8082

8191
8083

8082

Diag. Cht. No. 78-3

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. Co-1553 *Office No.* H-8082

LOCALITY

State VIRGINIA

General locality CHESAPEAKE BAY

Locality RAPPAHANNOCK RIVER ENTRANCE

1953-54

CHIEF OF PARTY

J.H. BRITTAIN, K.S. ULM, JOHN C. BULL

LIBRARY & ARCHIVES

DATE October 27, 1955

COMM-DC 61300

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

REGISTER No. H-8082

Field No. Co-1553

State VIRGINIA

General locality CHESAPEAKE BAY

Locality RAPPAHANNOCK RIVER ENTRANCE

Scale 1:10,000 Date of survey 8 Oct. 1953 to 1 Sept. 1954

Instructions dated 5 February 1953

Vessel COWIE

Chief of party J.H. BRITTAIN; K.S. ULM; JOHN C. BULL

Surveyed by A.J. RAMEY; J.M. OGILVIE; P. HERTELENDY; A.F. GREAVES; W.D. GARDNER & J.P. RANDALL

Soundings taken by ~~echometer~~, graphic recorder, hand lead, ~~wire~~ POLE

Fathograms scaled by PERSONNEL SHIP COWIE

Fathograms checked by PERSONNEL SHIP COWIE & NORFOLK PROCESSING OFFICE

Protracted by D.P. HARNDEN & W.L. JONNS

Soundings penciled by W.L. JONNS

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

REMARKS: This survey was smooth plotted in the HYDROGRAPHIC SECTION of the NORFOLK PROCESSING OFFICE.

U. S. GOVERNMENT PRINTING OFFICE 777032

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8082 FIELD NO. CO-1553

CHESAPEAKE BAY RAPPAHANNOCK RIVER

SHIP COWIE SCALE 1:10,000

J. H. BRITTAIN, COMDG.
K. S. ULM, COMDG.
J. C. BULL, COMDG.

A - PROJECT:

Project CS-287; Supplemental Instructions dated 5 February 1953.

B - SURVEY LIMITS AND DATES:

The area covered by this survey is the entrance to the Rappahannock River from lat. 37° 33'.6 to 37° 38'.0 N., and from long. 76° 14'.7 to 76° 23'.0 W. Junctions with contemporary surveys are as follows: CO-1454 to the north; CO-2153 and CO-2154 to the east; CO-1353 to the south; CO-1154 to the west. * noted Hood Office 3-15-54 hmj

H-8188 H-8083 H8191 H-8080 H-8185

Surveying operations began on 8 Oct. 1953 and continued in progress until the end of the 1953 season on 27 October. The survey was resumed on 15 April and completed on 1 Sept. 1954.

C - VESSELS AND EQUIPMENT:

The Ship COWIE, using the 808 type fathometers number 63, 114-S, 118-S and 120-S, was used in areas where it was practical to maneuver and in minimum depths of about 15 feet. Launch 102, using the 808 type fathometer number 63 and 118-S, for the 1953 and 1954 seasons respectively, was used in minimum depths of about 5 feet. Hydrography was also done using skiff number 736 equipped with the 808 type fathometer number 118-S, handlead, and sounding pole, was used in shoal areas along the shore, creeks, and inlets during the 1953 season. Hydrographic skiff number 749, equipped with the handlead and sounding pole, was used in

C - VESSELS AND EQUIPMENT: (CONT.)

shoal areas along the shore, creek and inlets during the 1954 season. The launch and hydrographic skiffs operated from the Ship COWIE.

D - TIDE AND CURRENT STATIONS:

A portable automatic tide gage was maintained at Mill Creek, Rappahannock River throughout the entire period of this survey. Tide records and soundings are on Eastern Standard Time. No Current stations were occupied within the limits of this survey.

E - SMOOTH SHEET:

The smooth sheet will be constructed and plotted by the Norfolk Processing Office.

It is recommended that the limits of the smooth sheet be shifted westward to include topographic signals JAR and TAF, thus eliminating the use of a dog-ear on the smooth sheet.

F- CONTROL STATIONS:

SEE N.P.O. signal list

TRIANGULATION:

HYDROGRAPHIC NAME	TRIANGULATION NAME
CHOR	Anchor 2, 1944
STER	Oyster House, 1944
STING	Stingray Pt. Lt. Station, 1900
WIND	Windmill Pt. Lt. Station, 1900

HYDROGRAPHIC NAME:	DESCRIPTION:
CHIP	Temporary signal
NEW	Broad Creek Lt. "1"
IT	Temporary signal in water.
IS	" " " "

TOPOGRAPHIC STATIONS - MANUSCRIPT NO. T-11056:

JAR	S. gable, building
TAF (1944)'53	End of pier

F - CONTROL STATIONS: (CONT.) - MANUSCRIPT NO. T-11057:

NAME		DESCRIPTION
ADO		Dead Tree
BEN(1944)'53		NE gable of house
BIB		Temporary signal
CAR	553	End of pier
DEB	554	End of pier
FED		Temporary signal
GAL		End of pier
HEM	555	End of pier
ION	556	SE corner of bridge
JAY	557	W. gable of house
KEY	558	W. corner of pier
LAX	559	Temporary signal
MAN	560	End of pier
MAW	678	W gable, 2 story house
NED	561	Temporary signal
ODD	562	S. corner of pier
PAL	552	S. gable of house
PAR		NW corner of pier

MANUSCRIPT NO. T-11058:

LEO	786	Temporary signal

MANUSCRIPT NO. T-11059:

ABE	570	Temporary signal
ACE	510A	End of groin
ACT	548	End of pier
ADD	541	End of pier
ANT		Temporary signal
BAG	514	NE corner of boat ho.
BAH	516	Temporary signal
BAT		End of groin
CAB	499	Temporary signal
CAT	540	SE corner of pier
CAW		Temporary signal
DAW	486	W. chim., W. end ho.
DAY	525	Bush
DIM		Bow of wrecked boat
EAT	523	Temporary signal
EBB	545	Lone cedar
EGG	531	Top of fallen tree
FAR		NE corner of pier
FAT	521	Tree
FEW		Temporary signal
FEZ		Lone cedar
FIG	502	Leaning cedar
GAS		Temporary signal
GOB		N. gable, boat ho.
HAT		Temporary signal
HER	538	Pole, corner of pier
HEX		End of pier
IRK		Temporary signal
IVY	509	Temporary signal
JAW	530	W. gable, boat ho.
KEN	569	Temporary signal
KID		End of pier
KIM		Temporary signal
LAM	567	S gable, boat ho.
LAY	532	End of Pier
LEG		Temporary signal
MAR	534	End of pier
MAX	518A	Top of steps
MOS	528	Inshore tile of groin
NAT	496	W. gable of house
NAY	549	Temporary signal
OFF		End of pier
OIL	518	Small cedar
PAD		End of pier
PAW	529	N. gable, boat house
PEP	517	Small bush
QUO	500	Temporary signal
RAG		Broad Cr. Day Bn. "4"
RAM	522	S. gable of barn
REV	527	End of pier
RIG	502A	Temporary signal
RIM		Temporary signal
SAD	565	Pine tree
SAG	551	Temporary signal
SAL	573	Temporary signal
SAX	503	Double cedar
SEX		Pine tree
SON	513	Dead tree
TAN		Broad Cr. Day Bn. "2"
TAP	536	Temporary signal
TAX	550	Temporary signal
THY	526	SE corner of pier
TUB		Inshore end of groin
USE	501	Corner of tile bulkhead
VAL	501A	Temporary signal
VET	547	HOLLY BUSH
VEX	535	Temporary signal
WAD	505	W. corner, pier
WOO		Temporary signal

F - CONTROL STATIONS: (CONT.) MANUSCRIPT NO. T-11059: - TOPOGRAPHIC SIGNALS:

NAME		DESCRIPTION
WAG	563	Temporary signal
WAN	544	W. end of pier
WAR WHO	571	Temporary signal
WIN	568	W. gable, house
YAK	504	N. corner, pier
YAM	564	Temporary signal
YES, YEA	572	Temporary signal
YET		Temporary signal
ZIG		Temporary signal
ZOO	544A	Temporary signal

MANUSCRIPT NO. T-11061: OCT. 1953:

AGO		Bush
BIG	508B	Temporary signal
CAM	485	End of groin
COD		Small cedar
EAR	487	End of pier
GAD	489	Tall cedar tree
HAG	490	Small bush
ICE	491	Bend in pier
JAP	495	End of pier
KED	494	End of pier
LAD	493	End of pier
MAG	492	NE gable, boat house
NEO	484	End of pier
* OAK	497	End of pier
RAT	482	SE gable, pavilion
SAM	483	S gable, L shaped house
TOM	507	Temporary signal
TOP		Top of pyramidal roof shed on pier
VIA	508	Lone cedar
WAS	508A	Temporary signal
ZAG	506	Cedar tree
* PEG	488	Bush

G - SHORELINE AND TOPOGRAPHY:

The shoreline on the boat sheet was transferred from office compiled manuscripts number T-11056, T-11057, T-11058, T-11059 and T-11061 which cover this sheet.

It was not practicable to define the entire low water line by soundings due to the small range of tide in this area.

H - SOUNDINGS:

Depths were measured with the 808 type fathometer, handlead and sounding pole. Bar checks were used for obtaining fathometer corrections. Soundings taken by fathometer, leadline and sounding pole are in good agreement - maximum discrepancies being about one foot.

I - CONTROL OF HYDROGRAPHY:

Sounding lines were controlled by three-point fixes using natural objects or signals erected along the shoreline. Satisfactory results were obtained from using these signals.

J - ADEQUACY OF SURVEY:

This survey is considered complete, adequate for charting purposes, and should supersede all prior surveys. Junctions with the adjoining surveys are satisfactory, no holidays exist and depth curves can be adequately drawn at the junctions.

K - CROSSLINES:

Crosslines are in good agreement, the percentage being estimated at eight to ten percent to the principal system of lines.

L-M - COMPARISON WITH PRIOR SURVEYS AND CHARTS: SKIFF NO. 749:

1. (Item 17) Preliminary Review, at lat. 37°33.46', long. 76° 18.99' in Broad Creek are the remains of the charted wreck in 3 feet of water. The pieces are very small and at a maximum are 9 inches above the bottom. It is recommended this wreck be removed from the chart.

2. (Item 18) Preliminary Review, the wreck at Lat. 37°34.52; long. 76° 21.05' was searched for at low tide on a calm day. The bottom was hard white sand. No trace of it was found and it is recommended that it be removed from the chart. TPG Review

3. The dredged channel into Broad Creek has a controlling depth of 7 feet - lat. 37°34.07', long. 76°18.68'.

4. The entrance at lat. 37°37.28', long. 76°18.90' is very changeable being open or closed depending on winds and seas.

5. The entrance at lat. 37°37.26', long. 76°18.50' on "r" day 29 July 1954 was open and had depths of 3 and 4 feet. 0' on a day

6. At lat. 37°37.34', long. 76°20.75' is a small pier in 3 feet of water.

7. At lat. 37°36.90', long. 76°17.68, is a small pier in 3½ ft. of water.

SHIP COWIE AND LAUNCH NO. 102:

8. In lat. 37°35.79' N., long. 76°17.46' W., general depths of 31 ft. were obtained in charted depths of 52 feet.

9. In lat. 37°36.00' N., long. 76°18.84'W., general depths of 45 ft. were obtained in charted depths of 57 ft., however 57 feet was obtained 200 m. south.

10. In lat. 37°35.82' N., long. 76°18.42' W, general depths of ~~36~~ 46 ft. were obtained in charted depths of 59 ft., however, 59 feet was obtained 150 m. north. (Bottom slopes here)

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

11. In lat. 37°35.92'N, long. 76°19.12' W, general depths of 56 feet were obtained in charted depths of 65 feet; however, 60 feet was obtained 75 m. southwest.

12. In lat. 37°35.70'N, long. 76°19.50' W, general depths of ~~60~~ 60-64 feet were obtained in charted depths of 73 feet; however, 72 feet was obtained 150 m. north.

13. In lat. 37°35.85' N, long. 76°20.64'W, general depths of ~~54~~ 51-53 feet were obtained in charted depths of 64 feet; however, 58 feet was obtained 100 m. South.

14. In lat. 37°35.59'N, long. 76°20.77'W, general depths of ~~60~~ 60-62 feet were obtained in charted depths of 71 feet.

15. In lat. 37°35.48'N, long. 76°20.99'W, general depths of 52 feet were obtained in charted depths of 62 feet; however, 56 feet was obtained 150 m. north.

16. In lat. 37°35.68'N, long. 76°21.21W, general depths of 61 feet were obtained in charted depths of 72 feet.

17. In lat. 37°35.60'N, long. 76°21.71'W, general depths of 58 feet were obtained in charted depths of 68 feet.

18. In lat. 37°36.34'N, long, 76°22.71'W, general depths of 57 feet were obtained in charted depths of 73 feet, however, ~~65~~ 64-65 feet was obtained 150 m. southwest. (Bottom slopes here)

19. In lat. 37°35.95'N, long. 76°22.23'W, general depths of 70 feet were obtained in charted depths of 79 feet. (Bottom slopes here)

N - DANGERS AND SHOALS:

1. At. lat. 37°34.51', long. 76°21.65' is the western end of a large rock breakwater in 6 ft. of water. It is submerged 2 ft, See boat sheet. Position 1-b. 1/2 ft at shoalest place

2. At lat. 37°34.48', long. 76°21.30' is the eastern end of the above rock breakwater in 6 ft. of water. It is submerged 3 ft. Position 5-b. See boat sheet.

3. At. lat. 37°34.53', long. 76°21.51', is a group of 3 piles, 5 meters apart in 8 ft. of water. They are 10 inches in diameter and submerged 1 ft. They mark the offshore end of the charted pier ruins, however, ~~some~~ None could be found between this point and shore. (B.S. states no pier ruins found between pile cluster and shore) (12-13)

4. At.lat. 37°36.76', long. 76°21.41', position ~~21~~ r (skiff 749), marks the end of a small shoal. The sounding was 4 1/2 ft. dropping rapidly to ~~6~~ 5 ft. to the westward.

N - DANGERS AND SHOALS: (CONT.)

5. At. lat. 37°36.81', long. 76°20.30', general depths of 6 feet were found in a reported 8 ft. area. 8ft. 50 meters west on present survey

6. The channel line starting at lat. 37°36.95', long. 76°20.51'. Position 1-r, skiff 749, has controlling depths of 3 ft.

7. The area in Windmill Point Creek near lat. 37°37.40', long. 76°18.65', had to be worked by wading because it was so shoal. ~~Dotted lines show areas bare at low water~~. The channel seems to follow the north shore very closely, but at places completely disappears. Only small row boats use this and then only at high tide.

8. There is a sounding line running between lat. 37°37.58', long. 76°16.29', and lat. 37°38.18', long. 76°16.99', along the top of a sand bar. It is easily visible from a boat when in the general vicinity.

9. At. lat. 37°37.12', long. 76°21.32' and lat. 37°37.13', long. 76°21.28', are investigations disproving shoal soundings obtained on 85-1 and 86-1 (Skiff 749).
CL (blue)

Q - COAST PILOT INFORMATION:

The 1954 Coast Pilot Report was forwarded to the Washington Office on 3 Nov. 1954

P - AIDS TO NAVIGATION:

(Ltr letter 11/26/1953)

Form 567, Nonfloating Aids to Navigation was forwarded to the Washington Office on 30 November 1953 and this form is being prepared as a separate report for this season.

Floating Aids to Navigation within the limits of this survey are as follows. (See Processing Office list.)

1 - Rappahannock River Lighted Buoy "1", lat. 37°35.18', long. 76°19.80', in 41 ft. of water.

2 - Rappahannock River Buoy "2", lat. 37°36.09', long. 76°21.30', in 39 ft. of water.

3 - B W S"8W", lat. 37°34.74', long. 76°14.54', in 34 ft. of water.

4 - B W S"6AW", lat. 37°34.60', long. 76°17.04', in 30 ft. of water.

5 - B W S"7W" , lat. 37°35.46', long. 76°17.66', in 29 ft. of water.

Q - LANDMARKS FOR CHARTS:

No new landmarks are recommended for the area of this survey.

R - GEOGRAPHIC NAMES:

Geographic names as shown on charts of this area are adequate and no additions are recommended.

U-Y - MISCELLANEOUS:

In laying out the smooth sheet is is recommended that the small lagoon (north of the bridge at lat. 37°38.02', long. 76°18.19') and the remainder of this inland system to the north and west be smooth plotted on sheet CO-1454. H-8188 to be plotted on Co-1454

It is also recommended that the small creek whose entrance is at lat. 37°37.64', long. 76°19.18', be smooth plotted on sheet CO-~~1553~~ 1454. H-8188 To be plotted on Co-1454

Z - TABULATION OF APPLICABLE DATA:

A list of signals is attached to Volume I of the sounding record.

A tabulation of other data is attached.

Respectfully submitted,

Albert J. Ramey
Albert J. Ramey,
Lieut. (j.g.), USC&GS.

J. Morgan Ogilvie
J. Morgan Ogilvie,
Ensign, USC&GS.

Approved and forwarded:

TIDE NOTE

A portable automatic tide gage at Mill Creek, Rappahannock River, lat. 37 35.00', long. 76 25.08', was used for obtaining tide reducers for the entire survey. No time or height corrections were applied to the observed tides. Hourly heights were scaled from the marigrams by personnel of the Ship COWIE.....

... ...

STATISTICS 1953

LAUNCH NO. 102: RED (Lower case)

VOL. NO.	DATE (1953)	DAY LETTER	NO. OF POS.	STATUTE MILES
I	10/8	a	122	21.8
I	10/9	b	60	10.0
I	10/13	c	97	15.4
II	10/14	d	234	45.3
III	10/15	e	250	48.9
III	10/19	f	27	5.2
IV	10/19	f	69	12.0
IV	10/20	g	196	39.0
V	10/20	g	46	11.5
V	10/21	h	192	31.5
TOTALS:			1293	240.6

SKIFF NO. 736: BLUE (Lower Case)

VI	10/8	a	12	0.8
VI	10/9	b	75	8.7
VI	10/13	c	56	6.9
VI ← VII	10/14 – 10/14	d d	137 cc	15.3
VII	10/15	e	146	16.3
VII	10/19	f	57	4.1
VII	10/20	g	75	5.6
VIII	10/20	g	102	11.7
VIII	10/21	h	123	11.2
TOTALS:			~~783~~ 809	80.6
GRAND TOTAL:			~~2076~~ 2102	321.2

AREA: 14.1 Square Statute Miles.

STATISTICS - 1954

SKIFF NO. 749: *BLUE (Lower)*

VOL. NO.	DATE (1954)	DAY LETTER	NO. OF POS.	STATUTE MILES
* XII	7/28	q	77	9.0
IX	7/20	j	166	17.5
IX	7/21	k	121	12.5
X	7/21	k	39	4.5
X	7/22	l	139	12.7
X	7/23	m	66	6.9
X	7/26	n	26	3.2
XI	7/27	p	207	30.4
XI	7/28	q	79	11.3
*XII	7/29	r	128	10.1
XII	7/30	s	46	0.8
XIII	8/12	t	16	0.9
TOTALS:			1110	119.8

16 FOOT SKIFF: *BROWN*

XIV	4/20	a	2	-
XIV	4/20	b	5	-

LAUNCH NO. 102: *PURPLE*

XIX	7/27	a	140	21.4
XIX	7/28	b	139	20.2
XX	7/28	b	43	7.0
XX	7/29	c	164	26.2
XXI	8/10	d	155	24.7
XXI	8/11	e	102	15.5
XXII	8/12	f	65	9.7
XXII	8/19	g	190	30.4
XXIII	8/19	g	8	1.4
XXIII	8/20	h	43	7.8
XXIII	8/24	j	142	22.3
XXIII	8/25	k	78	10.9
XXIV	8/25	k	64	10.9
XXIV	8/26	l	28	2.6
XXIV	9/1	m	136	19.4
TOTALS:			1497	230.4

SHIP COWIE:: *BLUE*

XV	4/15	A	109	31.1
XV	4/19	B	89	24.8
XV	4/20	C	56	16.1
XVI	4/20	C	118	29.8
XVI	4/21	D	162	38.5
XVII	4/21	D	12	3.2
XVII	4/23	E	28	7.4
XVII	4/30	F	26	7.3
XVII	5/3	G	52	13.0
XVII	5/7	H	28	7.2
XVII	5/17	J	21	4.3
XVII	5/21	K	27	7.0

COWIE - STATISTISC: - 1954 (CONT.)

XVIII	5/24	L	97	25.5
XVIII	5/28	M	19	6.1
XVIII	6/7	N	47	10.1
XVIII	6/21	P	34	9.4
TOTALS:			925	240.8
GRAND TOTAL:			5627 ~~3539~~	911.3 ~~591.0~~

AREA: 18.5 Square Statute Miles:

Note:
Since skiffs 736 and 749 are identical and blue ink was used for day letters on both skiffs, the 1954 day letters and volume numbers are a continuation of the 1953 work.

FATHOMETER CORRECTIONS

SHIP COWIE:

	15	20	30	40	50-A	50-B	60	70
A - 4/15		0.0	-0.1	-0.7	-1.0	-2.0(R)	-2.0(R)	
		0.0	0.0	-0.5				
B - 4/19		∔0.2	0.0	-0.5	-0.5	-1.0(R)	∔0.5	
		0.0	0.0	0.0	-0.1		-1.5(R)	
C - 4/20		0.0	0.0	-1.0	-1.0	∔1.5	∔0.2	
		0.0	0.0	-0.8	-1.0		∔2.0	
D - 4/21		0.0	-0.3	-1.0	-1.0	∔2.0	∔1.5	
		0.0	0.0	-0.2	-1.0	∔2.5	∔2.0	
E - 4/23		∔0.5	∔0.2	0.0	0.0	∔0.7	0.0	0.0
F - 4/30		∔0.5	∔0.5	∔1.0(R)	∔1.0(R)	∔1.0	∔1.5	∔1.2
G - 5/3		∔0.5	0.0	0.0	0.0	∔1.5	∔1.5	
H - 5/7		0.0	0.0	0.0	0.0	∔2.0	∔1.0	∔1.0
J - 5/17		0.0	0.0	0.0	0.0	∔1.7	∔1.5	
K - 5/21	∔0.5	∔0.0	0.0	0.0	0.0	∔2.0	∔2.0	
L - 5/24	∔0.8	∔0.5	0.0	0.0				
	∔0.5	∔0.2	0.0	0.0				
M - 5/28	∔0.2	∔0.0	0.0	0.0	0.0	∔1.5	∔1.0	∔1.5
N - 6/7	∔1.0	∔0.4	0.0	0.0				
P -6/21	∔0.7	∔0.5	0.0	0.0	0.0	∔2.0	∔2.0	-1.0(R)
AVERAGE	∔0.6	∔0.2	0.0	-0.3	-0.4	∔1.7	∔1.3	∔0.9

CORRECTIONS:

A scale: 10.0 to 15.0 - ∔0.6
15.5 to 19.5 - ∔0.4
20.0 to 26.0 - ∔0.2
26.5 to 37.0 - 0.0
37.5 to 50.0 - -0.2

B scale: 50.0 to 55.0 - ∔1.6
55.5 to 60.0 - ∔1.4
60.5 to 65.0 - ∔1.2
65.5 to 70.0 - ∔1.0

FATHOMETER CORRECTIONS (CONT.) LAUNCH NO. 102:

	5	10	15	20	25	30	40	50-A	50-B	60
a - 7/27	±0.3	±0.5	±0.5	±0.5	±0.7	±0.3	±0.2	-1.0(R)	0.0	
	0.0	±0.5	±0.7	±0.8	±0.8	±0.5	±1.0	±1.0	±2.0	
b - 7/28	0.0	±0.5	±0.4	±0.5	±0.3	±0.3	±0.5	±0.3	±1.2	±1.4
	00.0	0.0	±0.5	±0.5	±0.5	±1.0	±1.0	0.0	±2.0	±2.0
	0.0	0.0	±0.6	±1.0	±1.0	±0.7	±1.0			
c - 7/29	0.0	0.0	±0.2	±0.2	±0.3	±0.2	±0.2	±0.2	±1.5	±1.5
	0.0	±0.2	±0.2	±0.3	±0.1	±0.3				
d - 8/10	0.0	±0.2	±0.3	±0.7	±0.5	±0.7				
	0.0	±0.2	±0.2	0.0	±0.1	0.0				
e - 8/11	±0.2	±0.2	±0.5	±0.5	±0.2	±0.3				
	±0.2	±0.2	±0.5	±0.5	±0.2	±0.3				
f - 8/12	0.0	±0.1	±0.5	±0.5	±0.2	±0.2				
h - 8/20	0.0	±0.1	±0.5	±0.5	±0.2	±0.5				
j - 8/24	0.0	±0.5	±0.6	±0.5	±0.3	±0.5				
	0.0	±0.1	±0.5	±0.5	±0.1	±0.5				
k - 8/25	0.0	0.0	±0.2	±0.5	±0.6	±0.6				
l - 8/26	0.0	±0.4	±0.3	±1.0	±0.8	±0.8				
m - 9/1	0.0	0.0	0.0	0.0	±0.1	±0.7				
	0.0	0.0	0.0	±0.1	±0.5	±0.7	±1.0			
	0.0	0.0	±0.7	±1.0	±1.0	±1.0				
AVERAGE:	0.0	±0.2	±0.4	±0.5	±0.4	±0.5	±0.6	±0.4	±1.8	±1.6

CORRECTIONS:

A scale: 5.0 to 8.0 - 0.0
8.5 to 16.5- ±0.2
17.0 to 30.0 - ±0.4
30.5 to 45.0 - ±0.6
45.5 to 50.0 - ±0.4

B scale: 50.0 to 55.0 - ±1.8
55.5 to 60.0 - ±1.6

Skiff - 749:

No fathometer was used; all work done by this skiff was with the sounding pole and leadline.

FATHOMETER CORRECTIONS

LAUNCH 102:

DAY LETTER	CORRECTIONS
a	0.0 to 15.0 - 0.0 Over 15.0 - -0.2
b	0.0 to 6.0 - ∓0.4 6.5 to 9.0 - ∓0.2 Over 9.0 - 0.0
c	0.0 to 15.0 - ∓0.2 Over 15.0 - 0.0
d	A SCALE 0.0 to 8.0 - ∓0.2 8.5 to 41.0 - 0.0 41.5 to 43.0 - -0.2 43.5 to 45.0 - -0.4 45.5 to 47.0 - -0.6 47.5 to 49.0 - -0.8 Over 49.0 - -1.0 B SCALE ∓ 2.0 ft. - all depths
e	A scale 0.0 to 6.0 - ∓0.8 6.5 to 7.0 - ∓0.6 7.5 to 8.0 - ∓0.4 8.5 to 9.0 - ∓0.2 Over 9.0 - 0.0 B SCALE Under 41.0 - ∓3.0 41.5 to 43.0 - ∓2.8 43.5 to 45.0 - ∓2.6 45.5 to 47.0 - ∓2.4 47.5 to 49.0 - ∓2.2 Over 49.0 - ∓2.0
f	A SCALE 0.0 to 7.0 - ∓0.6 7.5 to 8.0 - ∓0.4 8.5 to 9.0 - ∓0.2 Over 9.0 - 0.0 B SCALE Under 42.0 - ∓3.0 42.5 to 46.0 - ∓2.8 46.5 to 50.0 - ∓2.6 50.5 to 54.0 - ∓2.4 54.5 to 58.0 - ∓2.2 Over 58.0 - ∓2.0
g	A SCALE 0.0 to 7.0 - ∓0.4 7.5 to 10.0 - ∓0.2 Over 10.0 - ∓0.0 B SCALE ∓3.0 ft., all depths
h	0.0 to 5.0 - ∓0.8 5.5 to 7.0 - ∓0.6 7.5 to 8.5 - ∓0.4 9.0 to 10.0 - ∓0.2 Over 10.0 - 0.0

HYDROGRAPHIC SKIFF:

a	No correction
b	Pole
c	No correction
d	No correction
e	0.0 to 6.0 - ∓0.2 Over 6.0 - 0.0
f	Pole
g	Pole
h	Pole

FLOATING AIDS TO NAVIGATION
H-8082

BUOY	LAT.	METERS	LONG.	METERS	DEPTH	POS. NO.	DATE
Rappahannock R. Lighted Buoy 1	37-35	335	76-19	1180	37'	105a	7-27-54
Rappahannock R. Buoy 2	37-36	160	76-21	~~445~~ 38	34'	85b	7-28-54
S8W	37-34	1340	76-14	737	34'	53d	8-10-54
S6AW	37-34	11~~80~~ 25	76-17	~~50~~ 45	29'	96d	8-10-54
S7W	37-35	~~707~~ 677	76-17	~~977~~ 939	29'	16k	5-21-54

LIST OF SIGNALS
H-8082

TRIANGULATION STATIONS

CHOR	ANCHOR 2, 1944
STER	OYSTER HOUSE, SOUTH GABLE, 1944-52
STING	STINGRAY POINT L.H., 1900-32
WIND	WINDMILL POINT L.H., 1898-1944

TOPOGRAPHIC STATIONS

SOURCE T-11056

Ben(d) Jar Taf(d)

SOURCE T-11057

Ado	Bib	Car	Deb	Fed	Gal	Hem	Ion	Jay	Key	Lax	Man
Maw	Ned	Odd	Pal	Par	Sex						

SOURCE T-11058

Leo

SOURCE T-11059

Abe	Ace	Act	Add	Ant	Bag	Bah	Bat	Cab	Cat	Caw	Daw
Day	Dim	Eat	Ebb	Egg	Far	Fat	Few	Fez	Fig	Gas	Gab
Hat	Her	Hex	Irk	Ivy	Jaw	Ken	Kid	Kim	Lam	Lay	Leg
Liz	Mar	Mos	Nat	Nay	Off	Oil	Pad	Paw	Pep	Quo	Rag
Ram	Rev	Rig	Rim	Sad	Sag	Sal	Sax	Son	Tan	Tap	Tax
Thy	Tub	Use	Val	Vet	Vex	Wad	Woo	Wag	Wan	Wat	Who
Win	Yak	Yam	Yes	Yet	Zig	Zoo					

SOURCE T-11061

Ago	Cam	Cod	Ear	Gad	Hag	Ice	Jap	Ked	Lad	Mag	Neo
Oak	Rat	Sam	Tom	Top	Via	Was	Zag	Peg			

HYDROGRAPHIC STATIONS

Chip	Vol. 1, pg. 34
New	T-11059
It	Vol. 23, pg. 12
Is	Vol. 23, pg. 59

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8082 (Field No. Co-1553)

GENERAL

Soundings at crossings check fairly well on this survey. Many minor discrepancies may be attributed to the use of many different fathometers and launches, and spreading the work over two seasons. Discrepancies are more noticeable where fathometer and pole soundings overlap.

Positions 1 thru 60b (red, lch. 102) are being submitted on an overlay as the soundings are in disagreement with surrounding hydrography. Most of the positions falling in the southeast area of the sheet are distant from control stations and many of the fixes are comparatively weak. Sdgs arbitrarily adjusted to agree with adjacent hydrography

CONTROL

Topographic station SON was incorrectly transferred to the boat sheet from manuscript T-11059, being displaced by about 70 meters. The correct position was used on the smooth sheet and a noticeable improvement was noted in course and time on hydrographic lines controlled by this station. It is probable that the investigation of the wreck charted in this vicinity was displaced, as this station was used in the fixes. WK deleted PG Review.

Hydrographic stations CHIP, IT and WAS were plotted from sextant cuts recorded in the volumes. Time and course on hydrographic lines indicated some displacement of the stations as shown on the manuscripts.

CHART COMPARISONS

New piers were located at the following positions:

Lat. 37-37.36' Pos. 1181 (blue)
Long. 76-20.76'

Lat. 37-36.90' Pos. 101p (blue)
Long. 76-17.69'

Lat. 37-33.57' Pos. 28 to 29f (blue)
Long. 76-19.01

Wrecks charted at the following positions were neither confirmed nor disproved: PG Review

Lat. 37-37.05'
Long. 76-20.39

Lat. 37-37.20
Long. 76-16.80

Since these wrecks were not seen by the hydrographic party and since they are not a danger to navigation they should be deleted from the chart.
John A. Bull
Cdr. USC&GS.

Respectfully submitted,
Hugh L. Proffitt
Cartographer.

Norfolk, Va.
17 Oct. 1955

GEOGRAPHIC NAMES

Survey No. H-8082

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Virginia									BGH	1
Chesapeake Bay				for title.					4	2
Rappahannock River										3
										4
Stingray Point										5
Broad Creek										6
Sturgeon Creek										7
Windmill Point										8
Windmill Point Creek										9
Little Oyster Creek										10
Mosquito Point										11
Mosquito Creek										12
					Names approved 10-31-55 L. Heck					13
										14
										15
										16
Mill Point			(tide station off limits sheet							17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8082

Records accompanying survey:

Boat sheets 1 (2 parts) sounding vols. 24; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 16-Envs.

special reports, etc. 1-Smooth sheet, 1-Descriptive report, 1-Overlay tracing, & 4-Sketch books.

discarded 2-14-56 Kennon

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

Number of positions on sheet		5627	
Number of positions checked		689	20
Number of positions revised		1	0
Number of soundings revised (refers to depth only)		0	*
Number of soundings erroneously spaced		119	0
Number of signals erroneously plotted or transferred		0	0
Topographic details	Time		8
Junctions	Time		2
Verification of soundings from graphic record	Time	20	14

Paul J. Harrison 138 8-29-56

[signature] 112 3-15-56

Preliminary Verification by D. J. KENNON .... Total time 29 .. Date 2-14-56

Reviewed by [signature] .... Time 40 .. Date 3-15-56

Addendum by John W Knoop Time 111 Date 4-5-63

* Revised soundings between pos. 1-60 Oct 9 1953 and pos. 21-29 and 44-57 Aug 12, 1954.

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8082 FIELD NO. CO. 1553

Virginia, Chesapeake Bay, Rappahannock River Entrance

Project No. CS-287

Surveyed - Oct., 1953 - Sept., 1954 Scale 1:10,000

Soundings: Control:

808 Fathometer
Leadline
Sounding Pole

Sextant fixes on shore signals

Chief of Party - J. H. Brittain, K. S. Ulm, J. C. Bull
Surveyed by - A. J. Ramey, J. M. Ogilvie, B. Hertelendy, A. F. Greaves, W. D. Gardner and J. P. Randall
Protracted by - D. P. Harnden and W. L. Jonns
Soundings plotted by - W. L. Jonns
Preliminary verification by - I. M. Zeskind
Verified and inked by - P.E. Harrison
Reviewed by - I. M. Zeskind 3-15-56
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic surveys T-11056, T-11057, T-11058, T-11059 and T-11061 of 1953.

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

2. Sounding Line Crossings

Depths at crossings are in good agreement. Arbitrary corrections of -1.0 to -1.3 and +0.3 to +1.0 ft. were made to soundings obtained by launch 102 on October 9, 1953, positions 1 - 60, and on August 12, 1954, positions 21 to 29 respectively, to bring these soundings into agreement with the adjacent hydrography. Numerous crossings and adjacent soundings were available on which to base the revisions.

3. Depth Curves and Bottom Configuration

The usual depth curves supplemented by the 3-ft. curve were adequately delineated.

The bottom is fairly irregular. Off Mosquito Pt., and Sturgeon Creek, the bottom drops abruptly from flat areas of 3 - 6 ft. to depths of about 45 ft. and then slopes more gradually to the center of the channel where depths as great as 75 ft. are found. 73

4. Junctions with Contemporary Surveys

Junctions with surveys H-8083 (1953) on the southeast, and H-8080 (1953) on the south will be considered in the reviews of those surveys. Project surveys on the east and north have not yet been received in the Washington Office.

5. Comparison with Prior Surveys

A. H-252 (1849-51), 1:40,000
H-285 (1851), 1:40,000
H-609 (1857), 1:10,000
H-610 (1857), 1:10,000
H-1005 (1869), 1:20,000

These early surveys cover the area of the present survey. A comparison between the prior and present surveys reveals changes in depths of as much as 11 ft., as for example, in lat. 37°35.60', long. 76°20.77', where a prior depth of 71 ft. falls in present depths of 60-62 ft. The present depths are generally shoaler than the prior depths. These changes in depths are attributed in part to the weak control and the improper spacing of soundings on the prior surveys, and in part to the depositing of sediment. Some changes result from dredging operations.

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

B. H-2560 (1901), 1:20,000
H-2813 (1906), 1:20,000
H-3002 (1909), 1:20,000

These prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals only minor differences of 1 - 2 ft. in depths. The present survey depths are generally shoaler than the prior depths largely because of the depositing of sediment. The channel into Broad Creek was dredged in 1948.

The field party recommends (Desc. Report, pg. 4, and sounding volume No. 14, pg. 3) that the wreck charted in lat. 37°33.48', long. 76°18.99', from H-3002 (1909), be deleted from the chart. The wreck, which falls in present depths of 3 ft., has

Applied 6/11/23

disintegrated into very small pieces whose maximum height above the bottom is 9 inches.

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

6. Comparison with Chart 534 (latest print date 10-31-55)

A. Hydrography

The charted hydrography originates with the prior surveys supplemented by several soundings from the present survey prior to verification and review.

The wrecks charted in lat. 37°37.05', long. 76°20.39', and lat. 37°37.22', long. 76°16.78', from a U. S. Geological Survey Map printed in 1948 (Bp. 49013), were neither confirmed nor disproved by the present survey. The hydrographer recommends that since the wrecks fall in present depths of 1 to 3 ft. and are not considered a danger to navigation, they should be deleted from the chart. Applied ch 1223

The wreck charted in lat. 37°34.52', long. 76°21.05', from H-3002 (1907-08) falls in present depths of 3 ft. This wreck was searched for by the field party at low tide on a calm day and no trace of it could be found. The recommendation of the field party (pg. 4a, Descriptive Report) that the wreck be deleted from the chart is concurred in. Applied ch 1223

B. Dredged Channels

Present survey depths in the dredged channel leading into Broad Creek are in harmony with the charted controlling depth of 7 ft. (Chart letter 370, 1952).

C. 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, except in the entrance channel to Broad Creek where Beacons "2" and "4" are charted 90 meters southwestward and the entrance light is charted 60 meters eastward of their present survey positions. Black Day Beacon Nos. 5, 7 and 9, charted in Broad Creek are not shown on the present survey. These beacons were charted from H.O.N. To M 21 (1955), subsequent to the present survey.

7. Condition of Survey

(a) This survey has only been given a preliminary verification. A complete statement concerning the condition of the survey is deferred until the present survey has been completely inked.

(b) The charted wrecks mentioned in paragraph 6A above were not verified or disproved.

8. Compliance with Project Instructions

The present survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

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

Examined and Approved:

H. R. Edmonston
Chief, Nautical Chart Branch

E. R. McCarthy
Chief, Chart Division

J. C. Bull
Chief, Hydrography Branch

Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-8082 (1953-54)

Verified and inked by - P. E. Harrison (Norfolk Proc. Office)
Review Addendum by - J. W. Knoop 4/8/63
Inspected by - I. M. Zeskind

The verification of this survey has been completed. Soundings and depth curves have been completely inked.

Junctions with Contemporary Surveys

An adequate junction was effected with H-8083(1953) on the southeast. Junctions with the remaining surveys have been considered in the reviews of those surveys.

Comparison with Chart 534 (latest print date 9/17/62)

The charted hydrography originates with the present survey after verification and preliminary review. No differences between the charted and present survey depths were noted.

Condition of Survey

(a) Completion of verification and inking reveals that the smooth plotting was well done.

(b) The Descriptive Report is complete and comprehensive.

Approved:

Marvin T. Paulson
Chief, Nautical Chart Division

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ 7 November 1955

Division of Charts: R. H. Carstens

Plane of reference approved in
24 volumes of sounding records for

HYDROGRAPHIC SHEET 8082

Locality Chesapeake Bay, Va.

Chief of Party: J. H. Brittain)
K. S. Ulm) in 1953-54
J. C. Bull)

Plane of reference is mean low water, reading
4.4 ft. on tide staff at Mill Creek
8.7 ft. below B. M. 1 (1953)

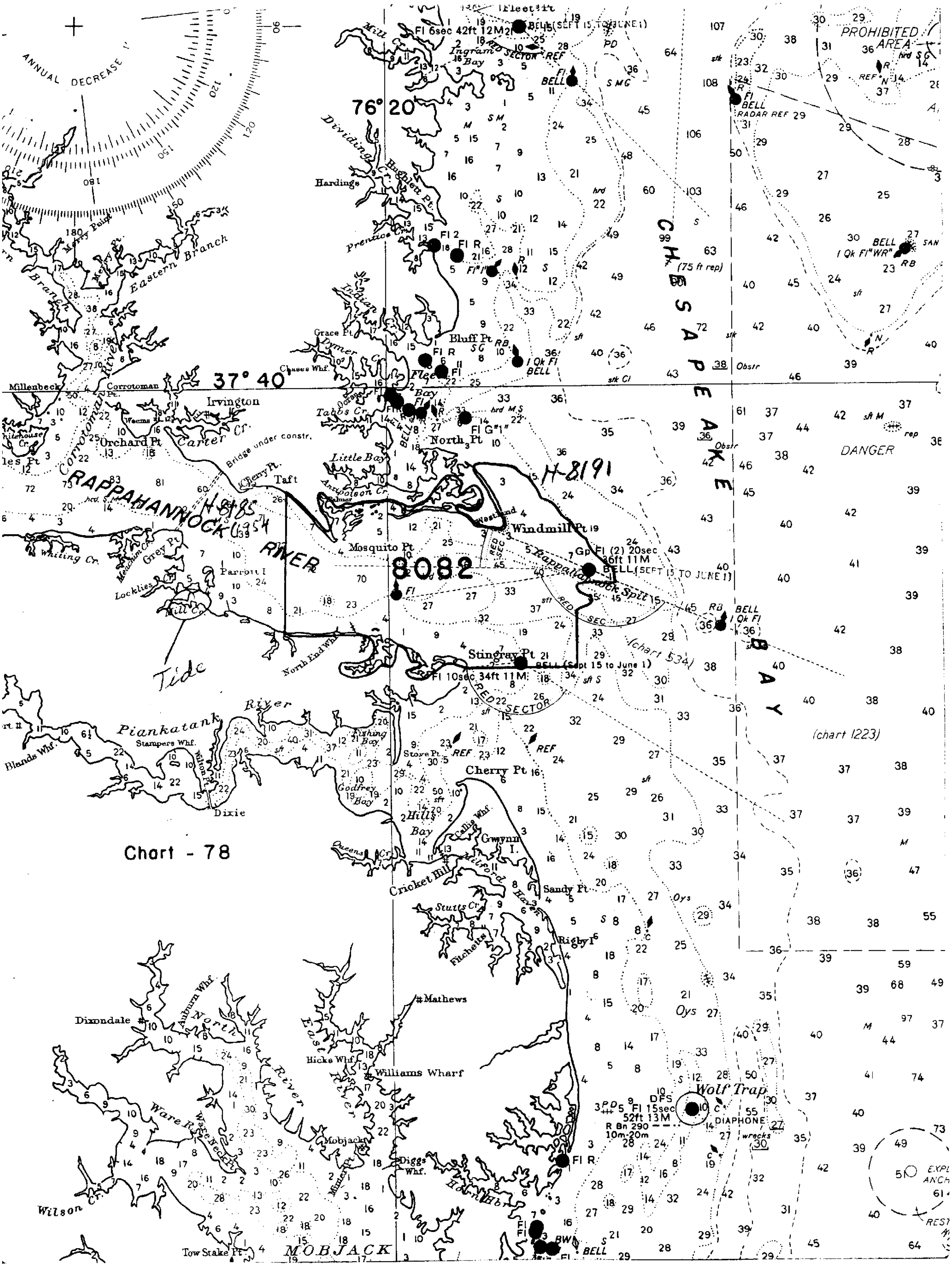
Height of mean high water above plane of reference is 1.2 ft.

Condition of records satisfactory except as noted below:

William Shofnos

Acting Chief, ~~Division of~~ Tides ~~and Currents~~ Branch

U. S. GOVERNMENT PRINTING OFFICE 877088



76° 20'
37° 40'
ANNUAL DECREASE
PROHIBITED AREA
DANGER
CHESAPEAKE BAY
H-8191
8082
H-8185
1954
RAPPAHANNOCK RIVER
Rappahannock Spit
Windmill Pt
Stingray Pt
Mosquito Pt
North Pt
Bluff Pt
Fleet Bay
Ingram Bay
Dividing Cr.
Hardings
Eastern Branch
Corrotoman River
Irvington
Carter Cr.
Orchard Pt
Taft
Grey Pt
Parrott I
Whiting Cr.
Locklies Cr.
North End Whf.
Little Bay
Antipoison Cr.
Tabbs Cr.
Dymer Cr.
Grace Pt
Millenbeck
Bridge under constr.
Tide
Piankatank River
Stampers Whf.
Blands Whf.
Dixie
Fishing Bay
Godfrey Bay
Cherry Pt
Hills Bay
Gwynn I.
Cricket Hill
Milford Haven
Queens Cr.
Stutts Cr.
Sandy Pt
Rigby I
Mathews
Dixondale
Auburn Whf.
North River
East River
Hicks Whf.
Williams Wharf
Ware R.
Ware Neck
Mobjack
Diggs Whf.
Horn Hbr.
Wilson Cr.
Tow Stake Pt
MOBJACK
Wolf Trap
DIAPHONE
wrecks
(chart 534)
(chart 1223)
Chart - 78

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8082

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/16/55	1223	[illegible]	Before ~~After~~ Verification and Review Partially applied. Soundings revised
3-13-57	534	R.K. DeLauder	~~Before~~ After Verification and Review. Unable to make preliminary complete application at this time.
11-22-57	534	[illegible]	~~Before~~ After Verification and Review Preliminary Completely applied SMA Before inking depth curves.
3-18-59	1223	R.K. DeLauder	~~Before~~ After Prelim Verification and Review. Completely applied thru Chart 534. SMA
1/4/61	78	J. Hraton	~~Before~~ After Prelim Verification and Review Chart thru 1223
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.