7944

Diag. Cht. No. 78-23

287

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. CO-2151 *Office No.* H-7944

LOCALITY

State MARYLAND AND VIRGINIA

General locality CHESAPEAKE BAY

Locality TANGIER SOUND

194 51

CHIEF OF PARTY

Comdr. John Bowie, Jr.

LIBRARY & ARCHIVES

DATE 20 November 1951

8-1870-1 (1)

7944

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-7944

Field No. CO-2151

State MARYLAND AND VIRGINIA

General locality CHESAPEAKE BAY

Locality TANGIER SOUND

Scale 1:20,000 Date of survey 5 May - 19 Sep't. 1951

Instructions dated 28 February 1949

Vessel Ship COWIE

Chief of party John Bowie, Jr.

Surveyed by G. C. Mast and E. A. Taylor

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

Fathograms scaled by Personnel of Ship COWIE

Fathograms checked by E. A. Taylor; R. M. Borst

Protracted by P.A. Cox

Soundings penciled by A.G. Atwill

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

REMARKS: This survey was smooth plotted in the Hydrographic Section of the Norfolk Processing Office.

U. S. GOVERNMENT PRINTING OFFICE 777032

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-7944, FIELD NO. 2151

PROJECT CS-287

TANGIER SOUND

SHIP COWIE SCALE 1:20,000

John Bowie, Jr., Comdg.

A - PROJECT:

This survey was made in accordance with the Director's Original Instructions dated 28 February 1949, for Project CS-287.

B - SURVEY LIMITS AND DATES:

The area covered by this survey is the southern part of the main section of Tangier Sound and is bounded on the south by Lat. 37°-46'.; on the east by Long. 75°- 52'.; up to Lat. 37°-52'.; then by Sheet CO-2251; on the north by Sheets CO-1149 and CO-1151, on the northwest by Sheet CO-1251, on the west by Sheet CO-2451 down to Lat. 37°52'.; then by Long. 76°02'.; to the southern limit. Field work was accomplished between 5 May and 19 Sep't. 1951 inclusive.

C - VESSELS AND EQUIPMENT:

Launch No. 102 and hydrographic skiff No. 737 were used, both operating from the Ship COWIE. Launch 102, using 808 type fathometer #63 and #57-S, was used where the depth was 6 feet and over. Skiff #737 powered by 2 outboard motors and using pole and leadline for sounding was used in shoal areas close to the shore, and in creeks and inlets where the depths were not sufficient for launch operation. Fathometer was not used with the skiff.

D - TIDE AND CURRENT STATIONS:

A portable automatic tide gage was maintained at Crisfield, Md. during the entire period of this survey. No current stations were observed in this area.

E - SMOOTH SHEET:

Projections will be constructed, and sheets plotted by the Norfolk Processing Office.

F - CONTROL STATIONS:

The following triangulation stations were recovered and used:

Blizzard Island Range; 1916-1942.

Calvary M.E. Church Spire; 1942.

Tangier Sound Light House; 1898, 1949.

Horse Hammock (M.S.F.C.), Md.-Va. B'ndry.; 1898, 1942.

Janes Island Light House, 1949.

Tangier Island Church Spire, 1898.

Stack - Sommers Cove, 1949.

Tangier 3, 1932-1949.

Topographic Control Stations are from 1942 Air Photographic Surveys T-8163 (1942), T-8162 (1942), T-8161 (1942), T-8164 (1942), [redacted]. Marked stations recovered are: HUT, ALL△, MAR△, COOK△, SED△, SOUTH, HERRING△, BONE△ and GOOSE△.

△ New locations by 1952 triangulation

G - SHORELINE AND TOPOGRAPHY:

The shoreline on this boatsheet was transferred from the air photo compilations covering this area (T-8163, T-8162, T-8161, T-8164, [redacted] (1942);) and is generally satisfactory with the following exceptions:

G - SHORELINE AND TOPOGRAPHY: (CONT.)

1 - The western edge of Great Fox Island has erroded from Lat. 37-53.6; Long. 75-54.3. Also new pos. of Island

2 - The southern tip of Little Fox Island has worn away as shown by red line on the skiff #737 boat sheet. New position of Island

3 - MUD I. (37-51.6; 75-52.2) is no longer exists.

4 - The Northern edge of WATTS I. has eroded and the NE point built out as indicated by red lines on the boat sheet. The airphoto position of the shoreline was found to be slightly out of position. The entire island should be moved East 75 meters. (Signals CON and PRO are on the H W line, JOE is 30 meters inshore) and ROB is on the Southern point of the island. Island was not moved [part of shoreline revised

5 - Tangier Island.:

(a) - Southern tip around Cod Harbor has undergone extensive changes. A new island has been formed. Sextant fixes were taken along the high waterline to define this major change. The new shoreline has been inked in red on the Lch. 102 boat sheet.

(b) - The entire SW shoreline of Tangier Island has eroded to a varying degree, and numerous sextant fixes along the high water line ware taken from the southern tip to Lat. 37-49.8; Long; 76-00.1; North of which the amouht of erosion was not excessive. This change has been inked in red on Lch. 102 boat sheet.

6 - The shoreline on Goose Island was in general agreement with the air photo except for the southern tip and western edge. The high water line was determined by numerous sextant fixes and plotted on the Lch. 102 boat sheet.

Easter island shifted

7 - At Lat. 37-54.6; Long. 76-02.0; exists a narrow island not heretofore shown on boat sheet. The high water line was determined by the preceeding method and plotted in red on Lch. 102 boat sheet.

bar shoal on T-8163(1942)

8 - At Lat. 37-55.0; Long. 76-02.1; exists a small sand bar appoximately 2 meters wide, and the length defined by positions 41-y, and 42-y.

It was not practicable to define the low water line at all places by soundings due to the small range of tide, and the difficulty of getting close enough to the shoreline without spending long periods dragging bottom and going aground. However, the sounding lines were run close to and parallel to the beach wherever possible.

H - SOUNDINGS:

Depths were measured with 808 type recording fathometer, hand lead and pole. In the shoal areas (depths less than 6.0 feet), some discrepancies were noted in the overlap between pole and fathometer soundings. This is due to the effect of grass on the fathogram profile and efforts were made to correct this when scanning the fathograms. It is believed that satisfactory overlap will be found between pole and fathometer soundings when plotting the smooth sheet, but in cases where minor discrepancies exist (in depths of less than 6 ft.), the pole soundings should be accepted as correct.

H - SOUNDINGS:(CONT.)

Bar checks were taken daily from the launch to depths where satisfactory results could be obtained. Fathometer corrections have been determined from the bar checks and entered in the sounding volumes by the field party.

In depths under 30 feet, sounding lines were spaced 100 meters except in featureless areas where the spacing was increased to 200 meters. In depths over 30 feet, sounding lines were spaced 200 meters.

I - CONTROL OF HYDROGRAPHY:

Sounding lines were controlled by three point fixes on shore objects. Satisfactory results were obtained for the most part, but jumps occurred when changing fixes from signals on one side of the sheet to the other. Sextant angles were observed at all 1942 air-photo stations using triangulation stations for control wherever possible. The corrected positions are shown in blue and it is recommended that the 1951 sextant position be accepted in lieu of the 1942 air-photo positions. Using these corrected positions, it is believed that all jumps will straighten out on the smooth sheet. If not, a reexamination of the radial plot is recommended.

see #1 of Review

J - ADEQUACY OF SURVEY:

This survey is considered complete and adequate to supersede prior surveys for charting. Satisfactory junctions were made with adjoining surveys and no holidays or excessive differences exist. Depth curves can be accurately drawn.

K - CROSSLINES:

Approximately 8 percent of crosslines were run. Satisfactory crossings were obtained. [adjusted & verified]

L-M - COMPARISON WITH PRIOR SURVEYS:

A - Preliminary Review Item No. 10:

Lat. 37-52.1; Long. 75-54.4; Low water spot charted from H-997 (1869) should be deleted. Present depths conform with the H-2800 (1906) survey.

B - Chart:

Prior to the field work, all soundings on Chart 1224 and 1223 in the area covered by this survey were transferred to the boat sheet for direct comparison with the new work. It was noted that the natural channel in Tangier Sound has changed somewhat. There is general agreement in the northern portion, but the central and southern section shows evidence of filling slightly in the deeper areas. However, the shoal area on either side of the channel, extending to Tangier Island on the west, and Great Fox and Watts Island on the east, shows a general deepening, in some cases, ~~over 5~~ 1-2 feet.

The area west and south of Tangier Island compares favorably with the charted depths. The following critical soundings were noted in the 1951 surveys:

1 - At 37-49.~~35~~31; 76-01.~~9~~87: A ~~6~~5 foot sounding.

2 - At Lat. 37-48.~~5~~55; Long 75-55.2: ~~8~~7.0 feet soundings in general depth of ~~12~~11-13 feet.

3 - At. Lat. 37-53.~~5~~58; Long. 75-57.~~7~~65: 7 feet sounding at edge of shelf.

L-M - COMPARISON WITH PRIOR SURVEYS: (CONT.)

A comparison between the 1951 survey and Charts 1223 and 1224 show the following outstanding changes:

1 - At Lat. 37-48.8; Long. 75-54.7: delete 6 foot shoal. 6 ft sndg 200 m. south

2 - At Lat. 37-49.2; Long. 75-55.35: delete 8 foot sounding. see #'s 5 & 6 at Review

3 - At Lat. 37-46.7; Long. 75-54.7: delete 48 foot sounding. ?

4 - At Lat. 37-47.1; Long. 75-57.4: delete 21 foot sounding.

5 - At Lat. 37-48.6; Long 75-54.1: delete 3 foot sounding,

(General deepening of area W. of Watts Island.)

6 - At Lat. 37-53.55; Long. 75-55.4: delete 6 foot sounding. 7 120 mues. NW
7½' at φ 37-53.51 λ 75-55.47

7 - At Lat. 37-53.75; Long. 75-54.85: delete 4 foot sounding.
There are 6' sdgs well outside curve

8 - At Lat. 37-52.0; Long. 75-57.9: delete 4 foot sounding.

9 - At Lat. 37-49.6; Long. 75-53.1: delete 17 foot sounding,

Channel no longer exists.

10 - At Lat. 37-52.37; Long. 75-53.8: delete 23 foot sounding,

channel filled in.

11 - At Lat. 37-48.8; Long. 75-58.1: delete 29 foot sounding.

12 - At Lat. 37-47.2; Long. 75-56.9: delete 14 foot sounding. 15 100 m SE
15' at φ37-47.14 λ 75-56.89

Sheet 1223 shows three wrecks in the vicinity of Cod Harbor on Tangier Island and were searched for by the Skiff #737 hydro party.

1 - At Lat. 37-48.4; Long. 75-59.0: Wreck shown on chart 1223 was identified on the beach broken up. It is no longer a danger to navigation. Delete from chart.

2 - At 37-48.5; Long. 75-59.95: Wreck shown on Chart 1223 no longer exists. Searched for at low water. Land has built up covering the charted position. Delete from chart.

L-M - COMPARISON WITH PRIOR SURVEYS: (CONT.)

3 - At Lat. 37-48.4; Long. 75-59.8: Wreck shown on Chart 1223 was searched for and found by the skiff #737 hydro party. Notation is made in Vol. XIX, page 20, as skiff passed over this wreck. No portion extends above waterline, but a faint outline was identified on the bottom. The wreck is in shoal water and not considered a menace to navigation.

N - DANGERS AND SHOALS:

1 - At Lat. 37-36.9; Long. 75-53.6: An old breakwater exists as shown by dotted line on the Skiff #737 boat sheet, and is awash at mean low water. The immediate vicinity is foul with concrete blocks and ruins.

2 - At Lat. 37-49.0; Long. 75-58.6: Submerged stake shown on Chart 1223 and was searched for by both the launch and skiff parties. It is recommended that this submerged stake be deleted from the chart.

No other important dangers and shoals not already shown on Charts 1223 and 1224 were found in the area covered by this survey.

O - COAST PILOT NOTES:

Controlling depth of channel from Tangier Sound into Tangier Island (Lat. 37-50.45: Long. 75-58.25: to Lat. 37-49.75; Long. 75-59.4: is 6.0 feet, instead of 7½ feet as shown on Chart 1223.

P - AIDS TO NAVIGATION:

Sextant fixes observed at all fixed and floating aids to navigation. Listed on Form 567.

FLOATING AIDS TO NAVIGATION

FOR HYDROGRAPHIC SURVEY H _____, FIELD NO. CO-2151

SHIP COWIE PROJECT CS-287

See processing list

Tangier Sound Buoy "5": Lat. 37-48.83; Long. 73-58.32: in 14 ft. of water.

Tangier Sound Buoy "7": Lat. 37-49.81; Long. 75-57.60: in 10 ft. of water.

2288 Great Fox Island Shoal Lighted Bell Buoy "2A": Lat. 37-54.38; Long. Long. 75-56.39: in 30 ft. of water.

2291 Tangier Sound Lighted Bell Buoy "9": Lat. 37-51.15; Long. 75-56.95: in 58 feet of water.

Tangier Sound Buoy "3": Lat. 37-46.21; Long. 76-00.13: in 14 ft. of water.

Little Watts Island Shoal Southeast Buoy "3": Lat. 37-45.85; Long. 75-52.95: in 12 feet of water.

Q - LANDMARKS FOR CHARTS:

No new landmarks for charts are recommended for the area covered by this survey.

R - GEOGRAPHIC NAMES:

The geographic names for this area shown on Chart 1224 and 1223 are adequate and no additional names are recommended.

U-Y - MISCELLANEOUS:

In featureless shoal areas, soundings were spaced every 30 seconds apart on the boat sheet. In depths of 30 foot and over, soundings were spaced every minute. Intermediate soundings were plotted only where needed to define underwater features.

Watts Island L.H. was destroyed by a storm in 1933 according to information obtained from several old-time watermen residing at Crisfield. Tide gage records and all soundings are on EST.

Z - TABULATION OF APPLICABLE DATA:

Coast Pilot Report, forwarded to Washington, D.C. separately.

Respectfully submitted,

Eugene A. Taylor

Eugene A. Taylor,
Ensign, USC&GS.,
Ship COWIE.

Approved and forwarded,

John Bowie, Jr.

John Bowie, Jr.,
Comdr. USC&GS.,
Comdg. Ship COWIE.

STATISTICS

FOR HYDROGRAPHIC SURVEY H_____, FIELD NO. 2151

SHIP COWIE PROJECT CS-287

SKIFF NO. 737

DATE	DAY	VOL. NO.	STAT. MILES	POS.
7/25	a	V	5.8	31
7/26	b	V	18.9	84
7/31	c	V-VII	32.6	168
8/1	d	VII	23.0	133
8/2	e	VII	7.8	44
8/6	f	VII-X	20.7	85
8/8	g	X	29.7	137
8/9	h	X-XII	20.6	103
8/13	j	XII	16.5	82
8/14	k	XII-XIII	20.8	150
8/15	l	XIII	18.6	121
8/16	m	XIII	14.0	151
8/17	n	XVII	3.4	36
8/20	p	XVII	27.4	133
8/22	q	XVII-XIX	20.87	115
8/23	r	XIX	29.9	124
8/28	s	XIX	23.5	102
8/29	t	XXI	31.7	183
8/30	u	XXI-XXIV	25.2	146
9/5	v	XXIV	18.9	93
9/10	w	XXIV	9.3	76
9/12	x	XXVI	27.4	161
9/13	y	XXVI-XXVII	18.7	129
TOTALS:			464.7	2587

S T A T I S T I C S

HYDROGRAPHIC SURVEY H_____ FIELD NO. CO-2151

SHIP COWIE PROJECT CS-287

LAUNCH NO. 102

DATE	DAY	VOL. NO.	STAT. MILES	POS.
5/2	a	I	18.3	66
5/3	b	II	47.2	162
5/4	c	II-III	36.9	133
5/9	d	I-III	51.0	160
5/10	e	III	13.1	45
7/20	f	IV	12.6	48
7/31	g	IV-VI	46.1	138
8/1	h	VI	51.5	154
8/2	j	VIII	31.2	86
8/6	k	VIII-IX	33.8	118
8/8	l	IX	52.8	169
8/9	m	XI	34.8	130
8/13	n	XI	18.3	73
8/14	p	XI-XIV	59.7	235
8/15	q	XIV-XV	45.9	182
8/16	r	XV	25.8	108
8/17	s	XV-XVI	42.1	165
8/20	t	XVI-XVIII	43.8	162
8/22	u	XVIII	57.0	226
8/23	v	XVIII-XX	38.1	195
8/28	w	XX-XXII	22.3	83
8/29	x	XXII	44.5	188

STATISTICS:

CONT. OF PAGE 10

8/30	y	XXII-XXIII	28.8	114
9/5	z	XXIII	36.1	147
9/10	aa	XXV	35.8	135
9/12	ba	XXV-XXVIII	57.2	217
9/13	ca	XXVIII-XXIX	41.3	173
9/17	da	XXIX	35.8	140
9/18	ea	XXIX	25.2	90
9/19	fa	XXVII	57.8	210
TOTALS:			1144.8	4252
GRAND TOTALS:			1609.5	6839

AREA: 94.7 Sq. Stat. Mi.

FATHOMETER CORRECTIONS (1)

FOR HYDROGRAPHIC SURVEY H_____, FIELD NO. CO-2151

SHIP COWIE PROJECT CS-287

LAUNCH 102

a - day 2 May 1951 Fath. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 7.5 ft.	∕ 1.0 ft.
7.6 ft. to 12.5 ft.	∕ 0.9 ft.
12.6 ft. to 17.5 ft.	∕ 0.5 ft.
Over 17.5 ft.	0.0 ft.

b - day 3 May 1951 Fath. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 7.5 ft.	∕ 0.5 ft.
7.6 ft. to 12.5 ft.	∕ 0.2 ft.
12.6 ft. to 35.0 ft.	0.0 ft.
Over 35.1 ft.	- 0.5 ft.

c - day 4 May 1951 Fath. 808, No. 63

DEPTH	CORRECTION	
0.0 ft. to 15.0 ft.	∕ 0.5 ft.	"A" Scale
15.1 ft. to 35.0 ft.	0.0 ft.	" "
35.1 ft. to 45.0 ft.	- 0.5 ft.	" "
45.1 ft. to 55.0 ft.	- 1.0 ft.	" "
36.0 ft. to 65.0 ft.	0.0 ft.	"B" Scale

FATHOMETER CORRECTIONS (2)

d - day 9 May 1951 Fatho. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 12.5 ft.	∕ 0.5 ft. "A" Scale
12.6 ft. to 25.0 ft.	0.0 ft. " "
25.1 ft. to 35.0 ft.	- 0.2 ft. " "
35.1 ft. to and over.	-0.8 ft. " "
40.0 ft. and over	∕ 0.2 ft. "B" Scale

e - day 10 May 1951 Fath. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 12.5 ft.	∕ 0.2 ft. "A" Scale
12.6 ft. to 25.0 ft.	0.0 ft. " "
25.1 ft. to 45.0 ft.	- 0.4 ft. " "
45.1 ft. to 55.0 ft.	- 0.8 ft. " "
All depths	0.0 ft. "B" Scale

f - day 20 July 1951 Fath. 808, No. 63

0.0 ft. to 15.0 ft.	0.0 ft. "A" Scale
15.. ft. to 30.0 ft.	-0.4 ft. " "
30.1 ft. to 55.0 ft.	-1.0 ft. " "
35.0 ft. to 50 ft.	∕1.5 ft. "B" SCale
50.1 ft. to 60.0 ft.	∕0.5 ft. " "
60.1 ft. to 80.0 ft.	0.0 ft. " "

g - day 31 July 1951 Fath. 808, No. 63

0.0 ft. to 7.5 ft.	∕ 0.1 ft.
7.6 ft. to 15.0 ft.	∕ 0.1 ft.

FATHOMETER CORRECTIONS (3)

h - day 1 Aug. 1951 Fath. 808, No. 63

DEPTH	CORRECTION	
0.0 ft. to 15.0 ft.	∕ 0.0 ft.	"A" Scale
15.1 ft. to 30.0 ft.	- 0.5 ft.	" "
30.1 ft. to 55.0 ft.	- 1.0 ft.	" "
35.0 ft. to 45.0 ft.	∕ 1.5 ft.	"B" Scale
45.1 ft. to 60.0 ft.	∕ 1.0 ft.	" "
60.1 and over	∕ 0.5 ft.	" ""

j - day 2 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 12.5 ft.	0.0 ft.	
12.6 ft. to 17.5 ft.	- 0.5 ft.	
17.6 ft. to 30.0 ft.	- 0.8 ft.	

k - day 6 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 16.0 ft.	0.0 ft.	"A" Scale
16.1 ft. to 22.0 ft.	- 0.2 ft.	" "
22.1 ft. to 27.0 ft.	-0.4 ft.	" "
27.1 ft. to 32.0 ft.	- 0.6 ft.	" "
32.1 ft. to 37.0 ft.	- 0.8 ft.	" "
37.1 and over.	- 1.0 ft.	" "
0.0 ft. to 48.0 ft.	- 2.0 ft.	"B" Scale
48.1 ft. to 56.0 ft.	- 1.5 ft.	" "
56.1 and over.	- 1.0 ft.	" "
All depths - -	∕ 2.5 ft.	"C" Scale

↓ revised on attached graph

FATHOMETER CORRECTIONS (4)

l - day 8 Aug. 1951 Fath. 808, No. 63

DEPTH	CORRECTION	
0.0 ft. to 7.5 ft.	∕ 0.2 ft.	"A" Scale
7.6 ft. to 12.0 ft.	0.0 ft.	" "
12.1 ft. to 16.0 ft.	- 0.2 ft.	" "
16.1 ft. to 22.0 ft.	- 0.4 ft.	" "
22.1 ft. to 28.0 ft.	- 0.6 ft.	" "
28.1 ft. to 35.0 ft.	- 0.8 ft.	" "
35.1 and over	- 1.0 ft.	" "
0.0 ft. to 50.0 ft.	∕ 1.5 ft.	"B" Scale
50.1 ft. and over.	∕ 1.0 ft.	" "

m - day 9 Aug. 1951 Fatho. 808, No. 63

0.0 ft. to 7.5 ft.	∕ 0.2 ft.
7.6 ft. to 11.0 ft.	0.0 ft.
11.1 ft. to 13.0 ft.	- 0.2 ft.
13.1 ft. to 16.0 ft.	- 0.4 ft.
16.1 ft. to 18.5 ft.	- 0.6 ft.
18.6 ft. and over.	- 0.8 ft.

n - day 13 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 7.5 ft.	∕ 0.2 ft.
7.6 ft. to 11.0 ft.	0.0 ft.
11.1 ft. to 13.0 ft.	- 0.2 ft.
13.1 ft. to 16.0 ft.	- 0.4 ft.
16.1 ft. to 18.5 ft.	- 0.6 ft.
18.6 ft. and over.	- 0.8 ft.

FATHOMETER CORRECTIONS (5)

p - day 14 Aug. 1951 Fath. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 7.5 ft.	+ 0.2 ft.
7.6 ft. to 12.0 ft.	0.0 ft.
12.1 ft. to 15.0 ft.	- 0.2 ft.
15.1 ft. to 19.0 ft.	- 0.4 ft.
19.1 ft. to 23.0 ft.	- 0.6 ft.
23.1 ft. to 27.5 ft.	- 0.8 ft.
27.6 and over.	- 1.0 ft.

q - day 15 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 12.0 ft.	0.0 ft.
12.1 ft. to 16.0 ft.	- 0.2 ft.
16.1 ft. to 19.0 ft.	- 0.4 ft.
19.1 ft. to 26.0 ft.	- 0.6 ft.
26.1 ft. to 34.0 ft.	- 0.8 ft.
34.1 ft. and over.	- 1.0 ft.

revised on attached graph

r - day 16 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 12.0 ft.	0.0 ft.	"A" Scale
12.1 ft. to 16.0 ft.	- 0.2 ft.	" "
16.1 ft. to 19.0 ft.	- 0.4 ft.	" "
19.1 ft. to 26.0 ft.	- 0.6 ft.	" "
26.1 ft. to 34.0 ft.	- 0.8 ft.	" "
34.1 ft. and over.	- 1.0 ft.	" "
35.0 ft. to 45.0 ft.	+ 2.0 ft.	"B" Scale
45.1 ft. to 55.0 ft.	+ 1.5 ft.	" "
55.1 ft. and over.	+ 1.0 ft.	" "

FATHOMETER CORRECTIONS (6)

s - day 17 Aug. 1951 Fath. 808, No. 63

DEPTH	CORRECTION
0.0 ft. to 7.5 ft.	+ 0.2 ft. "A" Scale
7.6 ft. to 12.0 ft.	0.0 ft. " "
12.1 ft. to 18.0 ft.	- 0.2 ft. " "
18.1 f t. to 24.0 ft.	- 0.4 ft. " "
24.1 ft. to 30.0 ft.	- 0.6 ft. " "
30.1 ft. to 36.0 ft.	- 0.8 ft. " "
36.1 ft. and over.	- 1.0 ft. " "
0.0 ft. to 44.0 ft.	- 2.0 ft. "B" Scale
44.1 ft. to 56.0 ft.	- 1.5 ft. " "
56.1 and over.	- 1.0 ft. " "
All depths	+ 2.5 ft. "C" Scale

↓ revised on attached graph ↑

t - day 20 Aug. 1951 Fath. 808, No. 63

0.0 ft. to 7.5 ft.	+ 0.2 ft. "A" Scale
7.6 ft. to 12.0 ft.	0.0 ft. " "
12.1 ft. to 15.0 ft.	- 0.2 ft. " "
15.1 ft. to 19.0 ft.	- 0.4 ft. " "
19.1 ft. to 26.0 ft.	- 0.6 ft. " "
26.1 ft. to 35.0 ft.	- 0.8 ft. " "
35.1 and over.	- 1.0 ft. " "
0.0 ft. to 48.0 ft.	- 0.2 ft. "B" Scale
48.1 ft. to 72.0 ft.	- 1.5 ft. " "
72.1 ft. and over.	- 1.0 ft. " "
All depths.	+ 2.5 ft. "C" Scale

↓ revised on attached graph ↑

FATHOMETER CORRECTIONS (7)

u - day 22 Aug. 1951 Fath. 808, No. 63.

DEPTH	CORRECTION	
0.0 ft. to 7.5 ft.	+ 0.2 ft.	"A" Scale
7.6 ft. to 12.0 ft.	0.0 ft.	" "
12.1 ft. to 16.0 ft.	- 0.2 ft.	" "
16.1 ft. to 19.0 ft.	- 0.4 ft.	" "
19.1 ft. to 24.0 ft.	- 0.6 ft.	" "
24.1 ft. to 28.0 ft.	- 0.8 ft.	" "
28.1 ft. to 32.0 ft.	- 1.0 ft.	" "
32.1 ft. to 36.0 ft.	- 1.2 ft.	" "
36.1 ft. and over	- 1.4 ft.	" "
All depths	+ 1.5 ft.	"B" Scale
All depths	+ 2.5 ft.	"C" Scale

v - day 23 Aug. 1951 Fath. 808, No. 63.

0.0 ft. to 11.0 ft.	0.0 ft.	"A" Scale
11.1 ft. to 13.0 ft.	- 0.2 ft.	" "
13.1 ft. to 15.0 ft.	- 0.4 ft.	" "
15.1 ft. to 17.0 ft.	- 0.6 ft.	" "
17.1 ft. to 19.0 ft.	- 0.8 ft.	" "
19.1 ft. to 22.0 ft.	- 1.0 ft.	" "
22.1 ft. to 26.0 ft.	- 1.2 ft.	" "
26.1 ft. to 30.0 ft.	- 1.4 ft.	" "
30.1 ft. to 34.0 ft.	- 1.6 ft.	" "
34.1 ft. to 38.0 ft.	- 1.8 ft.	" "
38.1 ft. and over	- 2.0 ft.	" "
All depths	+ 1.0 ft.	"B" Scale
All depths	+ 2.5 ft.	" "

FATHOMETER CORRECTIONS (8)

w - day 28 Aug. 1951 Fath. 808, No. 63.

DEPTH	CORRECTION	
0.0 ft. to 7.5 ft.	∕ 0.2 ft.	"A" Scale
7.6 ft. to 23.0 ft.	0.0 ft.	" "
23.1 ft. to 30.0 ft.	- 0.2 ft.	" "
30.1 ft. to 38.0 ft.	- 0.4 ft.	" "
38.1 ft. and over.	- 0.5 ft.	" "
0.0 ft. to 52.0 ft.	∕ 1.5 ft.	"B" Scale
52.1 ft. and over.	∕ 1.0 ft.	" "
All depths	∕ 2.0 ft.	"C" Scale

x - day 29 Aug. 1951 Fath. 808, No. 63.

0.0 ft. to 6.0 ft.	∕ 0.4 ft.	"A" Scale
6.1 ft. to 9.0 ft.	∕ 0.2 ft.	" "
9.1 ft. and over.	0.0 ft.	" "
All depths	∕ 1.0 ft.	"B" Scale

y - day 30 Aug. 1951 Fath. 808, No. 63.

0.0 ft. to 7.5 ft.	∕ 0.2 ft.	"A" Scale
7.6 ft. to 12.0 ft.	0.0 ft.	" "
12.1 ft. to 15.0 ft.	- 0.2 ft.	" "
15.1 ft. to 19.0 ft.	- 0.4 ft.	" "
19.1 ft. to 28.0 ft.	- 0.6 ft.	" "
28.1 ft. to 35.0 ft.	- 0.8 ft.	" "
35.1 ft. and over	- 1.0 ft.	" "
All depths	∕ 1.0 ft.	"B" Scale

FATHOMETER CORRECTIONS (9)

z - day 5 Sep't. 1951 Fath. 808, No. 63.

DEPTH	CORRECTION
0.0 ft. to 12.0 ft.	0.0 ft.
12.1 ft. to 14.0 ft.	- 0.2 ft.
14.1 ft. to 16.0 ft.	- 0.4 ft.
16.1 ft. to 18.0 ft.	- 0.6 ft.
18.1 ft. and over	- 0.8 ft.

aa - day 10 Sep't. Fath. 808, No. 63.

0.0 ft. to 11.0 ft.	0.0 ft.
11.1 ft. to 13.5 ft.	- 0.2 ft.
13.6 ft. to 16.0 ft.	- 0.4 ft.
16.1 ft. to 18.5 ft.	- 0.6 ft.
18.6 ft. and over	- 0.8 ft.

ba - day 12 Sep't.1951 Fath. 808, No. 63.

0.0 ft. to 25.0 ft.	0.0 ft.	"A" Scale
25.1 ft. to 32.0 ft.	- 0.2 ft.	" "
32.1 ft. to 40.0 ft.	- 0.4 ft.	" "
40.1 ft. and over	- 0.6 ft.	" "
35.0 ft. to 560ft.	∱ 1.0 ft.	"B" Scale
56.1 ft. and over.	∱ 0.5 ft.	" "
All depths	∱ 1.5 ft.	"C" Scale

ca - day 13 Sep't. 1951 Fath. 808, No. 63.

0.0 ft. to 12.5 ft.	0.0 ft.	"A" Scale
12.6 ft. to 15.0 ft.	- 0.2 ft.	" "
15.1 ft. to 17.5 ft.	- 0.4 ft.	" "
17.6 ft. and over	- 0.6 ft.	" "
35.0 ft. to 50.0 ft.	∱ 1.0 ft.	"B" Scale
50.1 ft. to 85.0 ft.	∱ 0.5 ft.	" "

FATHOMETER CORRECTIONS (10)

CONT. OF

ea - day	13 Sep't. 1951	Fath. 808, No. 63.
All depths	∕ 1.5 ft.	"C" Scale

da - day	17 Sep't. 1951	Fath. 808, No. 63.
0.0 ft. to 8.0 ft.	∕ 0.4 ft.	"A" Scale
8.1 ft. to 12.5 ft.	∕ 0.2 ft.	" "
12.6 ft. to 25.0 ft.	0.0 ft.	" "
25.1 ft. to 32.0 ft.	- 0.2 ft.	" "
32.1 ft. to 40.0 ft.	- 0.4 ft.	" "
40.1 ft. and over	- 0.6 ft.	" "
35.0 ft. to 53.0 ft.	∕ 1.0 ft.	"B" Scale
53.1 ft. and over	∕ 0.5 ft.	" "
All depths	∕ 1.5 ft.	"C" Scale

ea - day	18 Sep't. 1951	Fath. 808, No. 63.
0.0 ft. to 10.0 ft.	∕ 0.2 ft.	"A" Scale
10.1 ft. to 22.0 ft.	0.0 ft.	" "
22.1 ft. to 26.0 ft.	- 0.2 ft.	" "
26.1 ft. to 30.0 ft.	- 0.4 ft.	" "
30.1 ft. to 34.0 ft.	- 0.6 ft.	" "
34.1 ft. to 38.0 ft.	- 0.8 ft.	" "
38.1 ft. and over	- 1.0 ft.	
35.0 ft. to 55.0 ft.	∕ 1.0 ft.	"B" Scale
55.1 ft. and over	∕ 0.5 ft.	" "
All depths	∕ 1.0 ft.	"C" Scale

FATHOMETER CORRECTIONS (11)

fa - day 19 Sep't. 1951 FATH. 808, No. 63.

DEPTH	CORRECTION	
0.0 ft. to 10.0 ft.	∱ 0.2 ft.	"A" Scale
10.1 ft. to 16.0 ft.	0.0 ft.	" "
16.1 ft. to 20.0 ft.	- 0.2 ft.	" "
20.1 ft. to 24.0 ft.	- 0.4 ft.	" "
24.1 ft. to 28.0 ft.	- 0.6 ft.	" "
28.1 ft. to 32.0 ft.	- 0.8 ft.	" "
32.1 ft. to 36.0 ft.	- 1.0 ft.	" "
36.1 ft. and over	- 1.2 ft.	" "
35.0 ft. to 52.0 ft.	∱ 1.0 ft.	"B" Scale
52.1 ft. to 68.0 ft.	∱ 0.5 ft.	" "
68.1 ft. and over	0.0 ft.	" "
All depths	∱ 1.0 ft.	"C" Scale

T I D E N O T E

HYDROGRAPHIC SURVEY H_____, FIELD NO. CO-2151.

A portable automatic tide gage at Crisfield, Md., Lat. 37-59.87; Long. 75-50.18:, was used for obtaining tide reducers for this survey. Heights of M L W at this station was 2.6 feet above zero of the tide staff. No time or heights corrections were applied to the observed tides in obtaining tide reducers, for this survey. Hourly heights were scaled from the marigrams by the personnel of the Ship COWIE.

LIST OF SIGNALS
H-7944

TRIANGULATION STATIONS

ALL	ALL, 1952
BLIZ	BLIZZARD ISLAND RANGE, 1916-49
BONE	BONE, 1952
GAB	GAB, 1952
GOOSE	GOOSE, 1952
HER	HERRING, 1952
	HORSE HAMMOCK (M.S.F.C.), 1898-1942
JANE	JANES ISLAND L.H., 1949-52
LET	LET, 1952
SKI	SKI, 1952
STACK	STACK, SOMERS COVE, 1949
SUE	TANGIER 3, 1932-52
TAN	TANGIER ISLAND CHURCH SPIRE, 1898-1952
GIER	TANGIER SOUND L.H., 1898-1952
TEL	TEL, 1952
CHURCH	UNION M.E. CHURCH, SOUTH BELFRY, 1942

MARKED TOPOGRAPHIC STATIONS

COOK, 1942 (T-8163) HUT, 1942 (T-8163) MAR, 1942 (T-8162) SOUTH, 1942 (T-8163)

TOPOGRAPHIC STATIONS

SED (T-8163) TYE (T-8163)

HYDROGRAPHIC STATIONS

Box	Vol. 1, pg. 4	Pan	Vol. 5, pg. 2
Boy	" 1, " 3	Pig	" 1, " 3
Bum	H-7942	Pro	" 4, " 3&4
Cal	Vol. 4, pg. 3	Rat	" 1, " 3
Can	H-7942	Reg	" 4, " 3
Con	Vol. 4, pg. 3&4	Rob	" 4, " 3
Cut	" 4, " 3	Sis	" 7, " 3
Elk	" 5, " 2	Tax	" 4, " 4
Ham	" 1, " 3	Tim	" 1, " 32
Hor	" 1, pg. 4	Tub	H-7942
Joe	" 5, " 60	Watt	Vol. 4, pg. 3
	" 4, " 3	Wet	H-7945
Lt. 5	" 7, " 34	Wop	H-7945
Mix	" 4, " 4	Zip	Vol. 4, pg. 3
Moe	" 4, " 3		
Oak	" 1, " 7		
	" 5, " 2		
	" 7, " 2&66		

FLOATING AIDS TO NAVIGATION
H-7944

BUOY	LAT.	LONG.	DEPTH	POS. NO.	DATE
Tangier Sound Buoy 5	37-48.83	75-58.32	14.0	159fa	9/19/51
Tangier Sound Buoy 7	37-49.86	75-57.78	-	22k	8/ 6/51
Great Fox I. Shoal, Lighted Bell Buoy 2A	37-54.40	75-56.36	-	1p	8/20/51
Tangier Sound Lighted Bell Buoy 9	37-51.10	75-56.91	-	651	8/15/51
Tangier Sound Buoy 3	37-46.20	76-00.12	-	k	8/14/51
Little Watts Island Shoal, S.E. Buoy 8	37-45.86	75-52.99	12.8	581	8/ 8/51

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-7944 (Field No. Co-2151)

CONTROL

Before the hydrographic signals could be plotted on this survey it was necessary to request triangulation locations of most of the marked topographic stations. Due to the limited coverage of this additional work, some difficulty was experienced in plotting control on Watts and Smith Islands. Some jumps in time and course were noted but these were relatively minor and it is believed signal locations as plotted, are adequate for controlling the hydrographic lines.

SHORELINE

The geographic positions of the small islands in the immediate vicinity of marked topo stations Goose, Bone, Her, All and Gab were adjusted to the 1952 triangulation positions of these stations. As their original positions were determined by a radial plot, it follows that the shoreline in the immediate vicinity of these stations would be displaced a proportionate amount. This shoreline is shown on the smooth sheet in a solid red line.

Those changes in the shoreline due to erosion or accretion, as determined by the field party, are shown in a solid or broken red line as specified in the manual. A very close inspection of the boat sheet is required to find some of the smaller shoreline corrections.

Respectfully submitted,

Hugh L. Proffitt
Cartographer

Norfolk, Va.
5 Dec. 1952

Approved & Forwarded

for
Earle A. Deily
Supervisor, SE Dist.

GEOGRAPHIC NAMES

Survey No. H-7944

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Maryland									B.G.N.	1
Virginia									"	2
Chesapeake Bay									"	3
Tangier Sound									"	4
Watts Island									"	5
Cod Harbor										6
Tangier Island										7
Canton Creek										8
Tangier Creek										9
Oyster Creek Cut										10
Goose Island										11
Little Fox Islands										12
Great Fox Island										13
Little Annemessex River									BGN	14
Smith Island										15
										16
										17
										18
										19
Crisfield		(tide station)								20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red are approved 1-12-53 L. Heck

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7944

Records accompanying survey:

Boat sheets 1(2 parts); sounding vols. 29; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 16 Env;

special reports, etc. 1 Smooth Sheet; 1 Descriptive Report;

.....

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

Number of positions on sheet		6839
Number of positions checked		491
Number of positions revised		22
Number of soundings revised (refers to depth only)		1590
Number of soundings erroneously spaced		Approx. 5% *
Number of signals erroneously plotted or transferred		0
Topographic details	Time	32 hrs
Junctions	Time	24 hrs
Verification of soundings from graphic record	Time	40 hrs

Verification by F. P. Saulsbury Total time 655 hrs Date 12-15-54

Reviewed by A. R. STIRNI Time 60 hrs Date 1-13-55

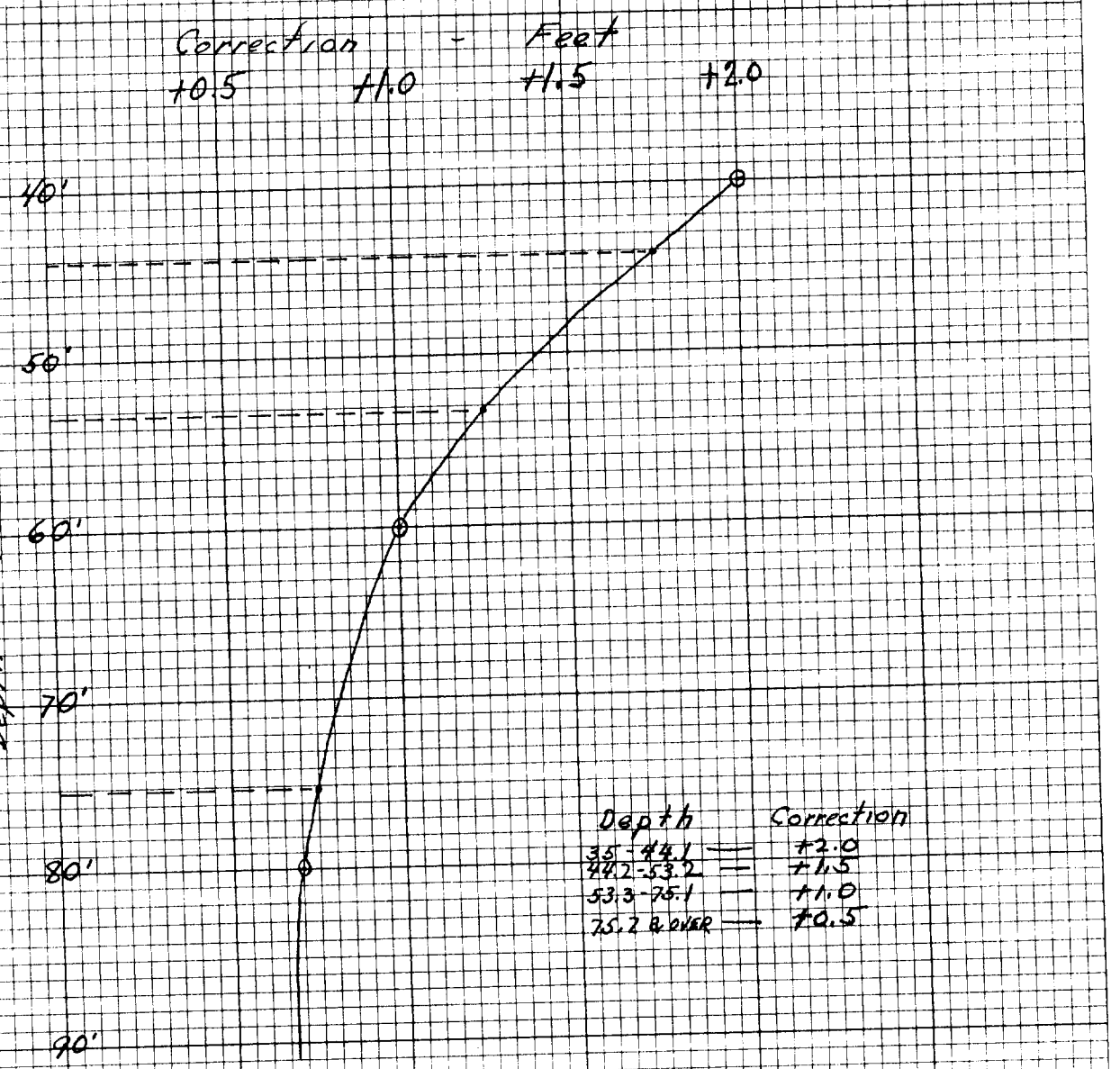
* Mainly in flat bottom areas where error in position was not important.

M-2232-1

H-7944 (1951)

B phase [redacted] correction (from bar check)

K Day - Aug 6, 1951

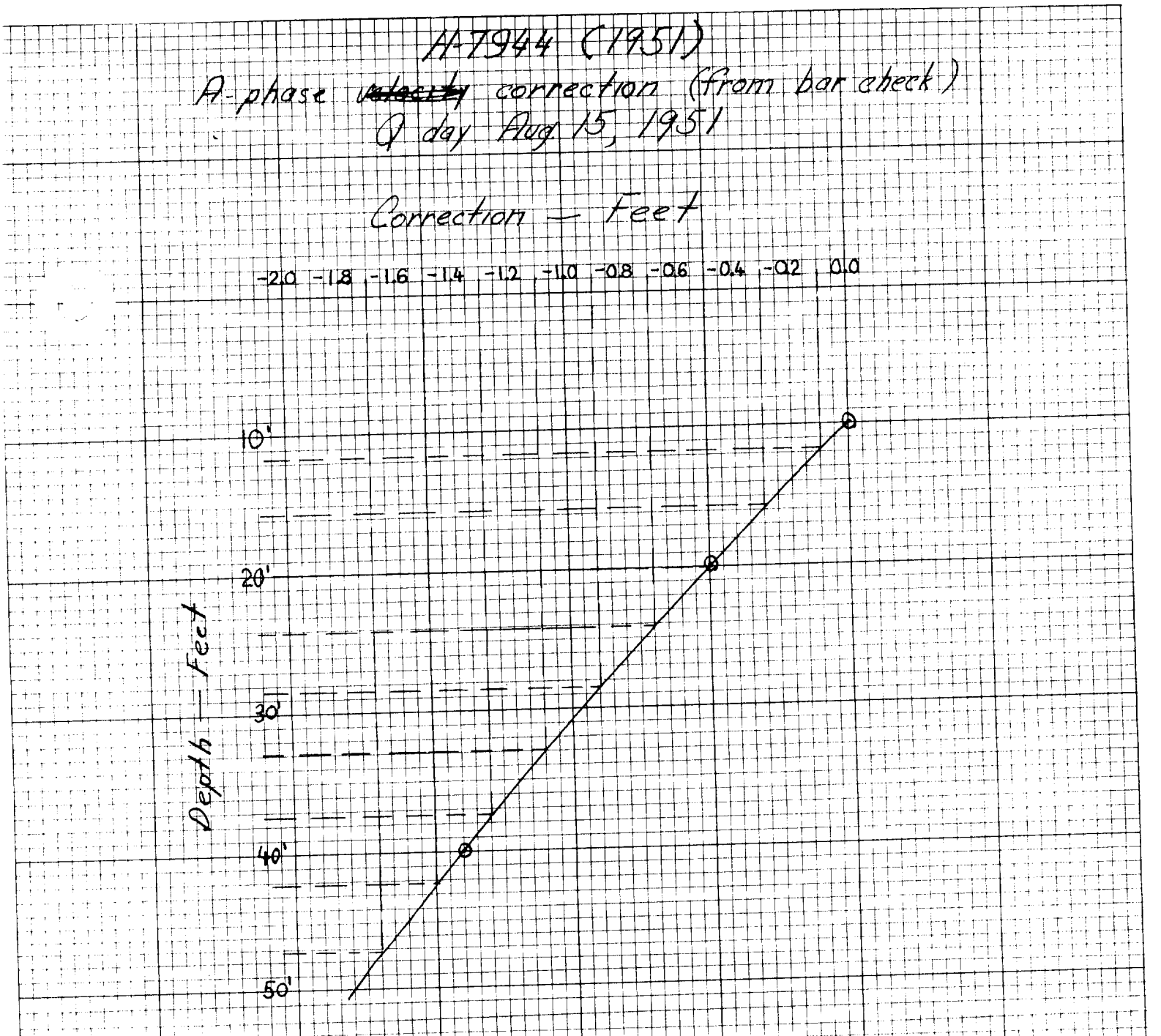


Depth	Correction
35-44.1	+2.0
44.2-53.2	+1.5
53.3-75.1	+1.0
75.2 & OVER	+0.5

A-7944 (1951)

A-phase ~~velocity~~ correction (from bar check)

Q day Aug 15, 1951

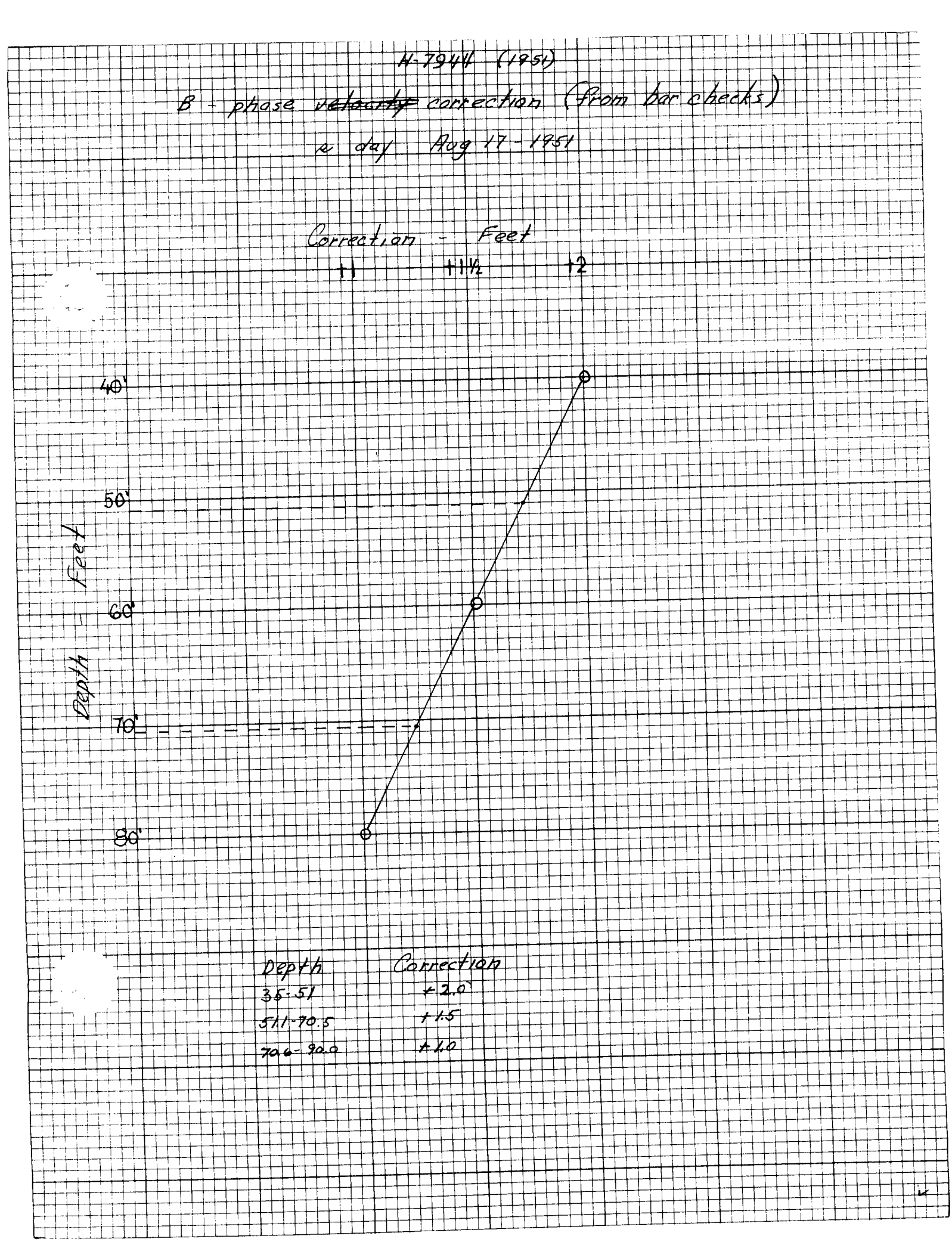


Depth	Correction
0.0 – 11.8	0.0
11.9 – 15.7	-0.2
15.8 – 20.0	-0.4
20.1 – 24.1	-0.6
24.2 – 28.5	-0.8
28.6 – 33.0	-1.0
33.1 – 37.4	-1.2
37.5 – 42.2	-1.4
42.3 – 47.2	-1.6

H-7944 (1951)

B - phase ~~velocity~~ correction (from bar checks)

& day Aug 17 - 1951

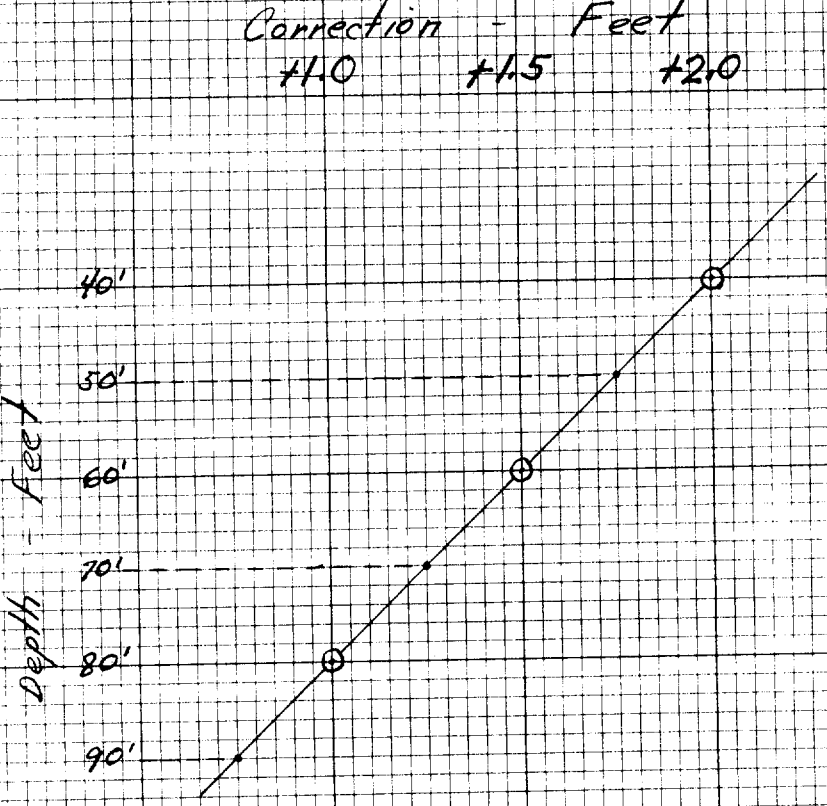


Depth	Correction
35-51	+2.0'
511-70.5	+1.5
706-90.0	+1.0

H-7944 (1951)

B phase ~~velocity~~ correction (from bar check)

T day - Aug. 20 - 1951



Depth	Correction
35-50	+2.0
50.1-70	+1.5
70.1-80	+1.0

Form 567
April 1945

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
TO BE DELETED } STRIKE OUT ONE

_____, 19____

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks be charted on *(deleted from)* the charts indicated.

The positions given have been checked after listing by _____

Chief of Party.

STATE

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION				DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			LATITUDE		LONGITUDE								
			° ′	D.M. METERS	° ′	D.P. METERS							
	Pocomoke River Daybeacon 12						N.A. 1927	Hydro. 2351					1224
2286	Pocomoke River 13						"	"					"
2287	" " 15						"	"					"
	Pocomoke River Daybeacon 16						"	"					"
2292	Tangier Island 1	Col	37-50′	691′	75-58′	446′	"	Hydro. CO-2151	1 Aug 1951				1223
	Tangier Island Daybeacon 2		37-50′	557′	75-58′	711′	"	"	"				"
	" " " " 4		37-50′	390′	75-58′	930′	"	"	"				"
2293	Tangier Island Channel 5	Lt. 5	37-50′	109′	75-58′	1246′	"	"	—				"
2294	" " " 7		37-49′	1761′	75-59′	40′	"	"	1 Aug 1951				"
	Tangier Island Daybeacon 8		37-49′	1644′	75-59′	245′	"	"	"				"
	" " " 9		37-49′	1357′	75-59′	560′	"	"	20 Aug 1951				"
	" " " 10		37-49′	1405′	75-59′	596′	"	"	"				"
	" " " 12		37-49′	1436′	75-59′	632′	"	"	"				"
2295	Tangier Island Channel inner 11		37-49′	1306′	75-59′	689′	"	"	"				"

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

Checked & plotted in Norfolk office

U. S. GOVERNMENT PRINTING OFFICE: 1949 O - 853418

Form 567
April 1945

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED
TO BE DELETED
} STRIKE OUT ONE

_____, 19____

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks be charted on *(deleted from)* the charts indicated.

The positions given have been checked after listing by _____

Chief of Party.

STATE			POSITION					METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			LATITUDE		LONGITUDE		DATUM						
CHARTING NAME	DESCRIPTION	SIGNAL NAME	° ′	D.M. METERS	° ′	D.P. METERS							
			37 48 /	1101 /	75-59 /	579 /	N.A. 1927	Hydro. CO-2151	15 Aug 1951				1223
2296	Cod Harbor		See G.Ps.				"	Tri.	—				"
	Tangier Sound Lighthouse							Hydro.					
		Reg	37-45	1690 /	75-52	874 /	"	CO-2151	—				"
2276	Watts Island												
		Mix	37-48 /	1172 /	75-59 /	305 /	"	"	15 Aug 1951				"
	Cod Harbor Daybeacon												

Sealed & checked in Norfolk Office

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE: 1949 O - 853418

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 7944 FIELD NO. CO-2151

Maryland and Virginia, Chesapeake Bay, Tangier Sound

Project No. CS-287

Surveyed - May, Sept. 1951 Scale 1:20,000

Soundings: Control:

808 Fathometer
Sounding pole
Leadline

Sextant fixes on shore signals

Chief of Party - J. Bowie, Jr.
Surveyed by - G. C. Mast and E. A. Taylor
Protracted by - P. A. Cox
Soundings plotted by - A. G. Atwill
Verified and inked by - F. P. Saulsbury
Reviewed by - A. R. Stirni 1/13/55
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline drawn in black originates with air-photographic surveys T-8161 (1942), T-8162 (1942), T-8163 (1942) and T-8164 (1942)

Revisions to the shoreline from the present survey are shown in solid red or dashed red in accordance with paragraph 753 of the Hydrographic Manual. Little Fox Island, Great Fox Island, Goose Island and the four small islands in the vicinity of Goose Island have been shifted in position to conform to revisions in control. The original control consisted of marked topographic stations located by a radial plot in 1942 which was found to be as much as 60 meters in error by 1952 triangulation. Other shoreline revisions in red indicate changes caused by erosion.

The sources of the control are given in the Descriptive Report.

2. Sounding Line Crossings

Sounding line crossings are in adequate agreement. Numerous revisions made during the verification of the survey improved crossing discrepancies shown on the pencilled smooth sheet.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated. The 3-ft. curve was added to accentuate the many extensive shoal areas. The bottom in Tangier Sound is characterized, in depths less than 3 fms. by numerous sand ridges undulating from one to 3 ft. At approximately 3 fms. the bottom descends fairly rapidly to the floor of the sound where depths range from about 50 to 120 ft.

4. Junctions with Contemporary Surveys

Adequate junctions were effected on the north with surveys H-7943 (1951), H-7942 (1951) and H-7782 (1949). Junctions with unverified surveys H-8069 (1951) on the west, H-7945 (1951) on the east and the preliminary verification of H-7722 (1949) on the northeast were examined during the verification of the present survey. The latter junctions will be discussed in the reviews of those surveys. No contemporary registered surveys are available on the south. The present survey depths are in general agreement with the charted depths on the south.

5. Comparison with Prior Surveys

H-252 (1849-51), 1:40,000
H-515 (1855), 1:40,000
H-557 (1856), 1:40,000
H-997 (1869), 1:20,000
H-1447b (1878), 1:40,000
H-2500 (1900-01), 1:60,000
H-2800 (1906), 1:20,000
H-2801 (1906-07), 1:20,000
H-2595 (1901-02), 1:20,000
H-3361 (1911), 1:40,000
H-3703 (1914), 1:20,000

The surveys of 1900-1914 provide the most complete prior coverage of the area under consideration. A comparison between the prior and present surveys reveals scattered changes in depths of 1-2 ft. on the shoal flats which forms shelves on the east and west sides of the main channel of Tangier Sound. Portions of the main channel of the Sound, however, have shoaled as much as 6 ft. in the period between the prior and the present surveys. The material deposited is apparently derived from the extensive erosion of islands and adjacent inshore shelf area. Erosion is quite apparent at Great Fox Island, Little Fox Island, Tangier Island, and Goose Island. Two prior islands at lat. 37°52.7', long. 75°53.9', and Mud Island in lat. 37°51.60', long. 75°52.15' have entirely disappeared. The present survey shows

depths of 3-5 ft. in these localities. In the vicinity of lat. 37°51.2', long. 76°00.1' a large section of land has been eroded and the area is now covered by depths of 2-5 ft. Tangier Island Channel with a present controlling depth of 5½ ft. was dredged subsequent to the prior surveys.

The 7-ft. sounding at lat. 37°50.95', long. 75°54.65' in present survey depths of 9-10 ft. and the 8-ft. sounding at lat. 37° 49.21', long. 75°55.32' in present survey depths of 20-21 ft. have been carried forward to the present survey from prior survey H-2800 (1906). No effort was made to verify or disprove either of these two shoals by additional development. Similar isolated shoals in the area, however, were verified by the present survey.

With the addition of the two soundings and the bottom characteristics, carried forward from H-2800 (1906) the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 568 (Latest print date 8/23/54)
Chart 555 (Latest print date 6/16/54)

A. Hydrography

The charted hydrography originates with the present survey before verification and review. Attention is directed to the uncharted 7 and 8-ft. soundings at lat. 37°50.95, long. 75°54.65', and lat. 37°49.21', long. 75°55.32' respectively, which as noted in paragraph 5 have been carried forward from H-2800 (1906). Except as noted the chart differs with the present survey by only 1-ft. in a few instances.

The 5-ft. depth charted in lat. 37°45.80', long. 75°53.05' from H-2801 (1906-07) falls slightly outside the limits of the present survey. The sounding should be retained on the chart pending verification or disproval by project surveys on the south. Removed from chts. as recommended by hydrographer H8405

The breakwater at Little Watts Island in lat. 37°46.9', long. 75°53.6' is shown on the present survey as awash at mean low water. Apparently the high water island charted here no longer exists.

B. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

C. Dredged Channels

The charted 5½-ft. controlling depth in Tangier Channel is from Chart Letter 694 (1954) based on a U. S. Engineers

survey of August 1953, made subsequent to the present survey.

7. Condition of Survey

A. The sounding records and Descriptive Report are complete and comprehensive.

B. The protracting of fixes was accurately done. Adjustment of weak fixes in the southeast portion of the survey was required in order to effect satisfactory sounding line crossings.

C. Bar check corrections affecting more than 1500 soundings were scanned in error in the field and were revised during verification. On three days work the sign of B-phase corrections apparently had been shown in error and revisions made to soundings during verification were as large as 4 ft.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended. The 5-ft. sounding charted in lat. 37°45.80', long. 75°53.05', from survey H-2801 falls at the limits of the present survey and should be specifically investigated when surveys are resumed to the southward. Hydrographer of H8408 recommends deletion of 5 ft.

Examined and Approved:

H. R. Edmonston
Chief, Nautical Chart Branch

E. R. McCarthy
Acting Chief, Chart Division

John C. Bull
Chief, Hydrography Branch

Earl O. Heaton
Chief, Division of Coastal Surveys

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coast and Surveys~~ 22 December 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 29
volumes of sounding records for

HYDROGRAPHIC SHEET 7944

Locality Tangier Sound, Chesapeake Bay

Chief of Party: J. Bowie, Jr. in 1951
Plane of reference is mean low water, reading
3.6 ft. on tide staff at Crisfield
5.8 ft. below B. M. 9 (1942)

Height of mean high water above plane of reference is 2.0 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section of Tides
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877933

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7944

Record of Application to Charts

Reviewed 1-13-55

DATE	CHART	CARTOGRAPHER	REMARKS
12/18/52	1224 Reconstr.	GJE	Before ~~After~~ Verification and Review
1/9/53	555	J.A.M.	Before ~~After~~ Verification and Review Completely applied.
3/31/53	78	Sam	Before ~~After~~ Verification and Review Partially applied.
4/8/53	1224 (T.P.)	Sam	Before ~~After~~ Verification and Review Partially applied.
6/12/53	568	GJE	Before ~~After~~ Verification and Review should be completely re-applied after review - JFW 12/29/53
11/5/53	1223	Sam	Before ~~After~~ Verification and Review Partially applied.
6/7/57	568	JJR	Completely applied ~~Before~~ After Verification and Review
1/3/58	1224	GJE	~~Before~~ After Verification and Review Considered as completely applied. Some changes due to J&R not made - JFW 1/27/58
2-20-59	1223	R.K. deLaunder	~~Before~~ After Verification and Review Three Chart 568 SMALL
3-3-59	555	R.K. deLaunder	~~Before~~ After Verification and Review Three Chart 568.
3-18-59	1224	R.K. DeLaunder	After V&R three Chart 568 & 1223 SMALL
9/29/61	78	M.L. Mall	Finally ggp after V+R three 1223

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.