40,000, 1957 on the northern limit; H-8439, 1:20,000, 1958 on the eastern limit; and (EX-6158), 1:60,000, 1958 on the southern limit. Junctions were made with the following earlier surveys: H-8308, 1;20,000, 1956 on the western limit; H-6848, 1:20,000, 1943 on the northeastern corner; and H-8309, 1:60,000, 1956 on the southwestern corner.

The survey was made between 12 July and 3 September 1957, and 21 July and 25 August 1958.

C. SURVEY VESSEL AND EQUIPMENT

The off-shore portions and the center of ATKA PASS were surveyed

by the ship EXPLORER, using 808 graphic recorders 1135 in 1957, and 57-20 for the 1958 season work.

In-shore areas were surveyed by EXPLORER Launches 1, 2, and 3, based on the ship. 808 graphic recorders, and portable EDOs were used; launch 1 No. 57-27, launch 2 EDO No. 212 in 1957, No. 158 SPX through 24 July and 57-27 in 1958; and launch 3 No. 128 in 1957 and No. 57-21 in 1958. Hand lead soundings were used to supplement the echo soundings.

Bottom samples were obtained with a snapper on a wire sounding machine. Turning radius of the ship (from a 1952 Descriptive Report)

Full right rudder	360 meters
Full left rudder	275 meters

All fathometers were calibrated for 800 fm/sec.

D. TIDE AND CURRENT STATIONS

A portable automatic tide gage was installed on the BERING SEA side of the small rocky island on which SHORAN station NEF is located. The position of the gage was Lat. 51° 57.6' N, Long. 175° 35.2' W. The gage was installed on 7 June 1957, and was maintained in continuous operation until its removal on 24 August 1957. Tide reducers for the 1957 hydrography were obtained from this gage with no time or range corrections applied.

A portable automatic tide gage was installed on the south side of ATKA ISLAND, near ATKA PASS, on 8 July 1958, and operated until 12 September 1958. Tide reducers for the 1958 hydrography were obtained from this gage, and from tidal data furnished by the Washington office, for periods when the gage was inoperative. No time or range corrections were applied.

Current stations No. 48 (Lat. 51° 58.2' N, Long. 175° 34.3' W) and No. 53 (Lat. 51° 59.8' N, Long. 175° 23.2' W) were occupied during the 1958 season. Current Stations were not plotted on the smooth sheets because all data had already been forwarded to Washington, and there was no copy available to the smooth plotter.

E. SMOOTH SHEET

The smooth sheet projection was constructed by hand, aboard ship in 1957, on a flat 31" x 53" sheet of Whatman paper. 1957 SHORAN arcs were drawn as soon as the projection was checked.

this work not be logged for H-8438

Some of the Boat Sheet work, done during the 1958 season, fell outside the Smooth Sheet limits. This hydrography was plotted on H-8439 (EX-2158) and H- (EX-6158). All data plotted on these sheets was copied into the appropriate volumes.

Shoreline and topography were verified in accordance with section 757 of the Hydrographic Manual.

F. CONTROL STATIONS

Triangulation control was used as follows: SEAL, USN, 1943; KIGUN, C.M.D., 1943; FOUL, C.M.D., 1943; FEN, G.A.N., 1956; LAVA, G.C.M., 1958; DAK, 1943; KIG, 1943; and GUN, 1943.

SHOR AN station EAST was constructed over triangulation station EAST, USN, 1934; station NEF was located by triangulation in 1956; station LAV was located by distance and direction from LAVA, 1958; and station SAN was located over triangulation mark SANDY, 1957.

Photo-Hydro signals located in 1957 were identified on 9 lens photographs in the field, and final positions were determined by radial plot in the Washington Office. Signals located during the 1958 Field Season were located on 9 lens photographs and transferred to manuscripts. One signal, YAP, was located by sextant cuts. Topographic Manuscripts used to locate Photo-Hydro signals are: T-11551, T-11552, and T-11540.

A list of signals is included in this report.

G. SHORELINE AND TOPOGRAPHY

Shoreline and fore shore details for ATKA ISLAND are from Advance Manuscript T-11540. Shoreline and fore shore details for FENIMORE ROCK, IKIGINAK ISLAND, and OGLODAK ISLAND, are from Incomplete Manuscript T-11552. T-11552 was later classified as advance and the shoreline was inked from this manuscript. Field inspection of this area has not been accomplished, and the rock elevations shown, originate with the hydrography. Fore shore details around ATKA ISLAND were not inked as field inspection is not complete. This will be completed in 1959.

Heavy kelp, rocky shoreline, and breakers, prevented the delineation of the low water line, and in many areas, the 5 fm. curve.

Details which were located by the hydrographer are as follows:

Rock awash in foul area at Lat. 52° 00.28' N, Long. 175° 18.20' W (ML #1 3b)

Sunken rocks at Lat. 52° 00.43' N, Long. 175° 18.52' W
(ML #1 97b, 98b, 99b)

Rock awash at Lat. 52° 00.43' N, Long. 175° 18.2' W
(ML #1 85b)

Rock awash at Lat. 52° 00.85' N, Long. 175° 15.20' W
(ML #3 139h)

Rock awash at Lat. 52° 02.08' N, Long. 175° 17.50' W
(ML #2 7d)

Bare rocks at Lat. 51° 59.20' N, Long. 175° 26.53' W
(ML #2 5h, transferred from Boat Sheet)

Rock awash at Lat. 51° 58.60' N, Long. 175° 27.20' W
(ML #2 159 l)

Rock awash at Lat. 51° 58.70' N, Long. 175° 27.62' W
(ML #2 119m)

Rock awash at Lat. 51° 59.20' N, Long. 175° 27.57' W
(ML #2 51 b)

H. SOUNDINGS

Soundings were obtained with the equipment listed in section C.

Soundings obtained in 1957 were corrected as explained in Special Report on Fathometer Corrections, 1957 Season, which has been forwarded to the Director. Abstracts of phase comparisons, for the 808 fathometers us in 1958, are included in this report.

I. CONTROL OF HYDROGRAPHY

Most of the hydrography during the 1957 season was controlled by SHORAN distances from EAST and NEF, except as noted. Both stations were manned continuously during the period of sounding.

Ship work through ATKA PASS is adequately controlled at the north end, but at the south end, SHORAN fixes were so weak that a small error in reading or calibration can cause a large shift in position. Through the center, one and sometimes both stations, were blocked out by intervening land masses. The hydrography, as plotted, holds together very well.

Triangulation stations KIG 1943; DAK 1943; GUN 1943, and SEAL (USN) 1943 (all peaks or high points of islands) were used to control ship hydrography south of the chain. DAK and GUN are no check stations, and Seal was located using two concluded angles. All these stations are rounded peaks which are indistinct. For the above reasons, the hydrography is of questionable accuracy and subject to shift.

Visual fixes on Photo-Hydro signals were used by launches to control hydrography around ATKA ISLAND. In some instances, one SHORAN arc and one angle on tangents were used close in-shore. The tangents on FENIMORE ROCK, IKIGINAK ISLAND, and OGLODAK ISLAND, were plotted from preliminary manuscripts in 1957. Final shoreline, which was available in 1958, supercedes the 1957 smooth plotted shoreline. This change in shoreline may shift some of the positions smooth plotted in the fall of 1957. All 1957 data has been forwarded to Washington, therefore, this discrepancy could not be resolved.

No shift noted AHC

SHORAN distances were corrected as explained in SHORAN Report, 1957 Season.

During the 1958 season, in-shore work and the hydrography in ATKA PASS was controlled by sextant fixes on Photo-Hydro signals. Off-shore hydrography was controlled by SHORAN distances from stations NEF, LAV, and SAN. SHORAN distances were corrected as explained in SHORAN Report, 1958 Season.

AHC program available

Hydrography on "f" day ML #3, and "g" day ML#2, was controlled by one SHORAN distance and one angle on signals on shore. Some of this control is weak but most of these areas are adequately covered by lines of stronger control and the crossings are good.

A SHORAN correction of +0.005 st. miles was applied to the following positions: 21 1, 42 1, 43 1, 44 1, 63 1, 92 1, 106 1, 108 1, 69m, 70m, 75m, 76m, 77m, 82-86m, 94m, and 95m (launch no. 3). These positions are in the area between FENIMORE ROCK and IKIGINAK ISLAND. In each case, only one sextant angle was obtained along with one SHORAN distance from station NEF. The correction was determined by comparing the SHORAN distance with the true distance from fixes which were controlled by two angles, and a SHORAN distance on NEF in this same vicinity. An abstract of this data is included in this report.

J. ADEQUACY OF SURVEY

This survey is complete and is adequate to supercede prior surveys.

Portions of this survey which are less accurate than the other parts, are discussed in Section I.

Junctions were made with surveys H-8387, 1: 40,000, 1957, on the north; H-8309, 1: 60,000, 1956, and EX-6158, on the south. There is no overlap between this survey and H-8309 and H-8387, however, the depths curves could be drawn adequately. Junction with EX-6158 was satisfactory.

Tracings of the junctions with H-8308, 1: 20,000, 1956, and H-6848, 1: 20,000, 1943, were made and will be forwarded with this sheet. Junction was very good and depth curves could be adequately drawn.

Junction with H-8439, 1: 20,000, 1958, was good as shown by the portion of the hydrography from this sheet which was plotted on H-8439, as mentioned in paragraph E.

K. CROSS LINES

Cross lines consisted of 8.9% of all lines run. Cross lines generally agreed very closely except in areas of very irregualr bottom, where there were a few disagreements of 2 to 3 fathoms.

The 40 fm sounding at Lat. 51° 58.10' N, Long. 175° 21.67' W, appears to be a poor crossing, however, investigation of the fathograms shows this to be a sharp pinnacle which evidently was not crossed on the other lines.

Junctions and crossings show the 1957 ship soundings approximately 2 fathoms shallower than the 1958 ship work. Records and fathograms for the 1957 work had already been forwarded to Washington, so this discrepancy could not be resolved. A listing of the poor crossings is included in this report.

check V.C.'s and crossings with lacunch lines to detect which year in error

L. COMPARISON WITH PRIOR SURVEYS

Parts of this survey are covered by USN H-6898, 1: 60,000, 1934. This prior survey was primarily of a reconnaissance nature and should be superceded by the present survey.

Agreement between the two surveys is generally good except for the places listed below:

Least depth through ATKA PASS at Lat. 52° 00.2' N, Long. 175° 22.7' W, is 19 fm compared to 15 fms shown on the prior survey. Generally deeper soundings are shown all through the pass on the present survey.

Soundings not listed on the preliminary review, which are in poor agreement with the present surveys, are as follows:

22 fm	Lat. 51° 58.86' N	Long. 175° 23.47' W
22 fm	Lat. 51° 58.97' N	Long. 175° 22.71' W
27 Fm	Lat. 51° 59.10' N	Long. 175° 22.42' W

28 fm	Lat. 51° 59.27' N	Long. 175° 22.17' W
60 fm	Lat. 51° 56.14' N	Long. 175° 28.30' W
57 fm	Lat. 51° 56.27' N	Long. 175° 24.97' W

M. COMPARISON WITH CHARTS

This survey was compared with Chart Number 9138 (published April 1944, Scale 1: 30,000) which is the largest scale published chart of this area.

No evidence of the existance of the following rocks was found:

Rock awash at Lat. 51° 58.81' N, Long. 175° 32.27' W
Rock awash at Lat. 51° 58.98' N, Long. 175° 29.87' W
Sunken Rock at Lat. 51° 58.41' N, Long. 175° 29.79' W

It is recommended that these rocks be deleted from the chart.

A sounding of 12 fms should replace the 13 fm sounding at Lat. 51° 58.75' N, Long. 175° 31.70' W. EWB 10-21-59

A sounding of 7 fms was found at Lat. 51° 59.06' N, Long. 175° 31.50' N, which should replace the 11 fm soundings in that area.

Seventeen fm soundings were found at Lat. 51° 59.40' N, Long. 175° 31.43' W, and should replace the 14 fm sounding charted here.

A sounding of 3 fms was found at Lat. 51° 58.48' N, Long. 175° 31.63' W, which should replace the 9 fm sounding charted here.

A 2 fm sounding was found at Lat. 52° 00.05' N, Long. 175° 26.71' W, which should replace the 3 fm sounding there.

No indication of Kelp was found at Lat. 51° 59.7' N, Long. 175° 23.6' W.

Soundings for chart 9138 were taken from USN survey H-6898 and the same differences were found as discussed in section L.

N. DANGERS AND SHOALS

The shoal of 3 fms at Lat. 51° 58.48' N, Long. 175° 31.63' W, was the only newly found shoal.

O. COAST PILOT INFORMATION

No significant changes have been noted.

P. AIDS TO NAVIGATION

There are no aids to navigation in this area.

Q. LAND MARKS FOR CHARTS

Mountain peaks and small islets are the only land marks in this area.

R. GEOGRAPHIC NAMES

There are no new geographic names for this area. The names penciled on this sheet were taken from charts 9137 and 9138.

No geographic name report was submitted for either the 1957 or the 1958 season. Such a report is proposed for 1959.

Z. TABULATION OF APPLICABLE DATA

(1) Submitted with this report:

a. 1 smooth sheet
b. 3 boat sheets
c. 14 volumes of sounding records (Vol. 7-20)
d. 5 envelopes of fathograms
e. 1 tracing cloth overlay of in-shore hydrography around FENIMORE ROCK.
f. Tracings of junctions with H-6848, 1: 20,000, 1943, and H-8308, 1: 20,000, 1956.
g. Manuscripts and blue-lines of T-11551, and T-11552
h. Photostatic copies of H-6848, H-8308, H-8309, and H-6898

(2) Submitted previously:

a. 3 envelopes of fathograms, 7 March 1958
b. 6 volumes of sounding records (Vol. 1-6), 7 March 1958
c. Report on Fathometer Corrections 1957 season, 27 Feb 1958
d. Special report on SHORAN corrections, 1957 field season 27 Feb 1958.
e. Special report on SHORAN corrections, 1958 Field Season 9 Jan 59.
f. Tide Marigrams, FENIMORE PASS tide gage no. 7-37, 22 Jan 58; Leveling Record FENIMORE PASS tide gage, 10 Jun 57.
g. Tide Marigrams, ATKA PASS no. 1-10, 19 Aug 58; No. 11-15, Sep 13, 1958; Leveling record ATKA PASS tide gage 19 Jul 58.
h. Current observations, 1 Aug 58.
i. 1957 Season's Report, 15 Nov 57.
j. 1958 Season's Report, 31 Oct 58.

Glenn DeGroot

GLENN DeGROOT
ENS C&GS

STATISTICS FOR HYDROGRAPHY SURVEY H-8438

1957 - 1958

USC&GSS EXPLORER

PROJECT CS-218

VESSEL	DATE	DAY	VOL	NO. POS.	WIRE	MI. SOUNDING (N)
EXPLORER	12 Jul 57	A	I	86	0	31.4
"	13 Jul 57	B	I	147	0	59.7
"	14 Jul 57	C	II	108	0	32.8
"	15 Jul 57	D	II	113	0	41.2
"	3 Sep 57	E	II	7	7	0.0
"	5 Aug 58	F	XIII	209	0	67.5
"	6 Aug 58	G	XIII XIV	280	0	92.5
"	9 Aug 58	H	XIV XV	203	0	58.6
"	12 Aug 58	J	XV	23	0	6.8
"	13 Aug 58	K	XV XVI	111	13	31.0
"	15 Aug 58	L	XVI	174	0	54.2
"	20 Aug 58	M	XVI	11	0	3.0
"	24 Aug 58	N	XVI XX	33	6	8.5
ML # 1	21 Jul 58	A[a]	VIII	85	0	16.3
"	22 Jul 58	b	VIII	155	0	28.2
"	24 Jul 58	c	X	73	0	12.0
ML # 2	12 Jul 57	a	III	23	0	4.0
"	14 Jul 57	b	III	124	0	20.4
"	15 Jul 57	c	III	153	0	26.2

VESSEL	DATE	DAY	VOL	NO. POS.	WIRE	MI. SOUNDING (N)
ML # 2	13 Aug 57	d	IV	12	0	3.2
"	3 Sep 57	e	IV	67	3	9.0
"	21 Jul 58	f	IX	61	0	11.5
"	22 Jul 58	g	IX	71	0	13.0
"	24 Jul 58	h	IX	24	0	3.5
"	4 Aug 58	j	IX	87	0	11.2
"	5 Aug 58	k	IX XII	21	0	2.7
"	13 Aug 58	l	XII	184	0	29.4
"	14 Aug 58	m	XII XVIII	163	0	25.3
"	15 Aug 58	n	XVIII	184	0	28.9
ML # 3	12 Jul 57	a	V	130	0	23.5
"	13 Jul 57	b	V	119	0	22.0
"	14 Jul 57	c	VI	111	0	17.5
"	15 Jul 57	d	VI	141	0	20.5
"	3 Sep 57	e	VII	76	0	9.9
"	22 Jul 58	f	VII	99	0	15.5
"	24 Jul 58	g	VII	70	0	11.0
"	4 Aug 58	h	XI	146	0	23.0
"	5 Aug 58	j	XI	17	0	2.2
"	13 Aug 58	k	XI	126	0	15.8
"	14 Aug 58	l	XVII	172	0	28.0
"	15 Aug 58	m	XVII	96	0	16.0
"	20 Aug 58	n	XIX	88	0	9.3
"	24 Aug 58	p	XIX	55	0	5.4
"	25 Aug 58	q	XIX	41	0	5.8
		TOTALS:		4479	29	957.4

Total number of sq. Nautical miles surveyed - 747

TIDE NOTE

TO ACCOMPANY HYDROGRAPHIC SURVEY H-8438

(Field No. 2357)

1957 - 1958

USC&GSS EXPLORER

Tide reducers for the 1957 work were taken from the FENIMORE PASS Tide Gage, located at Lat. 51° 57.6' N, Long. 175° 35.2' W. Soundings were reduced to MLLW; staff reading of MLLW was 3.8 feet. No time or range corrections were applied to the observed tides.

Tide reducers for the 1958 work were taken from the ATKA PASS Tide Gage and from tidal data, furnished by the Washington Office, for periods when the gage was inoperative. Location of the gage was Lat. 52° 00.4' N, Long. 175° 19.2' W. All soundings were reduced to MLLW, no time or range corrections were applied to the observed tides. Staff reading of MLLW was 1.2 feet on staff installed on 20 July 1958.

GEOGRAPHIC NAME LIST

TO ACCOMPANY HYDROGRAPHIC SURVEY H-8438 (EX-2357)

1957 - 1958

USC&GSS EXPLORER

Geographic names on this sheet Are:

ATKA ISLAND

ATKA PASS

BERING SEA

CAPE KIGUN

CRESCENT BAY

FENIMORE PASS

FENIMORE ROCK

IKIGINAK ISLAND

KIGUN BAY

OGLODAK ISLAND

PACIFIC OCEAN

SLOPE POINT

FATHOMETER PHASE COMPARISONS

808 FATHOMETER NO. 57-20

1958 Season
Ship EXPLORER

A Scale	B Scale	A-B
47.0	47.3	-0.3
46.9	47.3	-0.4
46.9	47.0	-0.1
46.7	47.0	-0.3
46.7	47.2	-0.5
46.8	47.2	-0.4
46.8	47.1	-0.3
46.8	47.1	-0.3
46.8	46.9	-0.1
46.5	46.9	-0.4
	Mean	-0.31

(All depths in fathoms)

B Scale	C Scale	B-C
79.0	81.1	-2.1
79.5	81.1	-1.6
79.5	81.2	-1.7
79.8	81.2	-1.4
79.8	81.3	-1.5
79.8	81.3	-1.5
79.8	81.3	-1.5
80.0	81.3	-1.3
80.0	81.6	-1.6
	Mean	-1.58

C Scale	D Scale	C-D
120.2	120.6	-0.4
120.2	120.9	-0.7
120.5	120.9	-0.4
120.5	121.5	-1.0
120.5	121.5	-1.0
120.5	121.2	-0.7
121.0	121.2	-0.2
121.0	122.2	-1.2
	Mean	-0.70

D Scale	E Scale	D-E
151.0	151.0	0.0
151.0	151.0	0.0
151.0	151.0	0.0
151.0	151.0	0.0
151.0	151.0	0.0
151.0	151.0	0.0
	Mean	0.00

Summary:

Correction to soundings on B scale = -0.31 fm. (-0.3)
Correction to soundings on C scale = -1.89 fm. (-1.9)
Correction to soundings on D scale = -2.59 fm. (-2.6)
Correction to soundings on E scale = -2.59 fm. (-2.6)

The fathograms on which these phase comparisons are recorded are included in the envelope containing Ship EXPLORER fathograms for "F" and "G" days, sheet H-8438 (EX-2357).

FATHOMETER PHASE COMPARISON

808 FATH. NO. 57-21

8-2-58

A SCALE	B SCALE	A-B
46.2	46.1	+0.1
46.2	46.1	+0.1
46.2	46.2	0.0
46.4	46.2	+0.2
46.4	46.1	+0.3
46.3	46.1	+0.2
46.3	46.5	-0.2
45.9	46.5	-0.6
45.9	46.0	-0.1
	(9)	0.0
	MEAN	0.00

B SCALE	C SCALE	B-C
81.0	81.2	-0.2
81.0	81.2	-0.2
81.0	81.2	-0.2
80.9	81.2	-0.3
80.9	81.2	-0.3
80.9	81.2	-0.3
80.9	81.1	-0.2
80.9	81.1	-0.2
80.9	81.1	-0.2
	(9)	-2.1
	MEAN	-0.23

C SCALE	D SCALE	C-D
123.0	123.8	-0.8
123.2	123.8	-0.6
123.2	123.8	-0.6
123.0	123.8	-0.8
123.0	123.8	-0.8
123.3	123.8	-0.5
123.3	124.0	-0.7
123.2	124.0	-0.8
123.2	123.8	-0.6
	(9)	-6.2
	MEAN	-0.69

D SCALE	E SCALE	D-E
154.2	154.0	+0.2
154.2	154.0	+0.2
154.2	154.2	0.0
154.4	154.2	+0.2
154.4	154.3	+0.1
154.4	154.3	+0.1
154.4	154.3	+0.1
154.6	154.3	+0.3
154.6	154.5	+0.1
	(9)	+1.3
	MEAN	+0.14

SUMMARY:

Correction to sdgs. on B scale	0.00	(0.0)
Correction to sdgs. on C scale	-0.23	(-0.2)
Correction to sdgs. on D scale	-0.92	(-1.0)
Correction to sdgs. on E scale	-0.78	(-1.0)

Phase comparison fathograms are included in Lch. 3 fathograms, sheet H-8437, EX-2257.

LIST OF LINES AND DISCREPANCIES
BETWEEN 1957 AND 1958 SHIP HYDROGRAPHY

HYDROGRAPHIC SURVEY H-8438

1958 LINE	1957 LINE	AMOUNT 1958 LINE IS SHOALER (FM)
39-41F	94-97B	1-2
105-107F	69-70B, 94-95B, 97-98B	2
146-147F	99-100D	2
123-124G, 164-165G	103-104D	2
125-126G, 166-187G	102-103D	2
126-127H	51-52C	2
149-150H, 152-153H	101-102D	1
14K-15K	100-101D	2
166H	97-98D	2
83-85K	72-73D, 82-83D, 93-94D	2
59-61K	89-90D, 86-87D, 68-69D, 64-65D	2
14-17F	13-14A, 15-16A, 67-68B 70-71B, 93-94B, 98B	1-2
37-38F	97-98B	3
23-24K	100-101D	2
29-30K	96-97B	2
36-37K	69-70B, 94-95B, 97-98B	3
16-17L	35A-36A	1

POS.	SCALED DIST.	SHORAN DIST.	CORRECTION
93 m	2.587	2.584	+0.003
116 1	2.319	2.310	+0.009
94 1	2.630	2.630	0.000
95 1	2.641	2.636	+0.005
		TOTAL:	0.115
		MEAN:	+0.005 St. Miles

ABSTRACT OF SHORAN CORRECTION DATA

SHEET 2357 - LCH. NO. 3

O NEF

VICINITY OF FENIMORE ROCK

POS.	SCALED DIST.	SHORAN DIST.	CORRECTION
22 l	3.279	3.279	0.000
23 l	3.298	3.295	+0.003
24 l	3.293	3.291	+0.002
45 l	3.110	3.103	+0.007
41 l	3.200	3.196	+0.004
87 m	3.077	3.067	+0.008
88 m	3.027	3.022	+0.005
62 l	3.010	3.002	+0.008
61 l	3.012	3.007	+0.005
71 m	2.852	2.842	+0.010
72 m	2.781	2.778	+0.003
74 m	2.862	2.861	+0.001
68 m	2.822	2.819	+0.003
64 m	2.903	2.897	+0.006
67 m	2.738	2.734	+0.004
63 m	2.708	2.703	+0.005
66 m	2.711	2.703	+0.008
80 l	2.748	2.747	+0.001
109 l	2.483	2.478	+0.005
92 m	2.550	2.540	+0.010

Ape 062
Ace 012
Air 037
Act 018
Ask 074

Bag 003
Bah 002
Bay 009

cad 101
cab 160
con 165
car 107
Daw 109
Dog 163
Dak 104
Dix 139
Dib 130
Dil 134

Ear 208
Erp 276
Ely 249

Fag 206
Far 207
Foul 268
Fox 269

Gun 385
Got 368
Goo 366

Hap 306
IRK 374

Joe 462
Joy 469
Jaw 409

Ked 421
Kigun 433
Kig 432
Lav 408
Lap 406
Lop 466

Map 506
Mis 537

Nef 522
Now 569
Nob 560

out 608
Ohm 636

Par 607
Pin 635
Pot 668

Rag 703
Rig 733
Rub 780
Rut 788

Seal 720
Sit 748
Sex 769
Sun 785
Tom 865
Top 866
Uno 856
War 907
Wee 922
Yap 906
Zoo 966

LIST OF SIGNALS

SURVEY H-8438

FIELD NUMBER EX-2357

NAME	SOURCE	NAME	SOURCE
ACE	T-11552	ELY	T-11552
ACT	T-11540	ERP	T-11540
AIR	T-11540	FAG	T-11540
APE	T-11540	FAR	T-11552
ASK	T-11540	FOUL	FOUL 1943
BAG	T-11552	FOX	T-11540
BAH	T-11540	GOO	T-11552
BAY	T-11540	GOT	T-11540
CAB	T-11552	GUN	GUN 1943 (PEAK)
CAD	T-11540	HAP	T-11552
CAR	T-11540	IRK	T-11552
CON	T-11540	JAW	T-11552
DAK	DAK 1943 (PEAK)	JOE	T-11540
DAW	T-11552	JOY	T-11540
DIB	T-11540	KED	T-11552
DIL	T-11552	KIG	KIG 1943 (PEAK)
DIX	T-11540	KIGUN	KIGUN 1943
DOG	T-11540	LAV	LAVA RM2 1958
EAR	T-11540	LAP	T-11540
EAST	EAST (USN) 1934	LOP	T-11552

NAME	SOURCE	NAME	SOURCE
MAP	T-11540	RUT	T-11552
MIS	T-11552	SAN	SANDY 1957
NEF	NEF 1956	SEAL	SEAL (USN) 1934
NOB	T-11552	SIT	T-11552
NOW	T-11540	SOX	T-11540
OHM	T-11551	SUN	T-11540
OUT	T-11540	TOM	T-11540
PAR	T-11540	TOP	T-11552
PIN	T-11540	UNO	T-11552
POT	T-11552	WAR	T-11540
RAG	T-11540	WEE	T-11552
RIG	T-11540	YAP	T-11552
RUB	T-11540	ZOO	T-11552

APPROVAL SHEET

FOR

HYDROGRAPHIC SURVEY H-8438 (EX-2357)

This survey is considered to be complete, except as mentioned in paragraph "G" and "R" of the Descriptive Report.

During the Field Season, the Boat Sheets were periodically inspected by the Commanding Officer or his representative, the Field Works Officer.

Plotting of the Smooth Sheet has been examined and approved.

E. B. BROWN
CDR C&GS
Comdg. Ship EXPLORER

RHC

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens 20 April 1959

Plane of reference approved in
20 volumes of sounding records for

HYDROGRAPHIC SHEET 8438

Locality Aleutian Islands, Alaska

Chief of Party: E. H. Kirsch & G. C. Mast in 1957-58

Plane of reference is mean lower low water, reading

3.8 ft. on tide staff at Fenimore Pass

13.5 ft. below B.M. 2 (1956)

1.2 ft. on tide staff at Atka Pass
11.4 ft. below B.M. 1 (1958)

Height of mean high water above plane of reference is:

Atka Pass	4.4 feet
Fenimore Pass	3.3 feet

Condition of records satisfactory except as noted below:

William Shafus
Signature

Chief, Tides Branch

Comm-DC 34330

175° 34'

175° 33'

175° 32'

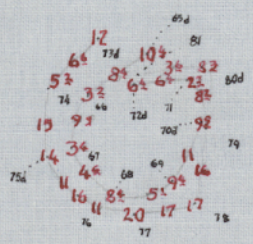
175° 31'

52° 00'

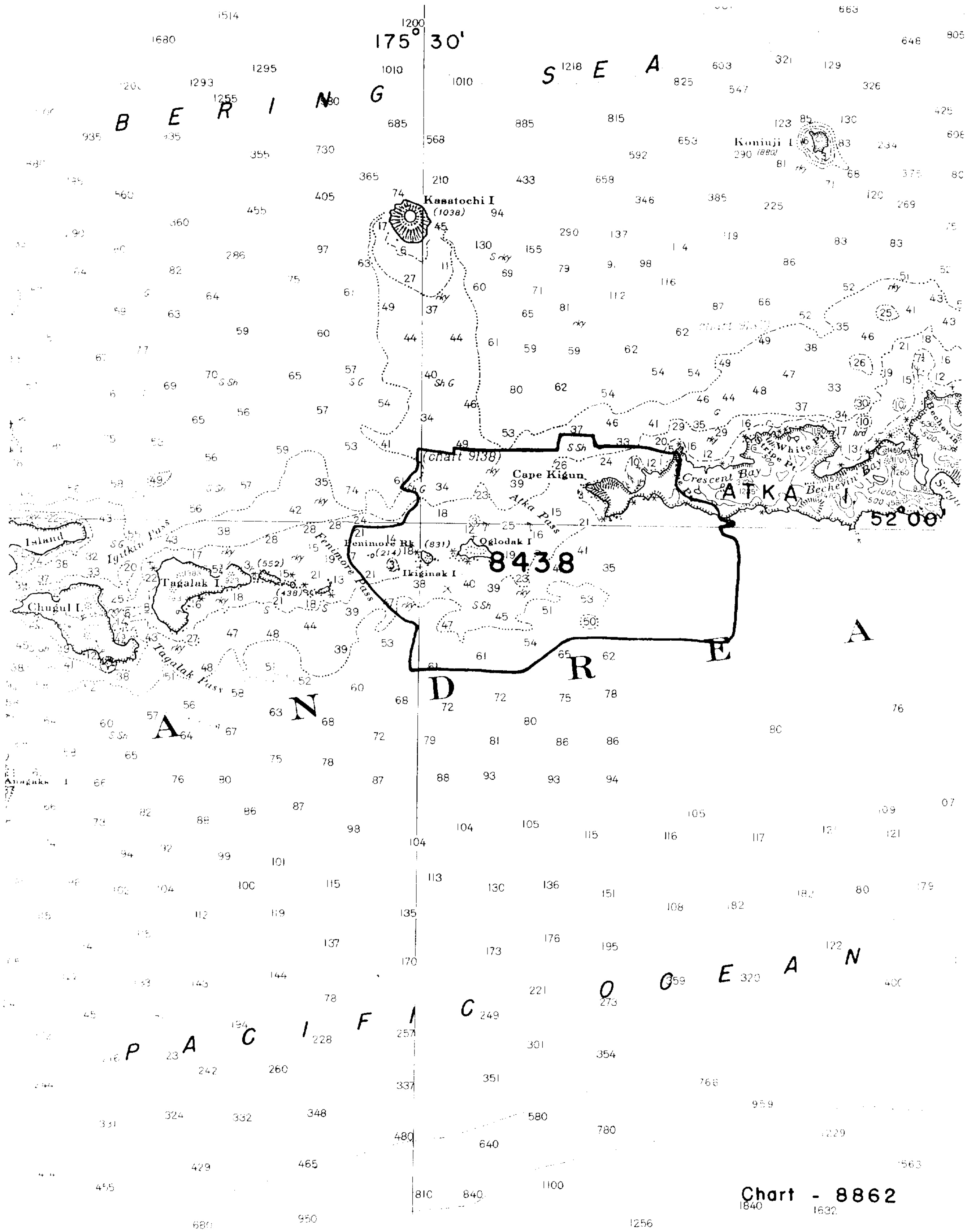
OVERLAY TO ACCOMPANY
EX 2357
#8438

To Accompany
Boat Sheet

51° 59'



51° 58'


175° 30'
BERING SEA
Kasatochi I
(1038)
Koniuji I
(chart 9138)
Cape Kigun
Atka Pass
Crescent Bay
ATKA I
White Pt
Stripe Pt
Bechevin Bay
52° 00'
Fenimore Rk
Oglodak I
Ikiginak I
Fenimore Pass
8438
Tagalak I
Chugul I
Igitkin Pass
Tagalak Pass
Island
ANDREA
PACIFIC OCEAN
Chart - 8862

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8438

Name on Survey	On Chart No. A	On previous survey No. B	On U.S. quadrangle Maps C	From local information D	On local Maps E	P.O. Guide or Map F	Rand McNally Atlas G	U.S. Light List H	K	
Alaska			(For title)							1
Aleutian Islands				"						2
Atka Island			(location of one tide station)						BGN	3
Crescent Bay										4
Slope Point										5
Bering Sea									BGN	6
Kigun Bay										7
Cape Kigun									BGN	8
Atka Pass									"	9
Oglodak Island									"	10
Ikiginak Island									"	11
Fenimore Rock									"	12
Fenimore Pass									"	13
Pacific Ocean										14
			Names approved 3-18-59							15
				L. Heck						16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8438

Records accompanying survey:

Boat sheets 3; sounding vols. 20; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 8-Envelopes

special reports, etc. 1-Smooth sheet, 1-Descriptive report, 2-Manuscripts Nos. T-11551 & T-11552, 2-Bluelines Nos. T-11551 & T-11552, 1-Overlay, and 3-Tracings of junctions.....

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

Number of positions on sheet		.....
Number of positions checked		.....
Number of positions revised		.....
Number of soundings revised (refers to depth only)		.....
Number of soundings erroneously spaced		.....
Number of signals erroneously plotted or transferred		.....
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	.....

Verification by.....Total time ..... Date .....

Reviewed by..... Time ..... Date .....

M-2232-1

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-8438

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.

3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.

4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.

5. All items affecting 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 and are a little larger than the adjacent soundings.

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.

14. The reduction and plotting of doubtful soundings were checked.

15. The transfer of contemporary topographic information was carefully examined.

16. All junctions were transferred and overlapping curves made identical.

17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.

18. The depth curves have been inspected before inking.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked.

20. Heights of rocks were checked against range of tide.

21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.

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.

24. The low water line and delineation of shoal areas have been properly shown.

25. Degree and minutes values and symbols have been checked.

26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).

28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.

29. All aids located, with those on contemporary topographic sheets, have been shown on survey.

30. Depth curves were satisfactory except as follows:

31. Sounding line crossings were satisfactory except as follows:

32. Junctions with contemporary surveys were satisfactory except as follows:

33. Condition of sounding records was satisfactory except as follows:

34. The protracting was satisfactory except as follows:

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

36. Notes to reviewer:

Verified by Date

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8438

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4/30/59	9193	[illegible]	Before [illegible]r Verification and Review Posted
5-14-59	8862	R.K. DeLaurier	Part appld Before ~~After~~ Verification and Review, Area covered by 9193 appld thru that chl. NOT appld thru 9137 or 38 fwd
10/16/59	9000	M. Rogers	Examined thru chl. 8862 Before [illegible] Verification and Review - No corrections considered necessary at the scale of 9000 until after U.S.R.
10-23-59	9137	E.A. Mathewson	Before ~~After~~ Verification and Review Posted Because 1064 covers & Ledge that was diff from B.S. appl.
10-23-59	9138	E.A. Mathewson	Before ~~After~~ Verification and Review Posted Thru 9137 & direct
2-25-61	9102	E.A. Mathewson	Before ~~After~~ Verification and Review Part'ly appld thru 8862 3rd ed
12/8/69	9137	C. Kuromoto	Fully Appl'd Before ~~After~~ Verification and Review
1-3-70	9138	C. Kuromoto	Fully appl'd Before ~~After~~ Verification and Review
7/15/77	9102	M Sayer	CLASS I Before ~~After~~ Verification and Review Fully applied Examined - no corrections
10/28/77	8862	M. Sayer	CLASS I Before ~~After~~ Verification and Review Applied thru Chart 9138 - Revised 10, 20 & 50 fm CURVES - Fully applied. Added several shoaler soundings + rocks awash, added ledges in several places.
9/27/94	530 (9102)	Lewis	FINAL application of Cat. 1 Survey thru chart 16012 (9102) - no corrections
4/15/92	16484	J Sherman	CAT 1 / FULLY APPLD
"	16486	J. Sherman	CAT 1 / FULLY APPLD

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.