

7879

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Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. CO-1150 Office No. H-7879

LOCALITY

State MARYLAND

General locality CHESAPEAKE BAY

Locality TANGIER SOUND

194 50

CHIEF OF PARTY

JOHN BOWIE, JR.

LIBRARY & ARCHIVES

DATE NOV 21 1951

B-1870-1 (1)

6282

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-7879

Field No. CC-1150

State Maryland ✓

General locality Chesapeake Bay ✓

Locality Tangier Sound (north end) ✓

Scale 1:10,000 ✓ Date of survey May - June 1950 ✓

Instructions dated 28 February 1949

Vessel Ship COWIE

Chief of party John Bowie, Jr. ✓

Surveyed by J. Bowie, H.D. Reed ✓

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

Fathograms scaled by Personnel of Ship COWIE

Fathograms checked by " " " "

Protracted by Ben T. Lewis

Soundings penciled by Ben T. Lewis

Soundings in fathoms feet at MLW MLLW ✓
and are true depths

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

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DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY H-7879 FIELD NO. CO-1150

PROJECT CS-287

TANGIER SOUND, MARYLAND SCALE 1:10,000

SHIP COWIE JOHN BOWIE, JR. - COMDG.

A. Project:

Project CS-287, Supplemental Instructions dated 28 Feb. 1949.

B. Survey Limits and Dates:

The area covered by this survey is in the northern part of Tangier Sound. It is bounded on the west by South Marsh Island, Holland Straits and Bloodsworth Island and on the east by Deal Island and Haines Point. Junction is made with Surveys H-7779 (1949) and H-7782 (1949) to the SE and Survey ^{H-7781}CO-1549 (1949) to the South. Junction is also made with the following 1950 surveys. ^{H-7880}CO-1250 to the ~~Eastward~~ ^{Westward} in Holland Straits and ^{H-7881}CO-1350 to the northward. Field work was accomplished during the period 5 May - 29 June 1950 inclusive.

*for
junctions
see
Review,
par. 4.*

C. Vessel and Equipment:

30' Launch #102 and 25' skiff #737 were used, both vessels operating from the Ship COWIE. Launch 102 using 808 type fathometers Nos. 57-S and 118-S was used in general in all areas where the depth was 6 ft. or over. Skiff #737 powered by 2 outboard motors and using pole or ^{lead}~~hand~~line for sounding was used in shoal areas close to the shoreline and in creeks and inlets where the depth was 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 Sharkfin Shoal Light House during the entire period of the survey. (See tide note included with this report)

Current Station # 3, Lat. 38 - 08.1 - Long. 75 - 58.8 falls within the area of this sheet and was observed during the progress of the work.

E. Smooth Sheet:

Projection will be constructed and sheet plotted by Norfolk Processing Office.

F. Control Stations:

The following triangulation stations were recovered and used:

Sharkfin Shoal L. H. 1898, Deal Island Church Spire, 1901,

Haines Point Light, 1942, Banks, 1942, Jack, 1942; [Topographic

Control] Stations are from Air Photo. sheets T-8134, T-8135 and

(1942)
T-8149, and graphic control sheets (CO-49-F, CO-49-H, and CO-50-A.) *
see note below

THE remainder of the control was located by intersection of sextant cuts from known positions or three point sextant fix with check angle.

** Desc. Report for "A" attached; No D, R's submitted for "F" & "H"; all G.C. sheets destroyed after comparison with contemporary hydrographic surveys.*

G. Shoreline and Topography:

§ smooth sheet

Shoreline on the boat sheet_A was transferred from the air photo and T-8150 (1942) compilations covering this area (T-8134, T-8135 and T-8149)_A and is

generally satisfactory. The shoreline south of Haines Point has changed

due to erosion. This was relocated by plane table topography and the corrected shoreline transferred to the boat sheet_A *§ smooth sheet.* Other differences

were found during the course of the hydrography and have been noted on the boat sheet. *§ transferred to the smooth sheet.*

Continuation of PP. (G).

The shoreline of the entire area covered by this survey is eroding to a varying degree, the greatest amounts being evident in the shorelines of South Marsh and Bloodsworth Islands. Some minor adjustment may have to be made in the shoreline of South Marsh Island when plotting the smooth sheet. (See boat sheet, a and b days, Skiff # 737). *S.L. adjustments made*

It was not practicable to define the low water line by soundings due to the small range of tide and the difficulty of getting the sounding vessel close enough to the shoreline without having to spend long periods dragging bottom or going aground. However a line of soundings was run parallel to the beach and this line defined the 1 ft. curve except in areas where deeper water extended in very close to the high water line.

H. Soundings:

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

*Review,
par. 7c.*

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

No bar checks taken at 5 ft. See Review, par. 7c.

I. Control of Hydrography:

Sounding lines were controlled by three point fixes on shore objects. Satisfactory results were obtained and no adjustment in horizontal position was found necessary.

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 adequately drawn.

K. Crosslines:

About 5% of crosslines were run. Satisfactory Grossings were obtained. *Review, par. 2.*

L.-M. Comparison with Prior Surveys; Chart: *Review, pars. 5 & 6*

Preliminary Review Items:

(1) Controlling depths in dredged channels:

Lat. 38 - 10.03 - Long. 75 - 57.0 Channel from Tangier Sound into Chance Harbor - Controlling Depth of 7 ft. shown on Chart 1224. This channel has filled up and is practically obliterated. A least depth of 3 ft. was found on the range. [Comparison with Chart 1224 (7-17-50).]

Lat. 38 - 10.0 - Long. 75 - 56.7 Small pier just E. of highway bridge at Chance. This pier no longer in existence, should be removed from chart. (*Pier has been deleted from charts*)

Continuation of PP. L-M.

Lat. 38 - 10.¹⁸03 - Long. 75 - 57.03 - Wreck. This was thoroughly searched for during the course of the survey and no indication was found. Recommend removal from chart. ✓ *Review, par. 5.*

Lat. 38 - 08.2 - Long. 76 - 01.3 - A 21 ft. sounding. No indication of this depth was found during the survey. Believe this is in error and recommend removal from chart. ✓

N. Dangers and Shoals:

Lat. 38 - 08.1 - Long. 75 - 59.25 - A small shoal with a least depth of 9½ ft. found in this position. ✓

General shoaling has taken place in the main channel running North & South through Tangier Sound. This amounts to as much as 12 ft. in some spots. This is probably due to silt washed down by the numerous rivers and creeks in the vicinity. However this shoaling does not constitute a menace to navigation in the area covered by this survey as there is still more than sufficient water in the channel for any vessel likely to navigate this area. ✓

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

O. Coast Pilot Notes:

This subject is covered in a separate report by the Commanding Officer, Ship COWIE. ✓

P. Aids to Navigation:

No fixed aids to navigation in this area were located by the field party, as location of these aids has previously been accomplished by triangulation and air photo methods. ✓

Continuation of EP. (P).

A list of floating aids to navigation is included with this report. ✓

Q. Landmarks for Charts:

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

R. Geographic Names: ²⁵⁴ ~~LA~~

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

U.-Y. Miscellaneous:

Because of the large featureless areas covered by the survey and in order to save time, soundings are plotted every 30 seconds on the boat sheet instead of every 15 seconds. Intermediate soundings were plotted only where needed to define underwater features. However all intermediate soundings are recorded in the sounding volumes. ✓

On featureless flat areas, sounding lines are spaced approximately 180 meters apart. This was done in accordance with Paragraph 9 of the instructions. ✓

Z. Tabulation of Applicable Data:

Coast Pilot Report, Forwarded to Washington Office 15 Nov. 1950.

Harry D. Reed, Jr.
Harry D. Reed, Jr.,
Lieut., USC&GS.

*Approved and Forwarded.
See Season's Report
John Bowie, Jr.
Comdr., USN
Comdy. Ship COWIE*

STATISTICS

FOR HYDROGRAPHIC SURVEY H 7879 FIELD NO. CO-1150

SHIP COWIE - PROJECT CS-287

DATE 1950	DAY	VOL. NO.	STAT. MI.	POS.	HI&P	BAR CK.
<u>LAUNCH 102</u>						
5/5	a	I	13.7	61	-	1
5/9	b	I	34.1	154	-	3
5/11	c	II	44.0	194	1	3
5/17	d	II-III	18.0	96	-	2
5/19	e	III	34.5	160	-	2
5/20	f	III-IV	26.8	127	-	2
5/22	g	IV	25.5	117	-	2
5/23	h	IV-V	40.6	201	-	2
5/25	j	V	19.0	80	-	2
6/15	k	V-VI	35.3	157	-	3
6/16	l	VI	29.2	138	-	3
6/20	m	VI-VII	38.0	170	-	-
6/27	n	VII	18.3	97	-	-
			375.1	1752	1	

STATISTICS

FOR HYDROGRAPHIC SURVEY H 7879 FIELD NO. CO-1150

DATE 1950	DAY	VOL. NO.	STAT. MI.	POS.	HL&P
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SKIFF # 737

5/24	a	I	23.2	143	922
5/25	b	I	8.2	63	403
6/27	c	I-II	13.9	87	605
6/28	d	II	8.7	77	366
6/29	e	II	16.0	123	716
TOTALS:			70.0	493	3012
GRAND TOTALS:			445.1	2245	3012

AREA: 23.9 Sq. Stat. Mi.

TIDE NOTE

HYDROGRAPHIC SURVEY H 7879 FIELD NO. CO-1150

A portable automatic tide gage was maintained at Sharkfin Shoal Light House (Lat. 38 - 12.1 - Long 75 - 59.2) for the entire period of this survey. Height of MLW at this station was 1.5 ft. above zero of tide staff, No time or height corrections were applied to the observed tides in obtaining tide reducers for this survey. Hourly heights were scaled from the marigrams by personnel of the Ship COWIE.

FLOATING AIDS TO NAVIGATION

SHEET CO-1150

NAME	LAT.	LONG	DEPTH OF WATER (FT.)	POS. NO.	DATE
Deal Island Shoal Buoy 8A	38 - 09.8 ⁸⁹	75 - 58.27	22 ²	111 m	6/20/50
Drumming Shoal Buoy 10	38 - 11.4 ²	75 - 58.0 ⁵	14	77 m	6/20/50
Upper Thorofare Buoy 1	38 - 10.18	75 - 57.33	7	105 m	6/20/50
Upper Thorofare Buoy 2	38 - 10.15	75 - 57.33	8 ¹ / ₂	104 m	6/20/50

CONTROL STATIONS--- SHEET CO-1150
Project CS-287

TRIANGULATION:

- / Sharkfin Shoal Lighthouse, 1898- 1942
- / Deal Island Church Spire, 1901-1942
- / Banks, 1942
- / Haines Point Light, 1942
- / Jack, 1942

Air PHOTO CONTROL:

Upper therefore front range light, (All)	-----	T-8134	/
" " rear " "	(Pen)-----	T-8134	/
" " Bn. 4	-----	T-8134	/
" " Bn. 6	-----	T-8134	/
" " Bn. 7	-----	T-8134	/
Ella, 1942	-----	T-8134	(Marked Topographic)
Great, 1942	-----	T-8135	" "
Joe, 1942	-----	T-8135	" "
Cove, 1942 <i>not used</i>	-----	T-8135	" "

TOPOGRAPHIC CONTROL: (From Graphic Control Sheets.)

Abe, CO-50-A	Gad, CO-50-A	} G.C. sheets destroyed Desc. Report for CO-50-A attached to this D.R. No D.R's. submitted for CO-50-F & H
Bag, "	Get, CO-49-F	
Cab, "	Day, CO-49F	
Daw, "	Arp, CO-49-F	
Ear, "	Dum, CO-49-H	
Far, "	Marsh, CO-49-H	

HYDROGRAPHIC CONTROL:

ACT, Vol. 1 P.4	Sheet CO-1150	Launch 102
BUR, " 1 P.3	" "	" "
DRY, " 4 P.11	" "	" "
END, Sheet CO-1350		
FIG, Vol. 4 P.11	Sheet CO-1150	Launch 102
GONE, Sheet CO-1350		
JAR, Vol. 1 P.3	Sheet CO-1150	Launch 102
LAND, " " P.4	" "	" "
OUT, " " "	" "	" "
OWL, " " P.3	" "	" "
PAR, Sheet CO-1250		
PAT, Vol. 4 P.11	Sheet CO-1150	Launch 102
PER, Sheet CO-1350		
PIP, Vol. 1 P.4	Sheet CO-1150	Launch 102
RED, " " "	" "	" "
SUM, " " "	" "	" "
TREE, " " "	" "	" "
TUB, " " P.3	" "	" "
UMP, " " P.3-4	" "	" "

FATHOMETER CORRECTIONS

Hydrographic Survey H 7879 Field no. 1150
Project CS-287

A-day through J-day inclusive ----- no corrections

k-day (Fathometer No. 118-S, Mod.808)

	Depths	Corrections
A-scale	00.0-22.0	0.0
	22.1-26.0	-0.2
	26.1-30.0	-0.4
	30.1-34.0	-0.6
	34.1-38.0	-0.8
	38.1-over	-1.0

B-scale corrections \neq 1.0 ft.

$-1.0 \neq 1.0 = 0.0$ for B-scale this day.

L-day (Fathometer No.118-S, Mod.808)

	Depths	Corrections
	0.0-22.0	0.0
	22.1-24.0	-0.2
	24.1-27.0	-0.4
-	27.1-43.0	-0.6
	43.1-46.0	-0.4
	46.1-over	-0.0

All B-scale depths add 1.0 ft.

M-day and N-day ----- no corrections

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-7879 (Field No. Co-1150)

SOUNDINGS

As mentioned under paragraph H in the body of the Descriptive Report, the pole soundings in shoaler depths are generally deeper than the fathometer soundings. This condition, if caused by grass, is not discernible in some instances on the fathograms. (See fathogram for C day, positions 84 to 88, which is about 1 ft. shoaler than surrounding skiff hydrography)

✓
Review,
par. 7c.

Respectfully submitted, .

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

Norfolk, Va.
19 Nov. 1951

Approved & Forwarded:

Earl O. Heaton
Earl O. Heaton
Supervisor, SE Dist.

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

19 September 1951

Division of Charts: R. H. Carstens

Plane of reference approved in 8
volumes of sounding records for

HYDROGRAPHIC SHEET 7893

Locality Sandy Island to Deer Island, Columbia River

Chief of Party: H. G. Conerly in 1951
Plane of reference is Columbia River Datum, reading
-2.8 ft. on tide staff at Longview, Washington
25.2 ft. below B. M. W B 17 (USE)

0.0 ft. on tide staff at Kalama, Washington
22.2 ft. below B. M. 1 (1937)

-3.5 ft. on tide staff at Columbia City, Oregon
77.8 ft. below B. M. J 30 = 78 (USGS)(1898)

Condition of records satisfactory except as noted below:

E. C. McKay
Section

Chief, ~~Division of Tides and Currents~~

GEOGRAPHIC NAMES

Survey No. 12-5-51

Name on Survey										
	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
<u>Maryland</u>									B-N	1
<u>Chesapeake Bay</u>									"	2
<u>Tangier Sound</u>									"	3
<u>South Marsh Island</u>									"	4
<u>Holland Straits</u>										5
<u>Bloodsworth Island</u>									B-N	6
<u>Haines Point</u>										7
<u>Chance</u>										8
<u>Deal Island</u>									B-N	9
<u>Sharkfin Shoal light</u>				(tide station)						10
<u>Little Deal Island</u>									B-N	11
<u>Upper Thorofare</u>										12
<u>Lower Thorofare</u>										13
<u>Sound Gut</u>										14
<u>Pungers Cove</u>										15
<u>Pungers Creek</u>										16
<u>Little Pungers Creek</u>										17
<u>Gunbarrel Cove</u>										18
<u>Thomas Island Gut</u>										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red are approved.
12-5-51
L.H.C.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .H-7879..

Records accompanying survey:

Boat sheets ...1...; sounding vols. ...9...; wire drag vols.;
 bomb vols.; graphic recorder rolls 7.80V;
 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	.....	2245
Number of positions checked	.....	100
Number of positions revised	.....	1
Number of soundings revised (refers to depth only)	.....	600 *
Number of soundings erroneously spaced	.....	—
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time	..... 2
Junctions	Time	..... 32
Verification of soundings from graphic record	Time	..... 25

Verification by... *Craig Henry O. Deegan* Total time 250 Date 19 Feb 52

Reviewed by... *J. A. Dinsmore* Time 28 Date 18 Mar. 1952

* Large amount of revised soundings due to correction applied because of gain, initial and bar checks ^{being in error} and in some cases grass areas made changes necessary.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. CO-50-A

REGISTER NO.

State MARYLAND

General locality TANGIER SOUND

Locality CHANCE, MD. & VICINITY

Scale 1:10,000 Date of survey July, 1950

Vessel ~~JOHN BOWIE, COCIN~~ Ship COWIE

Chief of party ~~H. D. Reed~~ John Bowie, Jr.

Surveyed by H. D. Reed, Jr.

Inked by _____

Heights in feet above _____ to ground to tops of trees

Contour, Approximate contour, Form line interval _____ feet

Instructions dated 28 February, 1950

Remarks: Graphic Control (sheet subsequently destroyed)

DESCRIPTIVE REPORT

TO ACCOMPANY

GRAPHIC CONTROL SHEET CO-50-A

TANGIER SOUND, MD.

SCALE 1:10,000

SHIP COWIE

John Bowie, Jr., Comdg.

PROJECT:

Project CS-287, Amended Instructions issued 28 February 1949.

LOCALITY:

This survey covers the area to the east of the highway bridge in Chance Harbor and northward toward Haines Point. Field work was accomplished on 5 - 6 July 1950.

DESCRIPTION OF COAST:

Except in Chance Harbor coast in this area is low and sand beach or marsh.

CHARACTER OF CONTROL:

Control was adequate for this type of survey. Haines Point Light, 1942 and Deal Island Church Spire, 1901 were the triangulation stations used. Air photo control station PEN (Upper Thorofare Rear Range Light) from survey (T-8134) was also used for control.

METHODS AND CLOSING ERRORS:

The purpose of this survey was to locate hydrographic signals in the large shallow pond east of the highway bridge at Chance. These signals were located by graphic triangulation methods and satisfactory results were obtained. Some shoreline revision and location of detail was made in Chance Harbor and northward toward Haines Point.

METHODS AND CLOSING ERRORS: (CONT.)

This was done using telemeter rod distances to the various detail and short telemeter rod traverse along the shoreline. The traverse was not closed, but indications were that no errors of any consequence exist.

LANDMARKS:

No additional landmarks other than those shown on Chart 1224 were located and none are recommended for this area.

GEOGRAPHIC NAMES:

Geographic names shown on Chart 1224 are adequate and no additional names are recommended.

Approved and Forwarded
John Bowie, Jr.
Comdr., USN
Comdg. Ship COWE

Harry D. Reed, Jr.
Harry D. Reed, Jr.,
Lieut., USN&GS.

after comparing this graphic control sheet with contemporary hydrographic surveys, the G.C. sheet was destroyed.

J. A. Dismore
4 April 1952

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7879

FIELD NO. CO-1150

Maryland, Chesapeake Bay, Tangier Sound

Project No. CS-287

Surveyed in May - June 1950

Scale 1:10,000

Soundings:

808 Fathometer
Hand lead
Pole

Control:

Sextant fixes on shore signals

Chief of Party - J. Bowie, Jr.
Surveyed by - J. Bowie, Jr. and H. D. Reed
Protracted by - B. T. Lewis
Soundings plotted by - B. T. Lewis
Verified and inked by - C. O. De Marr
Reviewed by - T. A. Dinsmore, 18 March 1952
Inspected by - R. H. Carstens

1. Shoreline and Signals

The origin of the shoreline and signals is given in the Descriptive Report. Shoreline revisions shown in red are from present survey information.

2. Sounding Line Crossings

After the application of the corrections mentioned in paragraph 7c, depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

This survey covers the northern end of Tangier Sound and the shoal flats adjacent thereto. The Sound with depths ranging from 37 to 75 feet is bordered for the most part by precipitous channel banks. This condition is particularly exemplified west of Deal Island in lat. $38^{\circ} 08.35'$ where depths drop rapidly from 6 ft. to 44 ft. in about 50 meters.

Sharp irregularities occurring near the western bank of the deep channel through the sound together with minor irregularities elsewhere in the area contribute to the unevenness in portions of the bottom.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7779 (1949) and H-7782 (1949) on the southeast and H-7781 (1949) on the south.

The junctions with H-7880 (1950) on the west and H-7881 (1950) on the north will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

H-557 (1856) 1:40,000
H-1447 (1878) 1:40,000

H-2614 (1901-02) 1:20,000
H-2616 (1901-02) 1:20,000

The surveys of 1901-02 provide the most complete prior coverage of the area under consideration. A comparison of the prior and present surveys reveals that some changes in bottom have taken place. Pronounced changes are noted east of South Marsh Island where in the general vicinity of lat. $38^{\circ} 07'$, the present 6- and 12-ft. depth curves are as much as 350 meters farther offshore than their positions in 1901-02.

Present depths along the axis of Tangier Sound are from 8 to 10 ft. less than prior depths.

Conspicuous examples of shoaling are indicated in the following comparison:

<u>Prior Depth</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth</u>
9	$38^{\circ} 07.65'$	$76^{\circ} 00.25'$	4-5
8	$38^{\circ} 07.27'$	$76^{\circ} 00.22'$	5
19	$38^{\circ} 06.52'$	$75^{\circ} 59.69'$	15
46	$38^{\circ} 06.02'$	$75^{\circ} 59.15'$	40
78	$38^{\circ} 08.13'$	$75^{\circ} 58.65'$	70
63	$38^{\circ} 11.00'$	$75^{\circ} 58.52'$	53

The last two examples are representative of the filling-in that has taken place in the deep channel.

The 1-ft. sounding charted in lat. $38^{\circ} 08.32'$, long. $76^{\circ} 00.72'$, from H-2616 (1901-02) should be disregarded. Filling in present depths of 4-6 ft., the area in this general vicinity has eroded and deepened 3 to 5 ft. The early surveys of 1856 and 1878 show an island in the above position.

Except as noted above, present depths are generally 1 to 3 ft. shallower than prior depths.

The wreck charted in lat. $38^{\circ} 10.18'$, long. $75^{\circ} 57.03'$, from H-2614 (1901-02) should be removed from the chart. A thorough search during the present survey failed to reveal any evidence or remains of the wreck. The wreck is now considered to be non-existent.

The dock charted in lat. $38^{\circ} 10.05'$, long. $75^{\circ} 57.2'$, from H-2614 (1901-02) should be disregarded. Inasmuch as the dock does not appear on T-8134 (1942) and no remains of the dock were found on the present survey, it is presumed now to be nonexistent.

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

6. Comparison with Chart 1224 (Latest print date 7/30/51)
Chart 3330 (Latest print date 3/27/50)

A. Hydrography

Charted hydrography originates with the prior surveys of 1901-02 which need no further consideration. The present survey supersedes the charted hydrography.

B. Aids to Navigation

The buoys, range lights and day beacons marking the channel into Chance Harbor on Chart 3330 are charted 50-70 meters north of the positions on the present survey. The charted positions originating with a source of information prior to 1942 are superseded by the present survey positions.

The buoys located in lat. $38^{\circ} 11.43'$, long. $75^{\circ} 58.05'$, and lat. $38^{\circ} 09.89'$, long. $75^{\circ} 58.28'$ on the present survey are charted 150 meters NNE and 150 meters SSW, respectively, from the survey positions. The charted positions appear to more adequately serve the purpose intended. No other differences are noted between the survey and charted positions of aids.

C. Dredged Channels

The charted controlling depth (Chart 3330) of $6\frac{1}{2}$ ft. in the channel leading to Chance Harbor originates with Chart Letter 301 (1949). Present survey depths indicate that the channel has shoaled considerably. A 3-ft. sounding was obtained on the channel range in lat. $38^{\circ} 10.18'$, long. $75^{\circ} 57.03'$. The present survey depths supersede the charted information. The note "spoil" adjacent to the channel should be removed from the chart inasmuch as present survey depths do not indicate the existence of spoil banks.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. About 600 soundings were revised in depth during verification. Most of the revised depths resulted from corrections determined and applied to fathometer soundings in depths less than 10 ft. The corrections were applied to compensate for fluctuations in

the gain and initial in the shoaler depths. Bar checks were not taken in depths less than 10 ft. Inasmuch as shoal flats cover a large portion of the surveyed area, bar checks at 5 ft. would have been useful in more accurately determining fathometer corrections in the shoal depths.

Numerous soundings were also revised from rescanning the fathograms in areas where grass was prevalent on the bottom.

Difficulty was experienced in some instances in resolving discrepancies between fathometer and pole soundings in areas of soft bottom and where grass existed. In taking pole soundings in soft bottom, the use of a disk or openwork circular attachment on the end of the pole might serve to prevent undue penetration of the pole and result in more accurate depth measurement.

Although minor discrepancies remain on the smooth sheet, they are considered to be relatively unimportant.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a basic survey and no additional field work is required.

Examined and approved:

Wallace A. Bruder

~~H. R. Edmonston~~
Acting Chief, Nautical Chart Branch

H. Arnold Karo

H. Arnold Karo
Chief, Division of Charts

L. S. Hubbard

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