

7910

Diag. Cht. No. 1222-3

CS-326

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. FBS-H-1150 Office No. H-7910

LOCALITY

State VIRGINIA

General locality LOWER CHESAPEAKE BAY

Locality OFF CAPE CHARLES

1945

CHIEF OF PARTY

G. R. Fish

LIBRARY & ARCHIVES

DATE

Feb 2 - 1953

B-1870-1 (1)

7910

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-7910

Field No. PBS-H-1150

State VIRGINIA

General locality LOWER CHESAPEAKE BAY

Locality OFF CAPE CHARLES HARBOR

Scale 1:10,000 Date of survey 11/6/50 to 11/28/50

Instructions dated 26 JULY 1948 - 11 SEPTEMBER 1950

Vessel LAUNCHES Nos. 82, 116 AND 25 FOOT SKIFF

Chief of party G. R. Fish

Surveyed by H. J. Seaborg, A. L. Powell and T. M. Krall

Soundings taken by ~~XXXXXXXX~~ graphic recorder, ~~XXXXXXXXXXXX~~ pole

Fathograms scaled by Ship's Personnel

Fathograms checked by " " & Norfolk Processing Office

Protracted by Geo. L. Fernandez

Soundings penciled by Geo. L. Fernandez

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

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

716

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-7910
(Field No. PBS-H-1150)

Chief of Party Launches #82 #116 and 25 foot Skiff
G. R. Fish Surveyed in November 1950
Scale 1:10,000

A. PROJECT:

This Survey was executed under Supplemental Instructions from the Director for Project CS-326 dated 26 July 1948.

B. SURVEY LIMITS AND DATES:

This survey covers the inshore hydrography on the East side of Lower Chesapeake Bay off Cape Charles from Latitude 37-11-00" to 37 - 16'-00".

On the south side this survey joins survey Sheet ^{H-7791(1949)} PBS-H-1249.

On the west side this survey joins survey Sheets ^{H-7750(1948-50)} PBS-H-4148 and
PBS-H-4150.
^{H-8012(1950-52)}

On the north side this survey joins survey Sheet ^{H-7911(1950)} PBS-H-1250.

This survey was begun on 6 November 1950 and was completed on 28 November 1950.

C. VESSEL AND EQUIPMENT:

Launch #82 using portable depth recorders No. 63 (type 808A) and No. 116S (type 808J) completed the southern portion of the survey.

Launch #116 using portable depth recorder No. 120S (type 808J) completed the northern portion of the survey.

A 25 foot Skiff using a 10 foot pole and portable depth recorder No. 65 (type 808A) completed the survey of Old Plantation Creek.

D. TIDE AND CURRENT STATIONS:

The tides as furnished by the Washington Office were based on the hourly heights as observed at the primary tide station located at the Naval Operating Base, Hampton Roads, Va. All of the hydrography came within zone "X" where there is a time difference of minus 30 minutes and a 0.0 high water height difference (See tide note attached to this report). No current stations were occupied.

E. BOAT SHEET:

The boat sheets were constructed and shoreline transferred from T-8176, T-8181 and T-8182 by the Washington Office.

T-7074b(1949)

T-8177

oX (1942)

Signals were plotted and verified in the usual manner from contemporary graphic control sheets.

F. CONTROL STATION:

Hydrography was controlled by eight triangulation stations supplemented by five recovered air photo stations on T-8181 and T-8182 and 60⁺ topographic stations located on graphic control surveys PBS-B-1950 and PBS-C-1950. Following is a list of signals used on this sheet.

*Graphic control surveys to be destroyed subsequent to the verification and review of the surveys in this area. Desc: Rpt. filed with H-7911.

LIST OF SIGNALS
Sheet PBS-H-1150
H-7910

<u>STATION</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>YEAR</u>
VIM	Topo - PBS-B-1949 ^{✓ or D} F-7074b	G.R.F.	1949
ZIP	" " " " - * to be destroyed	G.R.F.	"
ZOO	" " " "	G.R.F.	"
SHE	Topo - PBS-B-1950 *	G.R.F.	1950
ABE	" " " "	G.R.F.	"
BIB	" " " "	G.R.F.	"
COP	" " " "	G.R.F.	"
DIX	" " " "	G.R.F.	"
FUN	" " " "	G.R.F.	"
GAS	" " " "	G.R.F.	"
HUB	" " " "	G.R.F.	"
ICE	" " " "	G.R.F.	"
JOY	" " " "	G.R.F.	"
KID	" " " "	G.R.F.	"
LUX	" " " "	G.R.F.	"
MOO	" " " "	G.R.F.	"
MAN	" " " "	G.R.F.	"
NAT	" " " "	G.R.F.	"
PAL	" " " "	G.R.F.	"
QUO	" " " "	G.R.F.	"
RAM	" " " "	G.R.F.	"
TAX	" " " "	G.R.F.	"
CUR	Parsons Boat House, North Gable No. T-8182 ✓	W.D.P.	1942
ART	Scotts Center Chimney - No. T-8181 ✓	W.D.P.	1942
OIL	Hunt Oyster House - No. T-8181 ✓	W.D.P.	1942
FOX	Lodge South Gable - No. T-8181 ✓	W.D.P.	1942
GIN	Hollywood West Gable - No. T-8182 ✓	W.D.P.	1942
DOG	Topo - PBS-B-1950	G.R.F.	1950
NED	" " " "	G.R.F.	"
CAT	" " " "	G.R.F.	"
WAS	" " " "	G.R.F.	"
JUG	" " " "	G.R.F.	"
FIG	" " " "	G.R.F.	"
TOM	" " " "	G.R.F.	"
AXE	" " " "	G.R.F.	"
OUT	" " " "	G.R.F.	"
RUM	" " " "	G.R.F.	"
ERG	" " " "	G.R.F.	"
TUB	" " " "	G.R.F.	"
SAM	" " " "	G.R.F.	"
POE	" " " "	G.R.F.	"
FLAG	" " " "	G.R.F.	"
BOB	" " " "	G.R.F.	"
RED	" " " "	G.R.F.	"
FOR	" " " "	G.R.F.	"
SLAT	" " " "	G.R.F.	"

LIST OF SIGNALS CONTINUED
 Sheet PBS-H-1150
 H-7910

<u>STATION</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>YEAR</u>
JOE	Topo - PBS-B-1950	G.R.F.	1950
VAL	" " " "	G.R.F.	"
BEN	" " " "	G.R.F.	"
BED	" " " "	G.R.F.	"
EVA	" " " "	G.R.F.	"
BOX	" " " "	G.R.F.	"
BAR	" " " "	G.R.F.	"
TEX	" " " "	G.R.F.	"
WAX	" " " "	G.R.F.	"
SIR	" " " "	G.R.F.	"
MOP	" " " "	G.R.F.	"
ON	" " " "	G.R.F.	"
PIE	" " " "	G.R.F.	"
FRY	" " " "	G.R.F.	"
LAY	" " " "	G.R.F.	"
RAY	" " " "	G.R.F.	"
SIG	Topo - PBS-C-1950	G.R.F.	"
JOY TOY	" " " "	G.R.F.	"
ZAG	" " " "	G.R.F.	"

TRIANGULATION STATIONS

SID	CHEAPSIDE (USE)	K.B.J.	1939 ⁴
COS	COSTIN	O.W.F.	1918 ⁴
OLD	OLD PLANTATION FLATS LIGHT HOUSE	K.B.J.	1939 ⁴²
TRAN	TRANSMISSION TOWER	W.D.P.	1942
PA	CAPE CHARLES PENNSYLVANIA RAILROAD SHOP STACK	K.B.J.	1939 ⁴²
JET	CAPE CHARLES JETTY LIGHT	K.B.J.	1939
CAP	CAPE CHARLES (USE)	K.B.J.	1939 ⁴²
APE	CAPE CHARLES ICE PLANT STACK	K.B.J.	1939

Also JAP & SAD - PBS-B-1950

G. SHORELINE AND TOPOGRAPHY:

T-8177 (1942)
 The shoreline and topographic details were taken from surveys T-8176, T-8181 and T-8182, scale 1:20,000 surveyed by photographic means. ^{and T-78740 (1927)} Where the slope of the beach gradient permitted, mean low water line was defined along the eastern shore and in the area of Old Plantation Creek by the use of a 25 foot Skiff and by soundings taken by the launches at the higher stages of the tide.

H. SOUNDINGS:

Soundings were obtained with the Submarine Signal Company type 808-J and 808-A depth recorders.

Standard procedure was used in obtaining bar checks in accordance with paragraph 557 of the Hydrographic Manual. Attached to this report are lists of "Abstract of Bar Checks" and "Summary of Echo Corrections" covering this phase of the hydrography.

Refer to section on "Fathometer Corrections" contained in report on Hydrographic Survey Field No. PBS-H-4148 for detailed account of method of obtaining corrections. H-7750(1948-50)

I. CONTROL OF HYDROGRAPHY:

Hydrography was controlled by the standard procedure of obtaining three-point sextant fixes on shore signals and objects and on permanent type navigation aids previously located.

J. ADEQUACY OF SURVEY:

This survey is complete and adequate to supersede prior surveys for charting. Junction with all previous and adjoining surveys is satisfactory and no trouble was experienced in drawing depth curves.

The presence of extensive oyster beds in Old Plantation Creek precluded additional hydrography in this area.

K. CROSSLINES:

Approximately ten percent of the lines were crosslines. In general, agreement was satisfactory.

L. COMPARISON WITH PRIOR SURVEYS:

Prior surveys register numbers H-3658 and H-3659, 1914, scale 1:20,000 and H-3660, 1914, scale 1:5,000 cover the area of the present survey. Since these surveys are of a different scale from the current survey and are quite old, no complete and thorough comparison was made. However a cursory examination indicates a ~~satisfactory~~ ^{general} agreement throughout.

Review,
par. 5.

Four items as covered by the Preliminary Review dated 14 July 1948 fall within the limits of this survey.

Nos. 9, 31 and 32 were soundings which proved to be one fathom too shoal on sheet H-3658.

Review,
par. 5

Item No. 8 proved to be from erroneous records and plotting on Sheet H-3650 and had been rejected previously. 10-ft. sdg. deleted from chart

M. COMPARISON WITH CHART:

Comparison was made with a copy of Chart 1222 published in December 1946 and hand corrected under date of February 3, 1951.

This survey shows ^{general} agreement, throughout with this chart.

Review, par. 6.

N. DANGERS AND SHOALS:

All charted dangers and shoals were found as charted except as listed in "L" above.

P. AIDS TO NAVIGATION:

The following listed floating aids to navigation were located during this survey.

<u>Name</u> <u>(1950 Light List)</u>	<u>Location</u> <u>Lat. Long.</u>	<u>Water</u> <u>Depth</u>	<u>Vol.</u> <u>Pos. No.</u>	<u>Location</u> <u>Date 1950</u>
✓ Cherrystone Inlet Bell Buoy "2 (Red)	37 14.23' 76 02.30'	17.0	Vol. #2, Pos. #131-b-day, Lch. #116	7 November
✓ Cherrystone Channel Buoy #3 (Black)	37 14.75' 76 02.23'	18.0	Vol. #7, Pos. #64-g-day, Lch. #116	14 November
✓ Cherrystone Channel Buoy #4 (Red)	37 14.79' 76 02.07'	18.0	Vol. #7, Pos. #63-g-day, Lch. #116	14 November
✓ Cherrystone Chanel Buoy #6 (Red)	37 15.36' 76 01.81'	13.0	Vol. #7, Pos. #65-g-day, Lch. #116	14 November
✓ Cherrystone Channel Buoy #5 (Black)	37 15.42' 76 01.95'	8.0	Vol. #7, Pos. #66-g-day, Lch. #116	14 November
✓ Old Plantation Bar Buoy (Can)	37 12.18' 76 01.78'	24.0	Vol. #11, Pos. #190-g-day, Lch. #82	14 November

AIDS TO NAVIGATION CONTINUED

<u>Name</u> (1950 Light List)	<u>Location</u> <u>Lat.Long.</u>	<u>Water</u> <u>Depth</u>	<u>Vol.</u> <u>Pos.No.</u>	<u>Location</u> <u>Date 1950</u>
Old Plantation Flats Buoy #2 (Red)	37 12.60' 76 01.69' 70	20.0	Vol.#11, Pos. #220-g-day, Lch.#82	14 November
Black & White Spar Buoy #128N (Not listed)	37 13.60' 76 03.05' 6	46.0	Vol.#11, Pos. #153-g-day, Lch.#82	14 November
<i>Spar 127 N</i>	37° 12.21' 76° 02.23'	45.0	Vol. 2, 25h (Lch. 82)	15 Nov.

Black and White Spar Buoys in this area do not appear in the Light List. Their positions and maintenance are regulated by Statute in connection with the fishing industry.

Q. GEOGRAPHIC NAMES:

No field investigation of Geographic names was made during this survey.

Respectfully Submitted

Emmett H. Sheridan
Emmett H. Sheridan
LCDR., USC&GS

STATISTICS
STATISTICS FOR HYDROGRAPHIC SURVEY H-7910 (PBS-H-1150)

Vol.	Day Letter	Date 1950	No. of Pos.	Stat. Mi. Sdg. Line	Launch		
1	a	6 Nov.	113	9.9	#116	FATH 1205 BCK	
1 - 2	b	7 Nov.	269	34.1	#116		
2 - 3	c	8 Nov.	231	33.2	#116		
3 - 4	d	9 Nov.	215	31.5	#116		
4 - 5	e	10 Nov.	226 ⁵	33.6	#116		
6	f	13 Nov.	183 ²	25.6	#116		
7	g	14 Nov.	181	20.4	#116		
7	h	28 Nov.	32	3.2	#116		
		Totals	1450 ⁴⁸	191.5			
		Square Statute Miles		5.2			
8	a	6 Nov.	66	6.6	#82	1165 63	
8	b	7 Nov.	220 ¹⁸	21.1	#82 BCK		
9	c	8 Nov.	184	23.3	#82		
9 - 10	d	9 Nov.	151	17.6	#82 BCK		
10	e	10 Nov.	142	15.5	#82		
10	f	13 Nov.	146	14.1	#82 BCK		
11	g	14 Nov.	241	24.6	#82 BCK		
11 - 12	h	15 Nov.	173	19.8	#82 BCK		
12	j	1 Dec.	8	0.7	#82		
		Totals	1331 ²⁹	143.3			
		Square Statute Miles		4.9			
13	a	16 Nov.	118	11.3	25! Skiff		65
13	b	17 Nov.	20	1.6	25! Skiff		
13	c	22 Nov.	55	3.8	25! Skiff		
13 - 14	d	27 Nov.	79	7.3	25! Skiff		
14	e	28 Nov.	76	10.2	25! Skiff		
		Totals	348	34.2			
		Square Statute Miles		0.4			

TOTALS FOR SHEET: ³¹²⁵ 3129 Positions
369.0 Statute Miles Sounding Line
10.5 Square Statute Miles

TIDAL NOTE
(PBS-H-1150)
H-7910 (1950)

The Standard Automatic Tide Gage at the Naval Operating Base, Hampton Roads, Virginia was used exclusively to obtain tide reducers.

To simplify the work involved in reducing for tides the area covered under Project CS-326 was divided into four quadrants centered on the intersection of Latitude $37^{\circ}10'00''$ and Longitude $76^{\circ}10'00''$. This survey is covered by area "X", north of $37^{\circ}10'00''$ and east of $76^{\circ}10'00''$. The time difference for area "X" is minus 30 minutes and a high water height difference of 0.0 feet.

ABSTRACT OF BAR CHECKS

FATHOMETER NO. 120-S

LAUNCH NO. 116

7910
SHEET H-(PBS - N - 1150)

NOTE: All signs are positive unless otherwise noted. Depths and corrections are in feet. Values have been reduced to an initial setting of 1.0 feet.

"A" SCALE DEPTH

DAY LETTER	DATE 1950	5	10	15	20	25	30	35	40	45	50
a	6 Nov.		0.5 0.6	0.2	0.0						
b	7 Nov.		0.5 0.4 0.0 0.0	0.5 0.2 0.0 0.0	0.1 0.0 0.5 0.0	0.4 -0.5					
c	8 Nov.	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0	0.0 0.0	0.0			
d	9 Nov.	0.0 -0.5 -0.5 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	-0.4 -0.2 0.0 0.0	0.0 0.0 0.0 0.0	-0.5 -0.5 0.0 0.0	-0.5 0.0 0.0	0.0
e	10 Nov.	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0						
f	13 Nov.	0.0 0.0 0.1	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0	-0.2 -0.4 -0.3	0.0 -0.3 -0.2	-0.5 -0.5 -0.2	-0.5 -0.2	-0.6
g	14 Nov.	0.0 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0					
h	28 Nov.	0.0 0.0	0.0 0.0	0.0 0.0	-0.1 -0.2	-0.2					
SUM		-0.8	2.0	0.9	0.3	-0.3	-1.2	-0.3	-1.7	-1.2	-0.6
NUMBER		19	26	25	22	13	8	7	6	5	2
MEAN		-0.04	0.08	0.04	0.01	-0.02	-0.15	-0.04	-0.3	-0.24	-0.3

ABSTRACT OF BAR CHECKS

FATHOMETER NO. 120-S LAUNCH NO. 116 SHEET H-⁷⁹¹⁰(PBS - H - 1150)

NOTE: All signs are positive unless otherwise noted. Depths and corrections are in feet. Values have been reduced to an initial setting of 1.0 feet.

"B" SCALE DEPTH

DAY LETTER	DATE 1950	35	40	45	50
f	13 Nov.	-1.0 -1.0	-1.0 -1.0	-1.2 -1.0	-1.4
d	9 Nov.	-0.5	-1.0 -0.8	-1.0 -0.8	-1.0
SUM		-2.5	-3.8	-4.0	-2.4
NUMBER		3	4	4	2
MEAN		-0.83	-0.95	-1.0	-1.2

ABSTRACT OF BAR CHECKS

FATHOMETER NO. 63

LAUNCH NO. 82

7910
SHEET H_λ (PBS - H - 1150)

NOTE: All signs are positive unless otherwise noted. Depths and corrections are in feet. Values have been reduced to an initial setting of 0.0 feet.

"A" SCALE DEPTH

DAY LETTER	DATE	5	10	20	30	40	50	60
f	13 Nov.		0.2 0.1	-0.5 -0.4	-1.0 -1.0	-1.8 -1.7		
g	14 Nov.		0.0 0.5	-0.6 -0.2	-1.4 -0.8	-2.0 (-3.0)R	-3.7	
h	15 Nov.	0.1	0.0 0.0	-0.3 -0.9	-1.2 -1.0	-1.9 -1.8	-2.0	
SUM NUMBER		0.1 1	0.8 6	-2.9 6	-6.4 6	-9.2 5	-5.7 2	
MEAN		0.1	0.13	-0.48	-1.07	-1.84	-2.85	

"B" SCALE DEPTH

f	13 Nov.					-0.1		
g	14 Nov.					(-0.9)R	(-2.1)R	-1.0 (-2.7)R
h	15 Nov.					0.1 0.0	0.0 -0.4	
SUM NUMBER						0.0 2	-0.4 2	-1.0 1
MEAN						0.0	-0.2	-1.0

SUMMARY OF ECHO CORRECTIONS

<u>Ship</u>	<u>Day Letter</u>	<u>Fath. No.</u>	Sheet H-7910 (PBS-H-1150)		<u>Fath. Scale</u>	<u>From Depth to Depth(ft.)</u>	<u>Corr'n (ft)</u>
			<u>Initial</u>	<u>Set.(ft.)</u>			
Launch # 82	b,d.	116-S	0.0	A	0.0 to 14.0	+ 0.4	Fath. 116 S
					14.5 to 19.5	+ 0.2	
					20.0 to 33.0	0.0	
					33.5 to 40.0	-0.2	
				B			
Launch # 82	f,g, h.	63	0.0	A	2.5 to 5.0	0.0	63
					5.5 to 11.0	+ 0.2	
					11.5 to 14.5	0.0	
					15.0 to 17.5	-0.2	
					18.0 to 20.0	-0.4	
					20.5 to 23.0	-0.6	
					23.5 to 27.0	-0.8	
					27.5 to 30.5	-1.0	
					31.0 to 33.5	-1.2	
					34.0 to 36.0	-1.4	
					36.5 to 38.5	-1.6	
					39.0 to 40.5	-1.8	
					41.0 to 43.0	-2.0	
					43.5 to 44.5	-2.2	
					45.0 to 46.5	-2.4	
					47.0 to 48.5	-2.6	
					49.0 to 50.0	-2.8	
50.5 to 52.5	-3.0						
53.0 to 54.5	-3.2						
55.0 to	-3.4						

SUMMARY OF ECHO CORRECTIONS - CONTINUED

Sheet H-7910
(PBS-H-1150)

<u>Ship</u>	<u>Day Letter</u>	<u>Initial Set (ft.)</u>	<u>Fath. Scale</u>	<u>From Depth to Depth (ft.)</u>	<u>Corr'n (ft.)</u>
Launch # 82	f,g,h.	0.0	B	36.5 to 47.0	0.0
				47.5 to 51.5	-0.2
				52.0 to 54.0	-0.4
				54.5 to 56.5	-0.6
				57.0 to 59.0	-0.8
				59.5 to 61.0	-1.0
				61.5 to 63.5	-1.2
				64.0 to 65.5	-1.4
				66.0 to 68.0	-1.6
				68.5 to 70.5	-1.8
				71.0 to 74.0	-2.0
				74.5 to 78.5	-2.2
				79.0 to 86.0	-2.4
Launch # 116	a,b,c, d,e,f, g,h.	1.0	A	0.0 to 3.5	-0.2
				4.0 to 29.5	0.0
				30.0 to 50.5	-0.2
				51.0 to 55.0	-0.4
			B	35.0 to 38.5	-0.8
				39.0 to 47.5	-1.0
				48.0 to 54.0	-1.2
				54.5 to 58.5	-1.4
				59.0 to 62.0	-1.6
				62.5 to 67.0	-1.8
				67.5 to 71.5	-2.0
				72.0 to 76.0	-2.2
				76.5 to 82.0	-2.4

63

1205

LIST OF SIGNALS
H-7910

TRIANGULATION STATIONS

SID CHEAPSIDE (U.S.E.), 1939-49 ✓
 COS COSTIN, 1914 ✓
 OLD OLD PLANTATION FLATS LIGHTHOUSE 2, 1939-42 ✓
 TRAN TRANSMISSION TOWER, 1942 ✓
 PA CAPE CHARLES, PENNA. R.R. SHOP, STACK, 1939-42 ✓
 CAP CAPE CHARLES, (U.S.E.), 1939-42 ✓
 JET CAPE CHARLES, JETTY LIGHT, 1939 ✓
 APE CAPE CHARLES, ICE PLANT, STACK, 1939 ✓

Described
MARKED TOPOGRAPHIC STATIONS

ART SCOTT'S, CENTER CHY., 1942 T-8181 ✓
 CUR PARSON'S BOAT HOUSE, NORTH GABLE, 1942 T-8182 ✓
 FOX LODGE, SOUTH GABLE, 1942 T-8181 ✓
 GIN HOLLYWOOD, WEST GABLE, 1942 T-8182 ✓
 OIL HUNT OYSTER HOUSE, 1942 T-8181 ✓

*Apparently Re-est.
1950, Pass.
marked in 1950*

TOPOGRAPHIC STATIONS

SOURCE PBS-B-50

abe	Axe	Bar	Bed	Ben	Bib	Bob	Box	Cat	Cop	erg
Eva	Dix	Dog	Fig	Flag	For	Fry FRY	Fun	Gas	Hub	Ice
Jap	Joe	Joy	Jug	Kid	Lay	Lux	Man	Moo	Mop	Nat
Ned	On	Out	Pal	rie	Poe	Quo	Ram	Ray	Red	Rum
Sad	Sam	She	Sir	Slat	Tax	Tex	Tom	Tub	Val	Was
Wax										

SOURCE PBS-^B~~B~~-49 T-70746 (1949)

Vim Zip Zoo

SOURCE PBS-C-50

Sig Toy Zag

ADDENDUM
To Accompany

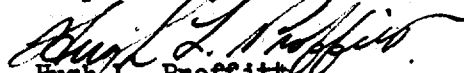
(1950)
HYDROGRAPHIC SURVEY H-7910 (Field No. PBS-1150)

GENERAL

Erratic courses on the southern part of this survey made it almost impossible to check positioning according to course and time. This is an area of sloughs and lumps where exact positioning of soundings is essential for correct bottom delineation. *(courses generally agree with compass headings)*

Relatively minor jumps in time and course were noted in some instances. This may be attributed to a slight displacement of signals as graphic control sheets were partially controlled from air-photo marked stations. Past experience has shown these stations are subject to varying amounts of displacement.

Respectfully submitted,


Hugh L. Proffitt
Cartographer.

Norfolk, Va.
15 Jan. 1953

Approved & Forwarded:

Earle A. Deily
Supervisor, SE District.

839

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COAST AND GEODETIC SURVEY~~

4 February 1953

Division of Charts: R. H. Carstens

Plane of reference approved in 14
volumes of sounding records for

HYDROGRAPHIC SHEET 7910

Locality Lower Chesapeake Bay, Virginia

Chief of Party: G. R. Fish in 1950
Plane of reference is mean low water, reading
3.6 ft. on tide staff at Hampton Roads (NOB)
13.4 ft. below B. M. 6 (1927)

Height of mean high water above plane of reference is 2.5 feet.

Condition of records satisfactory except as noted below:

E. C. McKay

Section of Tides

Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. H-7910

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Virginia</u>										B.G.M.	1
<u>Chesapeake Bay</u>										"	2
<u>Old Plantation Creek</u>											3
<u>Cape Charles</u> (town)											4
<u>Cape Charles Harbor</u>											5
											6
											7
											8
											9
											10
											11
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											24
											25
											26
											27

Names underlined
in red are approved
2-3-53
L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-791Q...

records accompanying survey:

Boat sheets^{1(2.Parts)} sounding vols. 14.....; wire drag vols.;
 bomb vols.; graphic recorder rolls ..12 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	.....	3125
Number of positions checked	.....	206
Number of positions revised	.....	14
Number of soundings revised (refers to depth only)	.....	64
Number of soundings erroneously spaced	.....	16
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	4
Junctions	Time	12
Verification of soundings from graphic record	Time	8

Verification by *J.E. Garland*..... Total time 259..... Date 6-3-53

Reviewed by *J.A. Winsmore*..... Time 40..... Date 1 July 1953

Stirni - shw

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7910

FIELD NO. PBS-H-1150

Virginia, Chesapeake Bay, Off Cape Charles Harbor

Project No. CS-326

Surveyed in November 1950

Scale 1:10,000

Soundings:

808 Fathometer
Pole

Control:

Sextant fixes on shore signals

Chief of Party - G. R. Fish
Surveyed by - H. J. Seaborg, A. L. Powell and T. M.
Krall

Protracted by - G. L. Fernandez
Soundings plotted by - G. L. Fernandez
Verified and inked by - J. E. Gearhart
Reviewed by - T. A. Dinsmore, 1 July 1953
Inspected by - R. H. Carstens

1. Shoreline and Signals

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

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The 3-ft. curve has been added to emphasize the configuration of the inshore bottom. The low-water curve was determined where practicable.

The channel to Cape Charles Harbor and the offshore shoal (Old Plantation Flats) are the principal features covered by this inshore survey. The bottom which is generally uneven and undulating drops rapidly from depths of 18 ft. to 40 ft. at the offshore limits of the survey.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7791 (1949) on the south and with H-7750 (1948-50) on the west. The junctions with H-8012 (1950-52) on the northwest and H-7911 (1950) on the north will be considered in the reviews of those surveys.

5. Comparison with Prior Surveys

H-345 (1852) 1:20,000	H-1874 (1888) 1:20,000
H-353 (1852) 1:20,000	H-3658 (1914) 1:20,000
H-364 (1852) 1:40,000	H-3659 (1914) 1:20,000
H-1169 (1873) 1:10,000	H-3660 (1914) 1:5,000

These prior surveys cover the area of the present survey. The surveys of 1914 furnish the most complete prior coverage. Although the general configuration of the bottom has changed little, some changes in bottom are noted. Improvements to Cape Charles Harbor and the channel leading southwestward to deep water are the most important changes that have taken place. The harbor area has been both widened and deepened since 1914 and in lat. $37^{\circ} 14.05'$, long. $76^{\circ} 02.75'$, prior depths of 15 ft. have since been dredged to channel depths of 18-22 ft.

Other examples of bottom changes are given in the following comparison:

<u>Latitude</u>	<u>Longitude</u>	<u>Prior Depth</u>	<u>Present Depth</u>
$37^{\circ} 15.95'$	$76^{\circ} 02.30'$	6 - 7	2 - 3
$37^{\circ} 15.27'$	$76^{\circ} 02.13'$	16	3 - 5
$37^{\circ} 15.00'$	$76^{\circ} 02.60'$	11	4
$37^{\circ} 14.30'$	$76^{\circ} 02.76'$	15 - 17	10

It will be noted that the above examples of shoaling all fall in the shoal flats westward of the Cape Charles Harbor channel and probably result from the dumping of dredged spoil in that area.

Differences of 2-3 ft. between prior and present depths elsewhere in the area were apparently caused by shifting bottom. Except for a slight extension of the 12-ft. depth curve at the north end of Old Plantation Flats, no appreciable change has occurred in the delineation of this conspicuous shoal.

Examples of both shoreline erosion and accretion amounting to as much as 200 meters are noted immediately southward from Cape Charles Harbor.

Attention is directed to the following discrepancies:

- (1) The 10-ft. sounding (uncharted) in lat. $37^{\circ} 14.40'$, long. $76^{\circ} 01.87'$, on H-3658 should be disregarded. The 10 ft. was found to be on a line of soundings plotted from erroneous records and has been rejected on H-3658. The previously charted sounding has been removed from the chart.
- (2) The following soundings on H-3658 fall in depths about 1 fm. deeper on that survey and are considered to be 1 fm. in error. Present survey depths also disprove the prior depths which should be disregarded:

<u>Latitude</u>	<u>Longitude</u>	<u>Prior Depth</u>	<u>Present Depth</u>
$37^{\circ} 14.50'$	$76^{\circ} 02.50'$	7 (charted)	12
$37^{\circ} 13.28'$	$76^{\circ} 02.35'$	9 (uncharted)	14
$37^{\circ} 12.58'$	$76^{\circ} 01.87'$	16 (uncharted)	21

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

6. Comparison with Chart 1222 (Latest print date 1/26/53)

A. Hydrography

The charted hydrography originates principally with the previously discussed surveys which need no further consideration. Numerous differences are noted between the charted depths and depths on the present survey. These differences are mostly due to the bottom changes described in paragraph 5.

The present survey entirely supersedes the charted information.

B. Aids to Navigation

The survey position of the bell buoy in lat. $37^{\circ} 14.23'$, long. $76^{\circ} 02.30'$, is about 100 meters eastward of its charted position. The charted position more adequately marks the eastern bank of the dredged channel.

The siren charted in lat. $37^{\circ} 15.9'$, long. $76^{\circ} 01.2'$, originates with information subsequent to the present survey (H.O. Notice to Mariners, 24, (1952)).

The two buoys located in lat. $37^{\circ} 13.61'$, long. $76^{\circ} 03.05'$, and lat. $37^{\circ} 12.20'$, long. $76^{\circ} 02.22'$, on the present survey have been removed from the chart in accordance with H.O. Notice to Mariners, 52, (1952).

Except as noted, 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

No conflicts are noted between present survey depths and the charted controlling depths of 16 ft. (May 1947) and 16½ ft., respectively, in Cape Charles Harbor channel and basin.

7. Condition of Survey


- a. The sounding records are complete; the Descriptive Report covers all matters of importance.
- b. The smooth plotting was generally accurate.
- c. The sounding of Old Plantation Creek was not completed (see Descriptive Report, par. J.). North of lat. 37° 14.4', sufficient hydrography was not accomplished to reveal the general depths nor the natural channel. General depths are also not developed in the vicinity of lat. 37° 14.17', long. 75° 59.5' and lat. 37° 14.13', long. 76° 00.5'. It should be noted, however, that no more than 1 ft. can be carried into Plantation Creek.

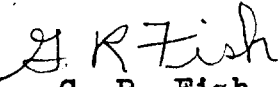
8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

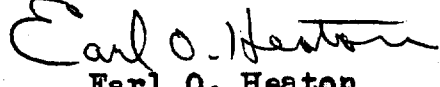
As a matter of record, attention is directed to the areas lacking soundings mentioned in paragraph 7c. Except as noted, the survey is considered to be complete and basic for the area.


H. R. Edmonston
Chief, Nautical Chart Branch


G. R. Fish
Chief, Section of Hydrography

Examined and approved:

H. Arnold Karo
Chief, Division of Charts


Earl O. Heaton
Chief, Division of Coastal Surveys

