

7911

Diag. Cht. No. 1222-3

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PBS-1250 Office No. H-7911

LOCALITY

State Virginia

General locality Lower Chesapeake Bay

Locality North of Cape Charles Harbor

1945 - 53

CHIEF OF PARTY

G. R. Fish

LIBRARY & ARCHIVES

DATE December 4, 1953

B-1870-1 (1)

7911

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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-7911

Field No. PBS-H-1250

State VIRGINIA

General locality LOWER CHESAPEAKE BAY

Locality North of Cape Charles Harbor
OFF CHERRYSTONE INLET

see also attached title sheet

Scale 1:10,000 Date of survey 11/14/50 to 12/1/50

Instructions dated 26 July 1948 - 11 September 1950

Vessel SHIP STIRNI, LAUNCHES #82, #116 and 25 foot Skiff

Chief of party G. R. Fish

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

Soundings taken by ~~echo sounder~~ echo sounder, graphic recorder, ~~and by~~ and by ~~other~~ pole

Protracted by A.K. Schugeld

Soundings penciled by A.K. Schugeld

Soundings in ~~fathoms~~ fathoms feet at MLW ~~MLW~~ MLW and are true depths.

REMARKS: This survey is incomplete and requires additional work.

See Cowie descriptive report covering additional work in 1952 & 1953

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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-7911

Field No. PBS-1250

State VIRGINIA

General locality CHESAPEAKE BAY

Locality NORTH OF CAPE CHARLES HARBOR

Scale 1:10,000 Date of survey OCTOBER 1952, JULY 1953

Instructions dated 13 MARCH 1952

Vessel SHIP COWIE

Chief of party J. H. BRITTAIN

Surveyed by SHIP'S OFFICERS

Soundings taken by fathometer ^{portable 808 type} ~~graphic recorder~~, hand lead, ~~wire~~ and pole

Fathograms scaled by Ship's Personnel

Fathograms checked by Ship's Personnel

Protracted by A.K. Schugeld

Soundings penciled by A.K. Schugeld

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~ *and are true depths*

REMARKS: This report covers additional hydrography in the area originally surveyed by the PARKER, BOWEN and STIRNI in 1950.

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-7911
(Field No. PBS-H-1250)

Chief of Party Ship STIRNI, Launches #82 #116 and 25 foot Skiff
G. R. Fish Surveyed in November and December 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 Cherrystone Inlet from Latitude 37 - 16' - 00" to about Latitude 37- 18' - 30" (Northern portion of sheet is incomplete).

On the south side the survey joins Sheet No. PBS-H-1150.

On the west side the survey joins Sheet No. PBS-H-4150.

On the north this survey is incomplete as the field season was closed before this sheet could be completed. *Completed in 1952-53*

The survey was begun on 14 November 1950 and concluded on 1 December 1950. *(Completed in July 1953)*

C. VESSELS AND EQUIPMENT:

Ship STIRNI using portable depth recorder No. 120S (type 808J) accomplished the hydrography in the deeper water on western portion of this survey.

Launch #82 using portable recorder No. 63 (type 808A) was engaged on the hydrography in Cherrystone Inlet and along the inshore portion of this survey.

Launch #116 using portable recorder No. 120S (type 808J) was engaged on the hydrography in the central portion of this survey.

A 25 foot Skiff using a 10 foot pole and portable depth recorder No. 65 (type 808A) was engaged on hydrography in shoal portion of Cherrystone Inlet.

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 the shoreline transferred from T-8176 and T-8182 ^{of 1942} by the Washington Office.

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

F. CONTROL STATIONS:

Hydrography was controlled by four triangulations, supplemented by 46 topographic stations located on graphic control surveys PBS-B-1950 and PBS-C-1950. Following is a list of signals used on this sheet.

See Processing Office Signal List

LIST OF SIGNALS
Sheet PBS-H-1250

1950

<u>STATION</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>YEAR</u>
SLAT	Topo - PBS-B-1950	G. R. F.	1950
BEN	" " " "	G. R. F.	"
BOX	" " " "	G. R. F.	"
LAY	" " " "	G. R. F.	"
RAY	" " " "	G. R. F.	"
OLD (CASINO 1942)	Topo - PBS-C-1950	G. R. F.	"
SIG	" " " "	G. R. F.	"
CAB	" " " "	G. R. F.	"
ZOO	" " " "	G. R. F.	"
TOY	" " " "	G. R. F.	"
HUT	" " " "	G. R. F.	"
COW	" " " "	G. R. F.	"
GAB	" " " "	G. R. F.	"
YET	" " " "	G. R. F.	"
JUG	" " " "	G. R. F.	"
HIT	" " " "	G. R. F.	"
DUC	" " " "	G. R. F.	"
EGG	" " " "	G. R. F.	"
FOX	" " " "	G. R. F.	"
FAT	" " " "	G. R. F.	"
GUS	" " " "	G. R. F.	"
JAP	" " " "	G. R. F.	"
KID (STAB HOUSE 1942)	" " " "	G. R. F.	"
TOW	" " " "	G. R. F.	"
MIL	" " " "	G. R. F.	"
SIS	" " " "	G. R. F.	"
OAK	" " " "	G. R. F.	"
REO	" " " "	G. R. F.	"
HAG	" " " "	G. R. F.	"
MET	" " " "	G. R. F.	"
LEO	" " " "	G. R. F.	"
RAM	" " " "	G. R. F.	"
WIN	" " " "	G. R. F.	"
TAP	" " " "	G. R. F.	"
VAL	" " " "	G. R. F.	"
WAX	" " " "	G. R. F.	"
CHY	" " " "	G. R. F.	"
HOW	" " " "	G. R. F.	"
COW	" " " "	G. R. F.	"
EVA	" " " "	G. R. F.	"
KEY (SANDY G.P. 1942)	" " " "	G. R. F.	"
LOW (25 606 E 1942)	" " " "	G. R. F.	"
MAG	" " " "	G. R. F.	"
LAD	" " " "	G. R. F.	"
ODD	" " " "	G. R. F.	"
MOO	" " " "	G. R. F.	"
PILE	" " " "	G. R. F.	"

LIST OF SIGNALS CONTINUED
Sheet PBS-H-1250

1950

TRIANGULATION STATIONS

<u>STATION</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>YEAR</u>
TRAN	TRANSMISSION TOWER	W. D. P.	1942
PA	CAPE CHARLES PENNSYLVANIA RAILROAD SHOP STACK	K. B. J.	1939
JET	CAPE CHARLES JETTY LIGHT	K. B. J.	1939
CAP	CAPE CHARLES (USE)	K. B. J.	1939

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topographic details were taken from survey ~~T-8182~~^{7-8176, 7-8177} scale 1:20,000, surveyed by photographic means. Where the slope of the beach gradient permitted, mean low water line was defined along the eastern shore and in the area of Cherrystone Inlet by the use of a 25 foot Skiff and by soundings taken by launch #82 at the higher stages of the tide. Additional hydrography is required in these areas. ✓

Shoreline corrections from graphic control surveys PBS-025-50, which have been marked for destruction.

H. SOUNDINGS:

Soundings were obtained with the Submarine Signal Co. type 808J and 808A 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~~^{8-21-50 (1947-49)} for detailed account of method of obtaining corrections.

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 incomplete as the field season was closed due to inclement weather. Additional work is required. *(Completed 1952-53)*

K. CROSSLINES:

In as much as this survey is incomplete additional crosslines will be required. ✓

L. COMPARISON WITH PRIOR SURVEY:

Comparison with prior survey should be made when the survey sheet is completed. ✓

M. COMPARISON WITH CHART:

A cursory comparison was made with a copy of Chart 1222 published in December 1946 and hand corrected under date of February 3, 1951. This survey in the areas sounded show agreement with the chart but a more extensive comparison should be made when the survey is completed. *Review TP-6*

N. DANGERS AND SHOALS:

This survey is not completed and additional work is required in shoal areas. *(Completed 1952-53)*

P. AIDS TO NAVIGATION: *See Processing Office List*

The following listed floating aids to navigation were located during this survey: *TP6 Review*

NAME	LOCATION LAT.LONG.	WATER DEPTH	VOL. POS.NO.	LOCATION DATE - 1950
Kings Creek Buoy #1 ✓	37 16.87 ⁶ 76 00.84 ⁶	7.0	Vol #8, Pos. #49-f-day, Lch.#82	Nov. 23
Cherrystone Channel Buoy #14 ✓	37 16.81' 76 01.60'	12.0	Vol.#7, Pos. #72-e-day, Lch.#82	Nov. 23

There are other buoys in the area that should be located before this sheet is considered completed. *TP6 Review*

Q. GEOGRAPHIC NAMES:

No field investigation of Geographic Names has been made during this survey.

Respectfully Submitted

Emmett H. Sheridan
Emmett H. Sheridan *by HSR*
LCDR., USC&GS

APPENDIX TO DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY H-7911, FIELD NO. PBS-1250

CHESAPEAKE BAY

PROJECT CS-350

SHIP COWIE

SCALE 1:10,000

J. H. BRITTAIN, COMDG.

The work on this sheet was done in accordance with instructions for Project CS-350, dated 13 March 1952.

The work consisted of extending the area of the survey started by the PARKER, BOWEN AND STIRNI in 1950 northward to Lat. 37°20.', some splits in the area to the southward of the unsurveyed portion and some work in Cherrystone Inlet and Kings Creek. The hydrography was done 24 to 30 October 1952, on which date the field season was closed on account of inclement weather, and on 6, 21, 22 and 27 July 1953.

The hydrography was done with the Ship COWIE and launch 102, using the 808 type fathometer and a hydrographic skiff using the 808 type fathometer and sounding pole. The pole was used in areas too shoal for fathometer soundings. Bar checks were taken and used for correcting the soundings.

Tide reducers were taken from the standard tide gage at Cape Charles Harbor, Va. without time or range correction for the work done in October 1952. Tide reducers from the Kiptopeke Beach, Va. tide gage, Corrected for time and range, were used for the work done in July 1953.

The hydrography was plotted on the original boat sheets of the PARKER, BOWEN AND STIRNI. Signals located by triangulation and topography as shown on the sheet were used to control the hydrography. Four additional hydrographic signals were located by sextant cuts, which are recorded in the sounding volumes..

The hydrography will be plotted on the smooth sheet for the work done on the original survey in 1950.

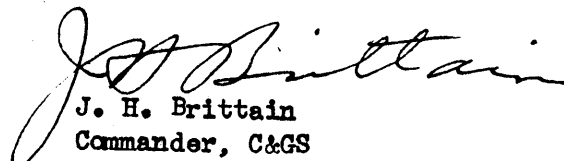
No dangers not already shown on Chart 1222 were found in the area north of the 1950 work. In general the agreement with charted depths is very good. There appears to be some shifting of the series of sand ridges running more or less parallel to the shore but some of this may be due to the transfer of soundings from the small scale chart to the boat sheet.

Hydrography in the area is considered complete except for the delineation of the low water line along the shore and around the small shoals awash at low water lying within 300 meters of the shore. These were not delineated due to the fact that good weather and high tide never seemed to coincide while working in the area. Due to the remaining work consisting entirely of skiff hydrography at high tide it is not considered economical to do more in conjunction with the work on Project CS-287. It is recommended that the remaining work be done when hydrography along the Eastern Shore of Chesapeake Bay to the northward of this sheet is done.

L.W. Line
considered
adequately
developed.
1M.Z.

Some splits and cross lines were run within the area of the 1950 hydrography so that, with the exception of that mentioned in the preceding paragraph, it is believed that the survey conforms with the requirements of paragraph 1 of Reference Number 367 of the Hydrographic Manual.

Respectfully submitted,


J. H. Brittain
Commander, C&GS
Comdg. Ship COWIE

1952-53

STATISTICS

SHIP COWIE

DATE	DAY	VOL. NO.	STAT. MILES	NO. OF POS.
1952				
10/27	A	X 11	23.6	120
10/30	B	^{11 12} X & XI	<u>39.6</u>	<u>213</u>
TOTAL			63.2	333

SKIFF NO. 737

<u>1952</u>				
10/24	a	¹³ III	8.1	75
10/27	b	¹³ III	14.4	84
10/28	c	¹³ III	3.0	19
10/30	d	^{13 & 14} III & IV	17.2	112
<u>1953</u>				
7/6	e	¹⁷ VII	7.1	57
7/21	f	¹⁷ VII	23.7	184
7/22	g	^{17 18} VII & VIII	15.5	133
7/27	h	¹⁸ VIII	<u>5.2</u>	<u>70</u>
TOTAL			94.2	734

LAUNCH 102

1953

7/6	a	¹⁵ V	8.9	88
7/21	b	^{15 & 16} V & VI	38.9	236
7/22	c	¹⁶ VI	37.5	218
7/27	d	¹⁶ VI	<u>9.5</u>	<u>69</u>
TOTAL			94.8	611

GRAND TOTALS 252.2 1678

AREA: - 3.5 Sq. Stat. Miles

FATHOMETER CORRECTIONS

A - day (Ship COWIE) 27 October - Fathometer 808, No. 114:

A - SCALE

B - SCALE

1952-53

-0.2 to 16.5 ft.

No soundings

-0.4 to 22.0

-0.6 to 25.5

-0.8 to 29.0

-1.0 to 33.0

-1.2 to 37.0

-1.4 to 41.5

-1.6 to 45.5

-1.8 to 50.0

-2.0 to ----

B - day (Ship COWIE) 30 October - Fathometer 808 No. 114:

A - SCALE

B - SCALE

-0.2 to 11.5 ft.

0.0 to 41.5 ft.

-0.4 to 14.5

-0.2 to 43.5

-0.6 to 17.5

-0.4 to 45.5

-0.8 to 20.5

-0.6 to 47.5

-1.0 to 25.0

-0.8 to 50.0

-1.2 to 29.5

-1.0 to 52.5

-1.4 to 34.0

-1.2 to 54.5

-1.6 to 39.5

-1.8 to 42.5

-2.0 to 44.5

-2.2 to 46.5

-2.4 to 48.5

-2.6 to 50.0

-2.8 to 52.0

-3.0 to 54.0

-3.2 to ----

FATHOMETER CORRECTIONS: (CON'T.)

"a" day (Skiff no. 737) 24 October - Fathometer 808 No. 118:

A - SCALE

0.0 to 8.0 ft.

-0.2 to 12.5

-0.4 to ----

"c" day (Skiff No. 737) 28 October - Fathometer 808 No. 118:

A - SCALE

0.0 to 10.0 ft.

-0.2 to ----

"d" day (Skiff No. 737) 30 October - Fathometer 808 No. 118:

0.0 to 10.0 ft.

-0.2 to ----

"e" day (Skiff No. 737) 6 July 1953:

0.0 - to 12 ft.

-0.2 - over 12 ft.

"f" day (Skiff No. 737) - 21 July 1953:

0.0 - all depths

"g" day - 22 July 1953 and "h" day - 27 July 1953 (Skiff 737):

All were pole soundings.

"a" day - (Lch 102) - 6 July 1953:

0.0 - all depths.

"b" day - (Lch. 102) - 21 July 1953:

0.0 - all depths.

"c" day - (Lch. 102) - 22 July 1953:

0.0 ft. to 20.0 ft.

-0.2 ft. over 20.0 ft.

"d" day - (Lch. 102) - 27 July 1953:

0.0 ft. - all depths.

1950

STATISTICS
STATISTICS FOR HYDROGRAPHIC SURVEY H- (PBS-H-1250)

Vol.	Day Letter	Date 1950	No. of Pos.	Stat.Mi. Sdg.Line	Vessel
1	A	30 November	<u>262</u>	<u>37.8</u>	STIRNI
		Totals	262	37.8	
		Square Statute Miles		2.2	
2	a	14 November	67	10.0	#116
2 - 3	b	15 "	179	30.1	"
3 - 4	c	20 "	167	20.1	"
4	d	22 "	109	15.9	"
4 - 5	e	27 "	177	29.5	"
5	f	28 "	70	10.7	"
5	g	1 December	<u>135</u>	<u>17.6</u>	"
		Totals	904	133.9	
		Square Statute Miles		2.8	
6	a	16 November	116	12.3	#82
6	b	17 "	131	12.0	"
6 - 7	c	20 "	113	11.4	"
7	d	22 "	95	9.7	"
7	e	27 "	136	15.0	"
8	f	28 "	142	14.1	"
8	g	29 "	53	5.5	"
8 - 9	h	30 "	143	15.3	"
9	j	1 December	<u>85</u>	<u>7.0</u>	"
		Totals	1014	102.3	
		Square Statute Miles		3.3	
10	a	17 November	<u>57</u>	<u>4.3</u>	25' Skiff
		Totals	57	4.3	
		Square Statute Miles		0.2	

TOTALS FOR SHEET: 2287 Positions
278 Statute Miles Sounding Line
8.5 Square Statute Miles

LIST OF SIGNALS
H-7911

1952-53

TRIANGULATION STATIONS

PA CAPE CHARLES, PENN. R.R. SHOP, STACK, 1939-42
 APE CAPE CHARLES, ICE PLANT, STACK, 1939
 TRANS TRANSMISSION TOWER, 1942
 CAP CAPE CHARLES (USE), 1939-42
 JET CAPE CHARLES JETTY LIGHT, 1939

DESCRIBED TOPOGRAPHIC STATIONS

CAR CARPENTERS, 1942 (T-8176)
 HOT WILKENS BEACH HOTEL, 1942 (T-8177)
 GAB BALLARDS CIAM HOUSE, 1942-50 (T-8176)*
 KIM BRICK MARCHE, 1942-50 (T-8176)*
 KID CRAB HO., 1942 (T-8176)
 OLD CASINO, 1942 (T-8176)
 NAY RED GAB, 1942-50 (T-8176)*

TOPOGRAPHIC STATIONS (Source, Graphic Control Surveys PBS-B,C & D-1950)

Aim	Ben	Box	Cab	Chy	Cow	Duc	Egg	Eva	Fat	Fox
Gus	Hag	Hay	Hit	How	Hut	Ice	Irk	Jap	Jar	Jug
Key	Kid	Lad	Lay	Leo	Low	Mag	Mar	Met	Mil	Moo
Nay	Oak	Odd	Ohm	Old	Peg	Pile	Pot	Pup	Ram	Rat
Ray	Reo	Rev	Roy	Sad	Sig	Sis	Slat	Tap	Tow	Toy
Val	Wax	Win	Yes	Yet	Zoo					

HYDROGRAPHIC STATIONS

Gam Vols. 15, 16 & 18
 Rig " 18
 Top " 18
 Tri " 15, 16 & 18

*Relocated on graphic control survey PBS-C-50. See Topo D.R.

ABSTRACT OF BAR CHECKS

1950

FATHOMETER NO. 120-S

Ship STIRNI

SHEET H (PBS - H - 1250)

NOTE: All signs are negative unless otherwise noted. Depths and corrections are in feet. Values have been reduced to an initial setting of 4.0 feet.

"A" SCALE DEPTH

DAY LETTER	DATE	10	15	20	30	40
A	30 Nov.	0.8	0.5	1.0	2.0	1.8
				1.0	1.5	
				1.0	1.2	1.8
		1.0	0.5	0.8	1.0	1.8
SUM		1.8	1.0	3.8	5.7	5.4
NUMBER		2	2	4	4	3
MEAN		0.9	0.5	0.95	1.425	1.8

ABSTRACT OF BAR CHECKS

1950

FATHOMETER NO. 63

LAUNCH NO. 82

SHEET H (PBS - H - 1250)

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 1950	5	10	15	20	25	30
a	16 Nov.	0.4 0.2	0.3 0.2	0.1 0.1			
c	20 Nov.	0.0	0.1 0.0	-0.2 0.0			
d	22 Nov.	0.0 0.2	-0.1 0.0	-0.6 -0.3			
e	27 Nov.	0.2 0.3	0.0 0.0	-0.2 -0.2	-0.8 -0.8		
f	28 Nov.	0.1 0.0	0.0 0.0	-0.2 -0.6	-0.9 -0.9	-0.9 -0.9	
h	30 Nov.	0.0 0.0	0.0 0.0	-0.5			
SUM		1.4	0.5	-2.6	-3.4	-1.8	
NUMBER		11	12	11	4	2	
MEAN		0.13	0.04	-0.24	-0.85	-0.9	

ABSTRACT OF BAR CHECKS 1950

FATHOMETER NO. 120-S

LAUNCH NO. 116

SHEET H (PBS - H - 1250)

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
a	14 Nov.		0.0 0.0	-0.2 0.0	-0.5		
b	15 Nov.	0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	-0.7 -0.4 0.0	-0.6 0.0	
c	20 Nov.	0.0 -0.5 0.0 0.1	0.0 0.0 0.0 0.2	-0.2 -0.2 0.0 0.1	-0.4 -0.3 0.0 0.0	-0.5 0.0	
d	22 Nov.	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0	
e	27 Nov.		0.0 -0.3	-0.3 -0.3	-0.6 -0.6	-0.8	
		0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0	
f	28 Nov.	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 -0.2 -0.1	-0.1 -0.2 -0.6 -0.5	-0.2 -0.5	
g	30 Nov.	0.0 0.0	-0.1 -0.1 0.0	-0.2 -0.2 0.0	-0.8 0.0	-0.4	
		0.0	0.0	0.0	0.0		
SUM		-0.4	-0.3	-1.8	-5.7	-3.0	
NUMBER		17	24	24	22	10	
MEAN		-0.02	-0.01	-0.28	-0.26	-0.3	

FLOATING AIDS TO NAVIGATION
H-7911

1952-53

<u>1950 LIGHT LIST</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS.</u>	<u>DATE</u>
Kings Creek Buoy 1 ✓	37-16.86	76 -00.85	7	1a	10/24/52
Kings Creek Buoy 3 ✓	37 -16.95	76-00.69	8	38a	10/24/52
Kings Creek Buoy 5 ✓	37-16. ⁷⁰ 80	76-00.48	7	37a	10/24/52
Cherrystone Chan. Buoy 14 ✓	37-16.82	76-01.60	12	72e	11/27/50
Spar 135N ✓	37-19.27	76-02.89	36	1c	7/22/53
Spar 134N	37-17.95	76-03.26	32	58g	12/ 1/50

SUMMARY OF ECHO CORRECTIONS

1950

Sheet H-
(PBS-H-1250)

<u>Ship</u>	<u>Day Letter</u>	<u>Fath. No.</u>	<u>Initial Set (ft.)</u>	<u>Fath. Scale</u>	<u>From Depth to Depth (ft.)</u>	<u>Corr'n (ft.)</u>
STIRNI	A	120-S	4.0	A	0.0 to 13.0	-0.6
					13.5 to 18.5	-0.8
					19.0 to 23.0	-1.0
					23.5 to 27.0	-1.2
					27.5 to 31.5	-1.4
					32.0 to 36.0	-1.6
					36.5 to 44.0	-1.8
Launch # 82	a,c, d,e, f,h.	63	0.0	A	0.0 to 7.0	+0.2
					7.5 to 13.0	0.0
					13.5 to 16.0	-0.2
					16.5 to 18.5	-0.4
					19.0 to 21.0	-0.6
					21.5 to 23.0	-0.8
					23.5 to 25.0	-1.0
Launch # 116	a,b, c,d, e,f. g	120-S	1.0	A	0.0 to 16.0	0.0
					16.5 to 23.0	-0.2
					23.5 to 28.0	-0.4
					28.5 to 32.0	-0.6
					32.5 to 35.5	-0.8

NONFLOATING AIDS OR ~~LANDMARKS FOR CHARTS~~

TO BE CHARTED }
~~TO BE OBLIQUED~~ } STRIKE OUT ONE

Norfolk, Virginia

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 R. A. Parker

W. F. Malnate
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 ° ' "							
	Cherrystone Channel 9 (Black pile)		BOX	37 15'	76 01'	N. A.	PBS-B-50	Nov. 1950	X			1222
	Cherrystone Bar (Black tower)		BEN	37 15'	76 01'	"	"	"	X			1222
	Cherrystone Channel 7 (Black pile)		BED	37 15'	76 01'	"	"	"	X			1222
	Cherrystone Inlet Channel Front (Red slatted pile)		EVA	37 15'	76 01'	"	"	"	X			1222
	Cape Charles City Harbor Northern (Red tower)		JET	37 15'	76 01'	"	Triangu- lation	1939	X			1222
	North Jetty (Black pile)		FRY	37 15'	76 01'	"	"	"	X			1222
	Cherrystone Inlet Channel Rear (White tower)		IAY	37 15'	76 01'	"	"	"	X			1222
	Cape Charles City Front (White square, black diamond on pile)		SIAT	37 14'	76 01'	"	"	"	X			1222
	Cape Charles City Rear (White square, black center on tower)		FOR	37 14'	76 01'	"	PBS-B-50	Nov. 1950	X			1222
	Cherrystone Channel 16 (Red pile)		ZOO	37 16'	76 01'	"	PBS-C-50	"	X			1222
	Cherrystone Channel 13 (Black pile)		CAB	37 16'	76 01'	"	"	"	X			1222

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.

TIDAL NOTE
(FBS-H-1250)

1950

The Standard Autohatic 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 - 10' - 00" and Longitude 76 - 10' - 00". This survey is covered by area "X", north of 37 - 10' - 00" and east of 76 - 10' - 00". The time difference for area "X" is minus 30 minutes and a high water height difference of 0.0 feet.

ADDENDUM
To Accompany

1952-53

HYDROGRAPHIC SURVEY H-7911 (Field No. PBS-1250)

GENERAL

This smooth sheet comprises the work of eight vessels during the 1950, 1952 and 1953 field seasons. Two descriptive reports accompany the survey. One was submitted from Ship Stirni to cover the 1950 season, the other by Ship Cowie to cover the 1952-53 seasons.

The bottom, in most of the area covered by this survey, is made up of numerous sloughs and pot-holes whose formations probably change frequently because of storm and current action. Depth curves on the sheet bring out rather improbable formations; however, when the conditions under which the survey was made and the extremely irregular bottom profiles on the fathograms are taken into consideration, these configurations are much easier to rationalize. *Appear to be probable for Chesapeake Bay - F.P.*

The soundings at crossings check fairly well with the exception of A-day (blue), Ship Cowie. This day averages about one foot shoaler than surrounding hydrography. The stylus arm length is incorrect on both days work by Ship Cowie in 1952. Corrections were not applied as the bar checks were taken under the same conditions. *(Depth differences resolved during verification in Washington.)*

OVERLAYS

The following positions are being submitted on an overlay to avoid congestion on the smooth sheet:

7 to 18c (brown) Lch. 102 ✓	109 to 115c (brown) Lch. 102 ✓
62 to 76c " " " ✓	130 to 141c " " " ✓
90 to 108c " " " ✓	

DAY LETTER COLORS

Day letter colors were assigned as follows:

1950 Field Season	1952 Field Season	1953 Field Season
Stirni - green	Cowie - blue	Lch. 102 (a-d days) brown
Lch. 116 - red	Skiff 737- purple	Ark 2 (e-h days) brown
Lch. 82 - blue		
Skiff - green		

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt, Carto.

1952-53

TIDAL NOTE

Hourly heights of the Cape Charles Harbor Standard Gage furnished by the Washington Office were used for tide reducers for the work done in October 1952. No time or height corrections were applied. Hourly heights of the Kiptopeke Va. Standard gage, corrected for time and range, furnished by the Washington Office were used for tide reducers for the work done in July 1953.

FHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

7 January 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
18 volumes of sounding records for

HYDROGRAPHIC SHEET

7911

Locality Cherrystone Inlet, Chesapeake Bay, Virginia

Chief of Party: G. R. Fish)
J. H. Brittain) in 1950, 1952-53

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)

4.8 ft. on tide staff at Cape Charles Harbor
9.6 ft. below BM 12 (1923)

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

Hampton Roads (NOB) = 2.5 feet

Cape Charles Harbor = 2.4 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-7911

Name on Survey	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		
	A	B	C	D	E	F	G	H	K	
Virginia			} for title						B.G.M.	1
Chesapeake Bay										"
										3
Cherrystone Inlet									B.G.M.	4
Cape Charles Harbor										5
Kings Creek										6
Wescott Point									B.G.M.	7
Mill Creek										8
Custis Cove										9
Eyrehall Creek									B.G.M.	10
Eyreville Creek									"	11
Old Castle Creek										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names approved
1/5/54
L. Heck

(All of above names on
Chart 1222 except 5, 8, 9)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7911

Records accompanying survey:

Boat sheets ~~1~~(2 Parts) sounding vols. 18.; wire drag vols.;
 bomb vols.; graphic recorder rolls 15. Env.
 special reports, etc. 2 Descriptive Reports (combined); 1 Smooth Sheet;
 1 Overlay;.....

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

Number of positions on sheet		3965
Number of positions checked		135
Number of positions revised		6
Number of soundings revised (refers to depth only)		150
Number of soundings erroneously spaced		—
Number of signals erroneously plotted or transferred		0
Topographic details	Time	8
Junctions	Time	40
Verification of soundings from graphic record	Time	20

Verification by *J. P. Saulsbury*..... Total time 285 Date 9-20-56

Reviewed by *Am Jeskind*..... Time 40 Date 12-10-56

Recoverable Station Cards
PBS-B-50-5 cards
PBS-C-50-4 cards

DESCRIPTIVE REPORT
TO ACCOMPANY

GRAPHIC CONTROL SURVEY T-

(Field No. PBS - B - 50)
(Field No. PBS - C - 50)

Scale - 1:10,000

G. R. Fish, Chief of Party

Ships PARKER, BOWEN & STIRNI

A. PROJECT:

Project CS-326, Supplemental Instructions dated 26 July 1948.

B. SURVEY LIMITS AND DATES:

These are primarily graphic control surveys made for the hydrographic surveys of the inshore waters of eastern Chesapeake Bay from CHEAPSIDE (USE) 1939, to ROSE 1898. For revision purposes a short section of shore line was located at most planetable setups. Pertinent information from graphic control surveys have been applied to H-7910 & H-7911. Graphic control surveys are marked for destruction. The surveys, including Old Plantation Creek, King's Creek and Cherrystone Inlet, were conducted between 24 October and 1 December 1950.

C. GENERAL:

(a) Description of Coast:

The coast is generally low with a sand beach backed by a low sand bluff. Around the mouth of creeks and inlets the area is flat marsh.

(b) Landmarks:

Landmarks for charts will be submitted with the hydrographic sheets.

(c) Character of Control:

The control used for these surveys consisted of previously established triangulation stations and recoverable air photo compilation stations. Many unmarked air photo topographic stations were checked and two have been relocated. Brick Marche 1942 and Ballard's Clam House 1942, located in King's Creek were found to be slightly in error. New description cards have been made out for these two stations.

The coordinates of the fixed aids to navigation at Cape Charles and along the entrance to the port were obtained from the United States Army Engineers. The coordinates were reduced to geographic positions and plotted on the graphic control sheet.

All positions ~~were~~ checked except position Cherrystone Channel 9 which was found to be slightly in error. The position on the graphic control sheet should be used for this aid to navigation.

The aids to navigation north of Cape Charles were located by this survey also.

(d) Methods:

Standard methods of graphic control were used. Resection or three point fixes were used where possible. Sextant cuts taken from Old Plantation Flats Lighthouse 2 were plotted by protractor and used to obtain resection positions along the shore line on Sheet PBS-B-50.

A graphic control survey was run in Old Plantation Creek using triangulation stations and air photo stations for control. The survey began at signal Flag. This station had been previously located and a resection fix checked its position. Holding the azimuth obtained at signal Flag, all necessary signals were located and checked by use of air photo stations. At the head of the creek a resection fix was taken at signal Was using triangulation stations TRANSMISSION TOWER, 1942, CAPE CHARLES ICE PLANT STACK, 1939 and air photo station Lodge, South Gable, 1942 as control. Necessary adjustment of signals was done in the field.

There is one traverse on Sheet PBS-B-50 of 2150 meters from CHEAPSIDE (USE), 1939 to WILLIS, 1932, which closed 4 meters in distance. Necessary adjustment of signals was done in the field.

A combination graphic triangulation and traverse survey was run in Cherrystone Inlet and its tributaries, using triangulation stations, topographic stations and air photo stations for control. The majority of signals were located by three cuts from a previously located signal. Topographic station Ace, 1942 was used as a check in King's Creek.

Air photo stations Ballard's Clam House, 1942 and Brick Marche, 1942 were relocated a few meters to the West South West (See Sheet PBS-C-50).

Topographic station Gray, 1942 was searched for but not found and station Fay 1942 was used as a check in the upper section of Cherrystone Inlet. Several air photo stations were recovered and checked. Necessary adjustment of signals was done in the field.

One traverse on Sheet PBS-C-50 of 3000 meters from signal Cow to triangulation station ROSE, 1898 closed 4 meters in distance. Signal Cow was located by a cut from triangulation station CAPE CHARLES JETTY LIGHT, 1939 and resections from other stations. Necessary adjustment of signals was done in the field.

A second traverse running northward was started but never completed due to the season ending. This traverse, starting at triangulation station ROSE, 1898 was run holding the azimuth of the previous traverse ending at ROSE, 1898. The traverse was extended to signal Pile, and was not closed.

(e) Description of Auxiliary Methods:

No auxiliary methods were used in the graphic control.

(f) Form Lines:

No form lines or contouring was done.

(g) Revision:

Existing topographic surveys are from an air photo survey made in 1942. There are some changes in the high water line around the Town of Cape Charles. South of Cape Charles the high water line is changed considerably. This major change seems to be more a correction of the air photo plot than one of erosion or sedimentation. A high bluff to the east of a low sand flat seems to have been taken for the high water line in the air photo plots. (See Sheet PBS-B-50).

There is general erosion of the shore line between CHEAPSIDE (USE), 1939 and Old Plantation Creek.

Savage Neck Spit has built up on the southern end and apparently moved to the east (See Sheet PBS-C-50). Cherry-stone Island, called Sandy Island on the air photo Sheet No. T-8176, has decreased in size. The lowwater line apparently remains about the same.

(h) Adequacy of Survey:

The survey of Sheet PBS-B-50 is considered complete and adequate and all discrepancies are discussed in this report. Coast Pilot information, land marks for charts and aids to navigation for this area are discussed in Descriptive Report to accompany Hydrographic Surveys H- (Field Nos. H-PBS-1150 and H-PBS-1250). The graphic survey of Sheet PBS-C-50 is considered complete also.

(i) Deviation From Standard Procedure:

The graphic control was established by standard methods.

(k) Geographic Names:

None.

(m) Photographs:

No photographic equipment is assigned to this party.

(n) Changes in Shoreline:

(See Paragraph (g)).

(p) Magnetics:

No stations were occupied.

Respectfully Submitted

Robert A. Parker

Robert A. Parker
Ensign, USC&GS

LIST OF SIGNALS ON SHEET PBS-B-50

<u>SIGNAL</u>	<u>ORIGIN OF SIGNAL</u>	<u>PARTY CHIEF</u>	<u>DATE</u>
She	Topography - PBS-B-50	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	" " W "	G. R. F.	"
Pal	" " " "	G. R. F.	"
Quo	" " " "	G. R. F.	"
Ram	" " " "	G. R. F.	"
Tax	" " " "	G. R. F.	"
Dog	" " " "	G. R. F.	"
Ned	" " " "	G. R. F.	"
Rum	" " " "	G. R. F.	"
Was	" " " "	G. R. F.	"
Out	" " " "	G. R. F.	"
Jug	" " " "	G. R. F.	"
Fig	" " " "	G. R. F.	"
Tom	" " " "	G. R. F.	"
Axe	" " " "	G. R. F.	"
Sad	" " " "	G. R. F.	"
Tub	" " " "	G. R. F.	"
Erg	" " " "	G. R. F.	"
Flag	" " " "	G. R. F.	"
Poe	" " " "	G. R. F.	"
Sam	" " " "	G. R. F.	"
Bob	" " " "	G. R. F.	"
Red	" " " "	G. R. F.	"
Slat	" " " "	G. R. F.	"
Joe	" " " "	G. R. F.	"
Get	" " " "	G. R. F.	"
Val	" " " "	G. R. F.	"
Ben	" " " "	G. R. F.	"
Bed	" " " "	G. R. F.	"
Box	" " " "	G. R. F.	"
Eva	" " " "	G. R. F.	"
Sir	" " " "	G. R. F.	"
Bar	" " " "	G. R. F.	"
Tex	" " " "	G. R. F.	"
Wax	" " " "	G. R. F.	"
Mop	" " " "	G. R. F.	"
On	" " " "	G. R. F.	"

LIST OF CONTROL STATIONS ON SHEET PBS-C-50

TRIANGULATION STATIONS

<u>NAME</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>DATE</u>
ROSE	ROSE	F. W. P.	1898
APE	CAPE CHARLES ICE PLANT STACK	K. B. J.	1939
CAP	CAPE CHARLES (USE)	K. B. J.	1939
JET	CAPE CHARLES JETTY LIGHT	K. B. J.	1939
PA	CAPE CHARLES PENNSYLVANIA		
	RAILROAD SHOPS STACK	K. B. J.	1939
TRAN	TRANSMISSION TOWER	W. D. P.	1942

AIR PHOTO STATIONS

ACE	ACE (MARKED TOPOGRAPHIC STATION) NO. T-8176)	W. D. P.	1942
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LIST OF SIGNALS ON SHEET PBS-C-50

<u>SIGNAL</u>	<u>ORIGIN OF SIGNAL</u>	<u>PARTY CHIEF</u>	<u>DATE</u>
Who	Topography - PBS-C-50	G. R. F.	1950
Pup	" " " "	G. R. F.	"
Ohm	" " " "	G. R. F.	"
Nay	" " " "	G. R. F.	"
Rat	" " " "	G. R. F.	"
Toy	" " " "	G. R. F.	"
Hut	" " " "	G. R. F.	"
Tow	" " " "	G. R. F.	"
Duc	" " " "	G. R. F.	"
Egg	" " " "	G. R. F.	"
Fox	" " " "	G. R. F.	"
Gus	" " " "	G. R. F.	"
Jap	" " " "	G. R. F.	"
Kid	" " " "	G. R. F.	"
Lap	" " " "	G. R. F.	"
Mar	" " " "	G. R. F.	"
Mil	" " " "	G. R. F.	"
Nix	" " " "	G. R. F.	"
Oak	" " " "	G. R. F.	"
Peg	" " " "	G. R. F.	"
✓ Reo Reo	" " " "	G. R. F.	"
Hag	" " " "	G. R. F.	"
Met	" " " "	G. R. F.	"
Leo	" " " "	G. R. F.	"
Ice	" " " "	G. R. F.	"
Aim	" " " "	G. R. F.	"
Cap	" " " "	G. R. F.	"
Ray	" " " "	G. R. F.	"
Mid	" " " "	G. R. F.	"
Pot	" " " "	G. R. F.	"
Eat	" " " "	G. R. F.	"
Ram	" " " "	G. R. F.	"
Win	" " " "	G. R. F.	"
Tap	" " " "	G. R. F.	"
Sis	" " " "	G. R. F.	"
She	" " " "	G. R. F.	"
Yes	" " " "	G. R. F.	"
Cab	" " " "	G. R. F.	"
Old	" " " "	G. R. F.	"
Sig	" " " "	G. R. F.	"
Yet	" " " "	G. R. F.	"
Fat	" " " "	G. R. F.	"
Ballard's			
Clam House			
(Gab)	" " " "	G. R. F.	"

LIST OF CONTROL STATIONS ON SHEET PBS-B-50

TRIANGULATION STATIONS

<u>NAME</u>	<u>ORIGIN OF STATION</u>	<u>PARTY CHIEF</u>	<u>DATE</u>
SID	CHEAPSIDE (USE)	K.B.J.	1939
COS	COSTIN	O.W.F.	1913
CAP	CAPE CHARLES (USE)	K.B.J.	1939
TRAN	TRANSMISSION TOWER	W.D.P.	1942
APE	CAPE CHARLES ICE PLANT STACK	K.B.J.	1939
PA	CAPE CHARLES PENNSYLVANIA RAILROAD SHOPS STACK	K.B.J.	1939
JET	CAPE CHARLES JETTY LIGHT	K.B.J.	1939

AIR PHOTO STATIONS

CUR	PARSON'S BOAT HOUSE, NORTH GABLE (NO. T-8182)	W.D.P.	1942
ART	SCOTT'S CENTER CHIMNEY (NO. T-8181)	W.D.P.	1942
OIL	HUNT OYSTER HOUSE (NO. T-8181)	W.D.P.	1942
GIN	HOLLYWOOD WEST GABLE (NO. T-8182)	W.D.P.	1942
FOX	LODGE SOUTH GABLE (NO. T-8181)	W.D.P.	1942

LIST OF SIGNALS ON SHEET PBS-C-50 - CONTINUED

<u>SIGNAL</u>	<u>ORIGIN OF SIGNAL</u>	<u>PARTY CHIEF</u>	<u>DATE</u>
Irk	Topographic - PBS-C-50	G. R. F.	1950
Jar	" " " "	G. R. F.	"
Brick			
Marche			
(Kim)	" " " "	G. R. F.	"
Lip	" " " "	G. R. F.	"
Rev	" " " "	G. R. F.	"
Sad	" " " "	G. R. F.	"
Why	" " " "	G. R. F.	"
Val	" " " "	G. R. F.	"
Wat	" " " "	G. R. F.	"
Chy	" " " "	G. R. F.	"
Hit	" " " "	G. R. F.	"
How	" " " "	G. R. F.	"
Pen	" " " "	G. R. F.	"
Cow	" " " "	G. R. F.	"
Zoo	" " " "	G. R. F.	"
Ann	" " " "	G. R. F.	"
Eva	" " " "	G. R. F.	"
Key	" " " "	G. R. F.	"
Low	" " " "	G. R. F.	"
Fig	" " " "	G. R. F.	"
Mag.	" " " "	G. R. F.	"

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7911

FIELD NO. PBS-1250

Virginia, Lower Chesapeake Bay, North of Cape Charles Harbor

Project No. CS-326

Surveyed Nov., 1950 - July, 1953

Scale 1:10,000

Soundings:

Control:

808 Fathometer
Sounding Pole

Sextant fixes on
shore signals

Chief of Party - G. R. Fish and J. H. Brittain

Surveyed by - G. R. Fish, H. J. Seaborg, A. L. Powell, T. M. Krall,
R. A. Parker, R. M. Borst, E. K. McCaffrey,
A. E. Greaves, A. J. Ramey and J. C. Sammons

Protracted by - A. K. Schugeld

Soundings plotted by - A. K. Schugeld

Verified and inked by - F. P. Saulsbury

Reviewed by - I. M. Zeskind 12-10-56

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed air-photographic surveys T-8176, T-8177 and T-8182 of 1942. Shoreline shown in red originates with graphic control surveys PBS-B-50 and PBS-C-50, which have been marked for destruction. The Descriptive Report of the graphic control surveys is attached to the Descriptive Report of the present survey.

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

2. Sounding Line Crossings

Depths at crossings are in adequate agreement. However, in order to eliminate conflicts in depths of as much as 3 ft. between the present survey and the junctional survey H-8012 (1950-52), it was necessary to shift several lines on H-8012 to positions of comparable depths on H-7911. The sounding lines on H-8012 were dependent on weak locations of hydrographic signals.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated. The 3-ft. curve has been added to more clearly define the bottom configuration in several of the creeks and in the inshore area.

The bottom is fairly irregular. Sand shoals, deeps, and ridges contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7910 (1950) on the south, and with H-8012 (1950-52) on the west. The project survey on the north has not yet been received in the Washington Office.

5. Comparison with Prior Surveys

- A. H-353 (1852), 1:20,000
 H-364 (1852), 1:40,000
 H-1169 (1873), 1:10,000

These surveys together cover the area of the present survey. A comparison between the prior and present surveys generally shows only minor differences of 1 - 2 ft. in depths, except in several areas where the differences are greater, as for example in lat. $37^{\circ}17.08'$, long. $76^{\circ}02.89'$ where a prior depth of 17 ft. falls in present depths of 22 ft. Some shifting of the axes of the natural channels in the creeks are noted with the resultant changes in bottom configuration, as for example, the axis of the natural channel at the entrance to Kings Creek has shifted about 150 meters southward. The controlling depth here, however, has remained about 4 ft. Except for the construction of Cape Charles Harbor, only minor changes to the shoreline are noted. These changes in shoreline and bottom configuration, except Cape Charles Harbor, are attributed to the action of the current on the bottom and the depositing of sediment from the contributing creeks.

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

- B. H-3659 (1914), 1:20,000
H-3660 (1914), 1:5,000

These surveys cover the area of the present survey. A comparison between the prior and present surveys generally reveals minor changes in bottom configuration

and shoreline. Differences in depths generally range from 1 - 2 ft., except in several areas where they are greater as for example, in lat. $37^{\circ}17.22'$, long. $76^{\circ}02.48'$, where a prior depth of 5 ft. falls in present depths of 12 ft., and in lat. $37^{\circ}16.10'$, long. $76^{\circ}01.54'$, where a prior depth of 14 ft. falls in present depths of 8 ft. The high-water line at Westcott Point now extends about $3/4$ mile further southward. These changes in bottom configuration and shoreline are attributed to causes similar to those given in the above paragraph.

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

6. Comparison with Chart 1222 (latest print date 7-9-56)

A. Hydrography

The charted hydrography originates with the present survey before verification and review. Only minor differences of 1 ft. between the charted and present survey depths are noted.

The present survey supersedes the charted hydrography.

B. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended. Buoy N "2" charted in lat. $37^{\circ}16.3'$, long. $76^{\circ}01.6'$, was not located on the present survey.

7. Condition of Survey

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

b. The smooth plotting was accurately done.


8. Compliance with Project Instructions

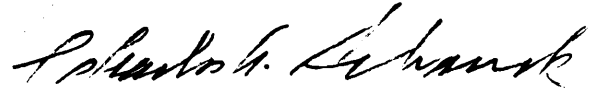
The survey adequately complies with the Project Instructions.

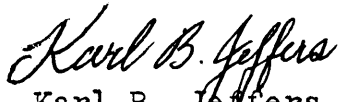
9. Additional Field Work Recommended


The survey is considered basic and no additional field work is recommended.

Examined and Approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Charles A. Schanck
Chief, Division of Charts


Karl B. Jeffers
Chief, Hydrography Branch


Samuel B. Grenell
Chief, Division of Coastal Surveys

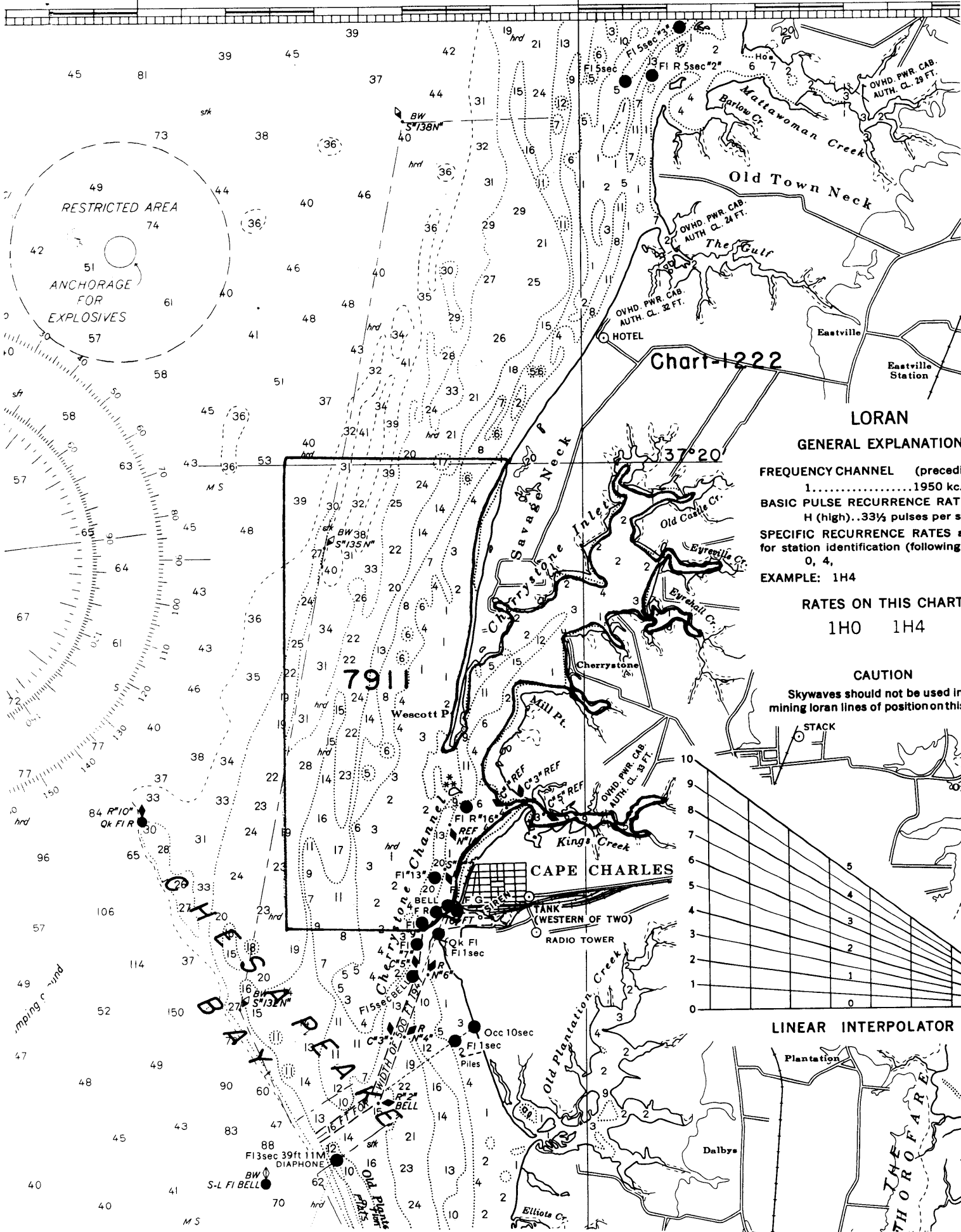


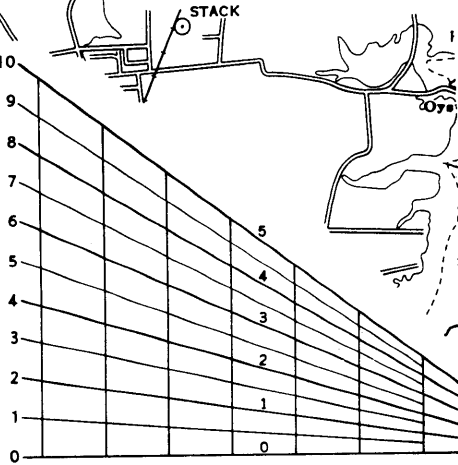
Chart-1222

LORAN
GENERAL EXPLANATION

FREQUENCY CHANNEL (preceded by 1.....) 1950 kc.
 BASIC PULSE RECURRENCE RATE H (high) ..33 1/3 pulses per sec
 SPECIFIC RECURRENCE RATES for station identification (following 0, 4,
 EXAMPLE: 1H4

RATES ON THIS CHART
1H0 1H4

CAUTION
Skywaves should not be used in determining loran lines of position on this chart



LINEAR INTERPOLATOR

THE THORFARE

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7911

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8 Sept 54	1222	H. E. Mac Ewen	Before After Verification and Review <i>Completely</i>
11-6-59	562	R. E. Elkins	Before After Verification and Review <i>applied in full</i>
3-26-62	1222	R. E. Elkins	Before After Verification and Review <i>Fully applied</i> <i>Have chart 562 (former layout)</i>
8/24/70	78	S. Mc Millan	Before After Verification and Review <i>fully thru</i> <i>cht 1222 Dwg #57</i>
10-2-85	12221	J. Graham	Before After Verification and Review
	Prototype		
			Before After Verification and Review
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			Before After Verification and Review

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.