8186

Diag. Cht. No. 78-3.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. CO-1254 *Office No.* H-8186

LOCALITY

State Virginia

General locality Rappahannock River

Locality Vicinity of Towles Point

1954

CHIEF OF PARTY

K. S. Ulm

LIBRARY & ARCHIVES

DATE January 8, 1957

B-1870-1 (1)

8186

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-8186

Field No. Co-1254

State VIRGINIA

General locality ~~CHESAPEAKE BAY~~ RAPPAHANNOCK RIVER

Locality ~~RAPPAHANNOCK RIVER AND CK ROTOMAN RIVER~~ VICINITY OF TOWLES POINT

Scale 1:10,000 Date of survey 7 Apr. to 7 July 1954

Instructions dated 5 Feb. 1953 & 25 Feb. 1954

Vessel COWIE

Chief of party K.S. ULM

Surveyed by K.S. ULM; A.J. RAMEY; J.M. OGILVIE &P. HERTELENDY

Soundings taken by ~~echo sounder~~, graphic recorder, hand lead, ~~wire~~ POLE

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL

Protracted by A. KAUPA

Soundings penciled by A. KAUPA

Soundings in ~~fathoms~~ feet at MLW ~~and MLLW~~ AND ARE TRUE DEPTHS

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

U. S. GOVERNMENT PRINTING OFFICE 16—65520-1

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8186 FIELD NO. CO-1254

(title revised - see title sheet)

CHESAPEAKE BAY, RAPPAHANNOCK R. - CORROTOMAN R.

SHIP COWIE SCALE 1:10,000

K. S. ULM, COMDG.

... ...

A - PROJECT:

Project CS-287; supplemental Instructions dated 5 February 1953 and supplemental instructions dated 25 February 1954.

B - SURVEY LIMITS AND DATES:

The area covered by this survey is from lat. 37°27.00' (36.00'), to lat. 37°32.50' (12.00'), and long. 76°36.22' (27.00') to long. 76°37.42' (32.50'). Junction is with CO-1154 (H-8185-1954) to the east and CO-1354 (H-8187-1954) to the north.

Work began on 7 April 1954 and ended on 7 July 1954.

C - VESSELS AND EQUIPMENT:

The Ship COWIE using 808 type fathometer No. 114-S was used in mid-stream. Launch 102, with 808 type fathometer No. 118-S and Launch No. 175, with 808 type fathometer No. 118-S, made junctions between the Ship and Skiff 749, which used 808 type fathometer No. 120-S and pole. Skiff 749 carried the work to the shoreline and up creeks and small tributaries.

D - TIDES AND CURRENTS:

A portable automatic tide gage was installed and maintained at Millenbeck wharf, lat. 37°40.14', long. 76°29.21' throughout the period of this survey.

Two 75 hour current stations were observed with the limits of this survey as follows: lat. 37°37.84, long. 76°30.45; and lat. 37°39.90', long. 76 29.05'. All records are on Eastern Standard Time.....

E - SMOOTH SHEET:

The smooth sheet ~~will be~~ was constructed and plotted by the Norfolk Processing Office. It is recommended that the creek at lat. 37°41.00', long. 76°27.50', ~~will~~ be plotted on Sheet CO-1154. (H-8185-1954)

F - CONTROL STATIONS: TRIANGULATION: See Processing Office list of signals.

HARD	Orchard 3, 1942	TOWL	Towles 3, 1941
HOSE	Old House, 1919 VFC	WHIT	Whiting 2, 1954
CORR	Corrotoman Pt. Lt., 1954	WLES	Towles 4, 1954.

TOPOGRAPHIC: MANUSCRIPT NO. T-11054:

AGE	ART	BIG	CRY	FAT	HAG	KID	NIP	PLY
AMP	ASK	BON	DAW	FRY	HON	LAY	NOW	RAT
APT	AVE	BUM	DAY	GAS	ICE	MAG	OFT	SOL
ARM	BARB	COO	EGG	GIN	JAY	MUG	ORB	TAN
								WEST

MANUSCRIPT NO. T-11056:

ABE	CAN	ELI	INK	MOO	SIS	TOM	YAK
AHA	DAT	FOG	ION	OAK	SKI	USE	YAM
AIM	DIP	FOP	JAR	ORA	SOX	VAL	ZEL
ANN	DUN	GIT	JOT	RIP	SUB	VAN	ZIG
AXE	EAR	GUS	LOB	ROT	TEE	WAD	
BAT	EAT	HOT	LUG	RUM	THY	WAN	
BOB	ELF	HUT	LUX	SIR	TIP	WAX	

MANUSCRIPT NO. T-11058:

ADO	ERG	ITS	NED	POL	SOP	WEE
AMY	FEW	JAW	NEW	PUP	STY	WEN
BIB	FEZ	KIP	NUB	REV	TAK	WET
BOX	GAM	KIT	NUL	ROY	TAX	WHO
CAW	HAR	LAY	NUT	RUB	TRY	WHY
COP	HEX	LEG	OFF	RUE	TUB	WIN
DIM	HUB	MAL	OWL	SAD	VIM	YEA
EBB	HUG	MAW	PUT	SKY	WAG	

HYDROGRAPHIC:

ASH

R-CONTROL STATIONS: (CONT.)

MANUSCRIPT NO. T-11226:

ACE	CUD	FUN	ION	PIX	SUE
ACT	DEL	GAG	NIL	POI	VET
ADD	DOT	GEM	NIT	POT	VEX
ALP	DUD	GIG	NOD	PUG	VIN
ANT	EEL	GOT	NON	RAG	WAS
BAG	EGO	GRO	NOR	RIM	WED
BOA	EMO	GUS	NUX	ROG	WHY
BUG	END	GUY	ODD	SIP	WIG
BUS	FAR	HOP	OHM	SOK	YES
BUT	FLY	HUM	PAD	SOW	YIT
CAT	FOX	HUT	PIN	STE	ZOO
		~~ION~~			ZUG

G - SHORELINE AND TOPOGRAPHY:

The shoreline on the boat sheet was transferred from airphoto manuscripts T-11054 (1952-53), T-11056 (1952-53), T-11058 (1952-53) ~~and~~ T-11226 (1952-53) and T-9898 (1952-53). It was not practical to define the entire low water line by soundings due to the small range of tide in this area.

The following areas have shoreline corrections as shown in red ink on the boat sheet:

1 - lat. 37°36.34', long. 76°28.98'. (T-11058 (1952-53))

2 - lat. 37°36.57', long. 76°29.30'. (T-11058 (1952-53))

3 - lat. 37°39.90', long. 76°29.99'. (T-11056 (1952-53) and T-11226 (1952-53))

4 - lat. 37°39.84', long. 76°29.89'. (T-11056 (1952-53))

5 - lat. 37°41.77' long. 76°30.22' (T-9898-1952-53)

Items 1, 2, 3 + 4 were revised on the Basic Topographic surveys & agree with the corrections made on the Boat sheet by the hydrographer. See Review Report dated 8 Apr 1954

Item 5 - Correction in red on Smooth Sheet originates with the Boat Sheet, and was not revised on T-9898 (1952-53)

H-SOUNDINGS:

Depths were taken with 808 type fathometer, handlead and sounding pole. Bar checks were used for obtaining corrections. Junctions of the Ship, launches and skiff are in good agreement, so depth curves can be adequately drawn.

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 SURVEYS:

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

K - CROSSLINES:

Crosslines are in good agreement and comprise approximately eight percent of the principal system of lines.

L-M - COMPARISON WITH PRIOR SURVEYS AND CHARTS:

SKIFF NO. 749:

1 - Item 20 (Preliminary Review) at lat. 37°39.37', long. 76°27.67' is a wreck in 2.5 ft. of water, bare 5 ft. MHW - pos. 62-j, skiff 749.

2 - Item 21(Preliminary Review) The piles, obstructions and features at lat. 37°39.30', long. 76°29.38'; lat. 37°39.72', long. 76°29.35'; and lat. 37°39.50', long. 76°29.80' respectively, were searched for but not found. Recommended that they be deleted from future charts.

3 - Item 22 (Preliminary Review) The platform at lat. 37°36.80', long. 76°30.70', was searched for but not found. Recommended that it be deleted from future charts.

4 - At lat. 37°~~39~~36.94', long. 76°32.~~33~~32', is the end of a new pier, pos. 67-k - skiff 749 *originates with this Hydrographic Survey - shown in red on smooth sheet*

5 - At lat. 37°36.~~78~~77', long. 76°30.99', is a 6' X 6' platform in 3 ft. of water, bare 4 ft. MHW, pos. 115-k, skiff 749.

6 - At lat. 37°37.37', long. 76°32.69', is a 7' X 9' duck blind in 4 ft. of water, bare 8 ft. (7.4 MLW), pos. 77-1, skiff 749.

7 - The creek at lat. 37°38.60', long. 76°30.23' could not be entered.

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

SHIP COWIE - LAUNCH NO. 175 - SKIFF NO. 749:

A comparison with Chart 534 (print date 2/9/53) shows good agreement between the old and new surveys

8 - It should be noted that numerous (13 to 18 ft) shoals, ranging in actual height from two to five feet, were located (above general depths of 20 ft to 25 ft) on regularly spaced sounding lines in the vicinity of lat. 37°37.3', and extending from about 76°27.5', to about 76°31.5'. Several of these shoals were investigated by taking simultaneous fathometer and leadline soundings. It was concluded, from the bottom samples obtained, that these shoals are part of an outcropping shale formation extending for about the same distance along the south shore.

N - DANGERS AND SHOALS:

1 - lat. 37°40.137', long. 76°29.21' is a cluster of 6 piles in 8 ft. of water submerged 1 ft., pos. 42-a, skiff 749.

2 - lat. 37°40.139', long. 76°29.20' is a pile in 9 ft. of water submerged 1 ft., pos. 43-a, skiff 749.

3 - lat. 37°40.144', long. 76°29.20' is a pile in 8 ft. of water submerged 0.5 ft., pos. 44-a, 749.

4 - lat. 37°40.143, long. 76°29.215' are three piles, 3 ft. apart in 5 ft. of water submerged 2 ft., pos 45-a, skiff 749.

5 - lat. 37°40.11, long. 76°28.32' is a shell pile in 2 ft. of water, bare 0.25 ft. at M.L.W. tide, pos. 49-f, skiff 749.

6 - lat. 37 40.87', long. 76 27.56' is a telephone pole in 3 ft. of water, pos. 113-f, skiff 749.

7 - lat. 37 40.83', long. 76 27.45' is a telephone pole in 5 ft. of water, pos. 114-f, skiff 749.

N - DANGERS AND SHOALS: (CONT.)

8 - lat. 37°40.95', long. 76°27.62' is the end of a rock breakwater in 1.5 ft. of water, (uncovers 2 ft at MLW) bare 1 ftl, pos 115-f, skiff 749. shown in red - plotted directly on smooth sheet from single lens photographs No. 1923 and 1924 (PH 16) (1452) L.S.S. 3/12/57.

9 - lat. 37°41.36', long. 76°29.03' offhore end of pier ruins in 5 ft. of water, submerged 2 ft. pos. 20h (green)

10 - lat. 37°41.06', long. 76°29.47' is a wreck in 3.5 ft. of water, bare 1 ft., (uncovers 2 ft MLW) pos. 43-h, skiff 749.

11 - lat. 37°39.13', long. 76°30.30' is a dolphin in 6.5 ft. of water, bare 8.5 ft. (8 MHW), pos. 51-j, skiff 749.

12 - lat. 37°39.37', long. 76°30.19', is a dolphin in 8 ft. of water, bare 10 ft. (11 MHW)

13 - lat. 37°38.94', long. 76°27.25' is a rock pile, pos. 81-j, skiff 749.

14 - lat. 37°38.92', long. 76°27.20', is a rock pile, pos. 82-j, " 749.

15 - lat. 37°37.06', long. 76°32.47' is a pile in 3 ft. of water, uncovers 1 ft. (MLW), pos. 66-K, skiff 749.

16 - lat. 37°36.83', long. 76°31.25' is inshore end of a shell pile, submerged 1 ft., pos. 75-k, skiff 749 - outlined by dashed black line on smooth sheet.

17 - lat. 37°36.85', long. 76°31.25' is offshore end of a shell pile, pos. 76-k, skiff 749.

Q - COAST PILOT INFORMATION:

1 - At lat. 37°41.67', long. 76°29.42' is a marine railway. Capacity of 50 ft. and 30 tons. Owned by MO. Saunders of Ottoman, Va.

2 - Meacham Creek channel, (west entrance) lat. 37°36.80', long. 76°27.23', has a controlling depth of 2 ft.

3 - Whiting Creek channel, lat. 37°36.67', long. 76°30.39', has a controlling depth of ~~1.5~~ 1.0 ft.

4 - The entrance to ~~Back~~ Cargo Creek, lat. 37°39.74', long. 76°31.96' is shoal and changeable. Upstream of the mentioned point there is only 1 ft. of water to the small oyster house. The lagoon of Back Creek was too shoal to enter, even at high tide.

P - AIDS TO NAVIGATION:

Form 567, Nonfloating Aids to Navigation is being prepared as a separate report.

Floating Aids to Navigation, within the limits of this survey are as follows: See N.P.O. List of A.to.N.

1 - Corrotoman River Entrance Can Buoy "1", lat. 37°39.49', long. 76°28.46', in 18 ft. of water.

2 - Taylor Creek Can Buoy "1", lat. 37°40.90', long. 76°27.42', in 9 ft. of water.

3 - Corrotoman River Spar Buoy "4", lat. 37°40.98', long. 76°28.40', in 14 ft. of water.

4 - Corrotoman River Spar Buoy "6", lat. 37°41.33', long. 76°28.43', in 12 ft. water.

5 - Rappahannock River Can Buoy "5", lat. 37°37.19', long. 76°30.37', in 27 ft. water.

6 - Rappahannock River Lighted Bell Buoy "6", lat. 37°38.02', long. 76°30.27', in 31 ft. of water.

Q - LANDMARKS FOR CHARTS:

Form 567, Landmarks for Charts, is being prepared as a separate report.

The following landmark was located within the limits of survey CO-1254.

1 - A steel stack for a small cannery, at lat. 37 40.15', long. 76 29.24', is visible for a considerable distance along the Corrotoman River channel, and is recommended for a landmark. Q. Jot Already charted as landmark on CO 534 3-8-57 RKD.

R - GEOGRAPHIC NAMES:

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

U-Y - MISCELLANEOUS:

Fathometer corrections were obtained by averaging all bar checks for each survey vessel, the same fathometer being used throughout the season. An abstract of these corrections is included as part of this report.

Z - TABULATION OF APPLICABLE DATA:

A list of signals is attached to Vol. I of the sounding records.

A tabulation of other data is included as part of this report.

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::

3/25/55

Comdg. Ship COWIE.

TIDE NOTE

A portable automatic tide gage at Millenbeck Wharf, Carrotoman River, lat. 37°40.1Ø', long. 76°29.20', was used for obtaining tide reducers for the entire survey. No time or height corrections were applied to the observed tides. The hourly heights were scaled from the marigrams and the tide curves were plotted by personnel of the Ship C O W I E . . . . . .

STATISTICS

SHIP COWIE:

DATE	DAY LETTER	VOL. NO.	STATUTE MILES	NO. OF POSITIONS
5/28	A (blue)	I	23.7	86
6/1	B	I	8.6	33
6/4	C	I	25.2	93
6/11	D	II	21.3	78
6/21	E	II	6.4	23
TOTALS:			61.5	227
LAUNCH NO. 175:				
5/12	a (violet)	III	38.2	200
5/13	b	III	12.3	69
5/13	b	IV	13.7	73
5/18	c	IV	35.6	199
5/19	d	V	25.9	152
5/20	e	V	22.3	136
5/25	f	VI	39.4	230
6/3	g	VII	23.7	179
6/8	h	VII	21.4	114
6/8	h	VIII	9.9	56
6/9	j	VIII	39.8	230
6/9	j	IX	0.7	4
TOTALS:			282.9	1542
LAUNCH NO. 102:				
6/17	a (Red)	X	22.3	156
6/18	b	X	19.7	129
6/18	b	XI	7.4	65
6/27	c	XI	10.9	69
7/7	d	XI	6.2	95
TOTALS:			66.5	514

STATISTICS:(CONT.)

SKIFF NO. 749:

DATE	DAY LETTER	VOL. NO.	STATUTE MILES	NO. OF POSITIONS.
4/7	a (green)	XII	9.0	111
4/27	b	XII	9.3	86
4/28	c	XII	6.7	76
5/27	d	XIII	18.2	183
6/2	e	XIII	9.8	128
6/2	e	XIV	5.2	53
6/10	f	XIV	12.6	147
6/16	g	XV	8.3	98
6/19	h	XV	12.5	142
6/20	j	XV	8.6	100
6/20	j	XVI	1.2	14
6/25	k	XVI	16.3	135
6/26	l	XVI	11.3	105
6/27	m	XVI	3.0	26
TOTALS:			132.0	1404
GRAND TOTALS:			542.9	3687

AREA: - 18.8 Square Statute Miles...

FATHOMETER CORRECTIONS

SHIP COWIE:

DAY	DATE	15'	20'	25'	30'	40'	50'-A	50'-B	60'	70'	75'
A	5/28	±0.5	0.0	0.0	0.0	0.0	0.0	±1.5	±1.2	±1.0	±2.0(R)
B	6/1	±0.5	±0.2	0.0	0.0	0.0	0.0	±1.6	±1.5		
C	6/4	±0.5	±0.5	0.0	0.0	0.0	0.0	±2.0	±2.0	±1.5	
D	6/11	±0.2	±0.2		0.0	0.0	-0.2	±1.5	±1.5	±1.0	
E-	6/21	±0.7	±0.5	0.0	0.0	0.0	0.0	±2.0	±2.0	±2.0	
AVERAGE		±0.4	±0.3	0.0	0.0	0.0	0.0	±1.7	±1.6	±1.4	

CORRECTIONS:

A scale - 10.0 to 14.0 - ±0.4
14.5 to 26.0 - ±0.2
26.5 to 50.0 - 0.0

B scale - 50.0 to 65.5 - ±1.6
66.0 to 70.0 - ±1.4

LAUNCH NO. 102:

DAY	DATE	5'	10'	15'	20'	25'	30'	40'A	40'B	50'A	50'B	60'
a	6/17			-0.5(R)	0.0		0.0	0.0		-0.8(R)		
		0.0	±0.2	±0.2	±0.1		±0.2	±0.2		-1.0(R)	±1.5	
		0.0	0.0	±0.4	±0.2		±0.8					
b	6/18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	±2.0	0.0		±2.0
		0.0	0.0	0.0	0.0	0.0	+0.2					
		0.1	±0.7	±1.0	±1.0	±1.0	±1.0					
c	6/27	0.0	0.0	±0.2	±0.2	±0.8	±0.7	±1.0	±2.0	±1.0	±2.0	±2.0
		0.0	±0.5	±0.5	±0.7	±1.0	±1.0	±1.0	±2.0	±1.5	±2.0	±2.0
d	7/7	-0.2	-0.2	±0.7	±1.0	±1.0	±1.0					
		0.0	±0.5	±0.8	±0.5	±0.2	±0.5	±0.5	±2.0	±0.5	±2.0	±2.5
		0.0	±0.5	±0.8	±0.5	±0.2	±0.5	±0.5	___	±0.5	___	___
AVERAGE		0.0	±0.2	±0.5	±0.4	±0.6	±0.5	±0.5	±2.0	±0.7	±1.9	±2.1

CORRECTIONS:

A scale - 0.0 to 7.5 - 0.0
8.0 to 12.0 - ±0.2
12.5 to 19.0 - ±0.4
19.5 to up - ±0.6

B scale - ±2.0 throughout

FATHOMETER CORRECTIONS (CONT.)

LAUNCH NO. 175:

DAY	DATE	5'	10'	15'	20'	25'	30'	35'	40' A	B	50' A	B	60'
a	5/12	0.0	0.0	0.0	0.0	0.0							
b	5/13	0.0	0.0	0.0	0.0	0.0	0.0						
c	5/18	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0		
		0.0	0;0	0.0	0.0					+1.0			
		0.0	0.0	0.0	0.0		0.0		0.0				
d	5/19	0.0	0.0	0.0	0.0		0.0		0.0		0.0	+1.0	
		0.0	0.0	0.0	0.0		0.0		0.0	+1.0	0.0	+1.0	
e	5/20	0.0	0.0	0.0	0.0				0.0		0.0	+1.0	
		0.0	0.0	0.0	0.0				0.0				
f	5/25	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
g	6/3	0.0	0.0	0.0	0.0	0.0							
		0.0	0.0	0.0	0.0		0.0		0.0		0.0		
h	6/8	0.0	0.0	0.0	0.0		0.0		0.0	+1.5	0.0	+2.0	+2.0
j	6/9	0.0	0.0	0.0	0.0		0.0		0.0		0.0	+2.0	+2.0
		0.0	0.0	0.0	0.0		0.0		0.0		0.0	0.0	0.0
												+1.5	+1.5
AVERAGE:		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.8	0.0	+1.2	+1.4

CORRECTIONS: 0.0 throughout: *for A scale*

B scale: 38.0 42.0 to 47.0 = +1.0
47.5 to 54.0 = +1.2
54.5 & up = +1.4

SKIFF NO. 749:

b	4/27	-0.5(R)	-0.65(R)	-0.9(R)	-1.0(R)	-1.25(R)	
h	6/19	-0.2	0.0	∓0.1	0.0	0.0	0.0
k	6/25	0.0	-0.5	-0.4	-0.5	-0.6	
l	6/26	∓0.2	0.0	0.0	0.0	0.0	-0.5
AVERAGE		0.0	-0.17	-0.1	-0.17	-0.2	-0.17

CORRECTIONS: 0 to 8.0 - ∓0.0
8.5 to =0.2

FLOATING AIDS TO NAVIGATION
H-8186

BUOY	LAT.	LONG.	DEPTH	POS. NO.	DATE
Carrotoman River Entr. Buoy 1	37-39.50	76-28.46	19'	127d	5/19/54
Taylor Creek Buoy 1	37-40.90	76-27.42	5'	112f 36h	6/10/54 6/19/54
Taylor Creek Buoy 4	37-40.98	76-28.40	13'	58f	5/25/54
Taylor Creek Buoy 6	37-41.33	76-28.43	16'	205f	5/25/54
Rappahannock R. Buoy 5	37-37.19	76-30.37	26'	38j	6/ 9/54
Rappahannock R. Ltd. Bell Buoy 6	37-38.03	76-30.28	31'	20h	6/ 8/54

LIST OF SIGNALS
H-8186

TRIANGULATION STATIONS

HARD	ORCHARD 3, 1942-53
HOSE	OLD HOUSE (VFC), 1919-54
TOWL	TOWLES 3, 1942-52
WHIT	WHITING 2, 1954
WLES	TOWLES 2, (VFC)(TOWLES 4), 1919-54

TOPOGRAPHIC STATIONS

SOURCE T-11054

Age	Amp	Apt	Arm	Art	Ask	Ave	Barb	Big	Bon
Bum	Coo	Cry	Daw	Day	Egg	Fat	Gas	Gin	Hag
Hon	Ice	Jay	Kid	Lad	Mag	Mug	Nip	Oft	Ply
Rat	Sol	Tan	West						

SOURCE T-11056

Abe	Aha	Aim	Ann	Axe	Bat	Bob	Can	Corr	Dat
Dip	Dun	Ear	Eat	Elf	Eli	Fog	Fop	Git	Hot
Ink	Jot	Lob	Lux	Oak	Rip	Rot	Rum	Sis	Ski
Sox	Sub	Tay	Tee	Thy	Tip	Tom	Use	Val	Van
Wad	Wan	Wax	Yak	Yam	Zel	Zag	Zig		

SOURCE T-11058

Ado	Amy	Box	Cop	Ebb	Fez	Gam	Har	Hug	Kip
Lay	Leg	Nub	Nul	Nut	Owl	Put	Rev	Sky	Tak
Tax	Try	Vim	Wag	Wee	Wen	Wet	Who	Why	Win
Yea									

SOURCE T-11226

Ace	Act	Add	Alp	Ant	Bag	Boa	Bug	Bus	But
Cat	Cod	Del	Dot	Dud	Eel	Ego	Emo	End	Far
Fly	Fox	Fry	Fun	Gag	Gem	Gig	Got	Gro	Gus
Guy	Hop	Hum	Hut	Ion	Joe	Nil	Nit	Nod	Non
Nor	Nux	Odd	Ohm	Pad	Pin	Pix	Poi	Pot	Pug
Rag	Rim	Sip	Sok	Sow	Ste	Sue	Vet	Vex	Win
Was	Wed	Why	Wig	Yes	Yit	Zoo	Zug		

HYDROGRAPHIC STATIONS

Ash Vol. 15, Pg. 16

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8186 (Field No. Co-1254)

GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Soundings at crossings checked very well.

Respectfully submitted,

Hugh L. Proffitt
Cartographer

Norfolk, Va.
3 Jan. 1957

GEOGRAPHIC NAMES

Survey No. H-8186

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H		
Virginia			)for title						BGN	1
Chesapeake Bay			) " "						BGN	2
Rappahannock River										3
Corrotoman River			(not Carrotoman)							4
Meachim Creek			(not Meacham--page 6)							5
Whiting Creek										6
Beach Creek			(Back Cr, bottom page 6, apparently in error for this stream)							7
Wyatt Creek										8
Towles Point									BGN	9
Whitehouse Creek										10
Wells Prong										11
Millenbeck Prong										12
Millenbeck			(tide station)							13
Town Creek										14
Myer Creek			(no separate names for its branches)							15
Bar Point										16
Western Branch										17
Eastern Branch										18
Moran Creek										19
Taylor Creek										20
Corrotoman Point										21
Orchard Point										22
Bell Pt.			Names approved 2-15-57. See chart 534 for best placement of names (except No. 7 on chart 535) L. Heck							23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8186

Records accompanying survey:

Boat sheets 1; sounding vols. 16; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 11*Envelopes

special reports, etc. 1-Descriptive report and 1-Smooth sheet.

.....

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

Number of positions on sheet		3873
Number of positions checked		33
Number of positions revised		0
Number of soundings revised (refers to depth only)		3
Number of soundings erroneously spaced		4
Number of signals erroneously plotted or transferred		0
Topographic details	Time	8
Junctions	Time	10
Verification of soundings from graphic record	Time	11
Revision of Topo + Hydro notes - Added 36 feet and parts of 24 feet curve		16

Verification by George A. Rozemeyak Total time 388 Date 30 Sept-58

Reviewed by [signature] Time 59 Date 23 Mar 1959

VDRE

M-2232-1

DIVISION OF CHARTS

Review Section - Nautical Chart Branch

Review of Hydrographic Survey — Registry No. H-8186

Virginia, Rappahannock River
Vicinity of Towles Point

Field No. CO 1254

Surveyed - April - July 1954 — Scale: 1:10,000

Project No. CS 287

Soundings:

808 Depth Recorder
Leadline
Sounding Ble

Control:

Sextant fixes on shore signals

Chief of Party - K. S. Ulm
Surveyed by - K. S. Ulm, A. J. Ramey, J. M. Ogilvie and P. Hertelendy.
Protracted by - A. Kaupa
Soundings plotted by - A. Kaupa
Verified and inked by - G. A. Kozemczak
Reviewed by - L. S. Straw 3/20/59
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed 1952-1953 shoreline surveys T-9898, T-11054, T-11056, T-11058, T-11226 and subsequent minor revisions by the hydrographer shown in red on the smooth sheet.

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

2. Sounding Line Crossings

The depths at sounding line crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves supplemented by the 3-foot and 36-foot curves are completely delineated on the survey. The 24-foot curve and isolated brown curves were used to accentuate the detail of the extensive shoal formations in approximate lat. 37°37.4' between long. 76°27.3' and long. 76°31.6'. The bottom of the lower Corrotoman River is irregular and contains several small isolated shoal areas of hard aand surrounded by soft mud bottom.

Two features stand out predominately in the Rappahannock River: the deep natural channel delineated by the 60-foot curve and the shell formations mentioned above.

4. Junctions with Contemporary Surveys

The junction with H-8185 (1954) on the east is adequate. The soundings are generally in good agreement with only a few that differ in depths by one foot.

The junction with H-8187 (1954) on the north in the Corrotoman River at lat. 37°42' will be considered in the review of that survey.

There are no contemporary surveys on the west; the project limit being 76°32.00'W. The soundings along the western limit of the present survey are in good agreement with those on Chart. No. 535 (Print date 7-28-58).

5. Comparison with Prior Surveys

H-608 (1857) 1:10,000 H-1002 (1869) 1:10,000
H-611 (1857) 1:10,000

A comparison of depths on the present survey with the prior surveys shows little change over the shallow flat areas contiguous to the shoreline, but beyond depths of 18 feet a considerable amount of sedimentation is evident. Several 12-foot (hard sand) shoals located in midstream of the lower Corrotoman River and two extensive sand bars in lat. 37°41.35' long. 76°28.4' and lat. 37°40.0' long. 76°28.95' agree within one foot of the depths obtained over a 100 years ago but the river bottom surrounding these features is soft mud and has shoaled from 2 to 4 feet. Maximum changes in depths have occurred in the natural channel of the Rappahannock River where present depths of 60 to 75 feet are 2 to 11-feet shoaler than those on the old surveys.

In approximate lat. 37°37.4' between long. 76°27.3' and long. 76°31.6' a large number of isolated shoals, most of them 18 feet, in general depths of 20 to 24 feet are located on the present survey; some of these shoals were also found on the earliest surveys. Two soundings, the 12 foot (corrected from 11½ to 12 feet on H-608 (1857) in lat. 37°37.08' long. 76°28.01', and the 15-foot (corrected from 14½ to 15 feet on H-608 (1857) in lat. 37°37.32' long. 76°28.07' were carried forward.

B. H-3002a (1907-08) 1:20,000
H-3003 (1909) 1:10,000

The sounding lines on these reconnaissance surveys average about 1600 meters apart and do not provide enough soundings to make a good comparison, however, where lines cross the Rappahannock River channel, present survey depths of 50 to 70 feet are from 3 to 6 feet shoaler than those on the prior surveys. From the 30-foot curve to the 18-foot curve the present survey depths are generally 1/2 to 1 foot shoaler from the 12-foot curve to the low water curve there appears to be no appreciable change in depths.

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

6. Comparison with Chart 534 (latest print date 4-7-58)
Chart 535 (latest print date 7-28-58)

A. Hydrography

(1) The charted hydrography originates basically with prior surveys discussed in paragraph 5 supplemented by information from other sources and critical information from the present survey applied before verification and review.

(2) The piles charted in lat. 37°39.30' long. 76°29.38'; from Chart Letter 3 (1947), the obstruction charted in lat. 37°39.72' long. 76°29.35' from remains of an oyster house first shown on survey T-2870 (1907-08) and the platform (not presently charted) in lat. 37°36.80' long. 76°30.70' were searched for but not found; the piles and the obstruction should be deleted from the charts.

(3) The ruins charted in lat. 37°36.88' long. 76°31.25' from T-8340 (1942-46) were not investigated. Part of these ruins may still exist under water and should be retained as presently charted.

(4) The ruins of Moran Wharf charted in lat. 37°41.67' long. 76°28.15' from Chart Letter 3 (1947), and the oyster shell shoal from T-8344 (1942-44) near the end of the wharf are not shown on T-11054 (1952-53) or the present survey and were not investigated. They are not considered disproved and should be retained as presently charted.

(5) For complete hydrography in Meachim Creek refer to H-8185 (1954).

Except as noted in the preceding paragraphs, the present survey is adequate to supersede the charted information.

B. Dredged Channels

The entrance channel to Whiting Creek (lat. 37°37.0' long. 76°30.58') was dredged and marked subsequent to the present survey. It is noted that chart 534 shows a 60-foot width for this channel and that chart 535 shows a 70-foot width.

The charted controlling depth of the entrance channel to Beach Creek lat. 37°39.61' long. 76°32.04' on the present survey is in adequate agreement with the present depths.

C. Aids to Navigation

The aids to navigation that were located by the present survey are in substantial agreement with the chart and properly mark the features intended.

7. Condition of the Survey

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

b. The smooth plotting was excellent.

c. A few bottom characteristics from prior surveys were carried forward to supplement those on the present survey.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is an excellent basic survey and no additional field work is recommended.

Examined and Approved:

Max G. Ricketts
Chief, Nautical Chart Branch

Ernest B. Lowey
Chief, Chart Division

Lorin F. Woodcock
Chief, Hydrography Branch

Samuel B. Grenell
Chief, Coastal Surveys Div.

RHC

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

7 February 1957

Plane of reference approved in
16 volumes of sounding records for

HYDROGRAPHIC SHEET 8186

Locality Chesapeake Bay, Virginia

Chief of Party: K. S. Ulm in 1954

Plane of reference is mean low water, reading

3.9 ft. on tide staff at Millenbeck

4.2 ft. below B.M. 1 (1954)

Height of mean high water above plane of reference is 1.3 feet.

Condition of records satisfactory except as noted below:

William Shafer
Signature

Chief, Tides Branch

Comm-DC 34330

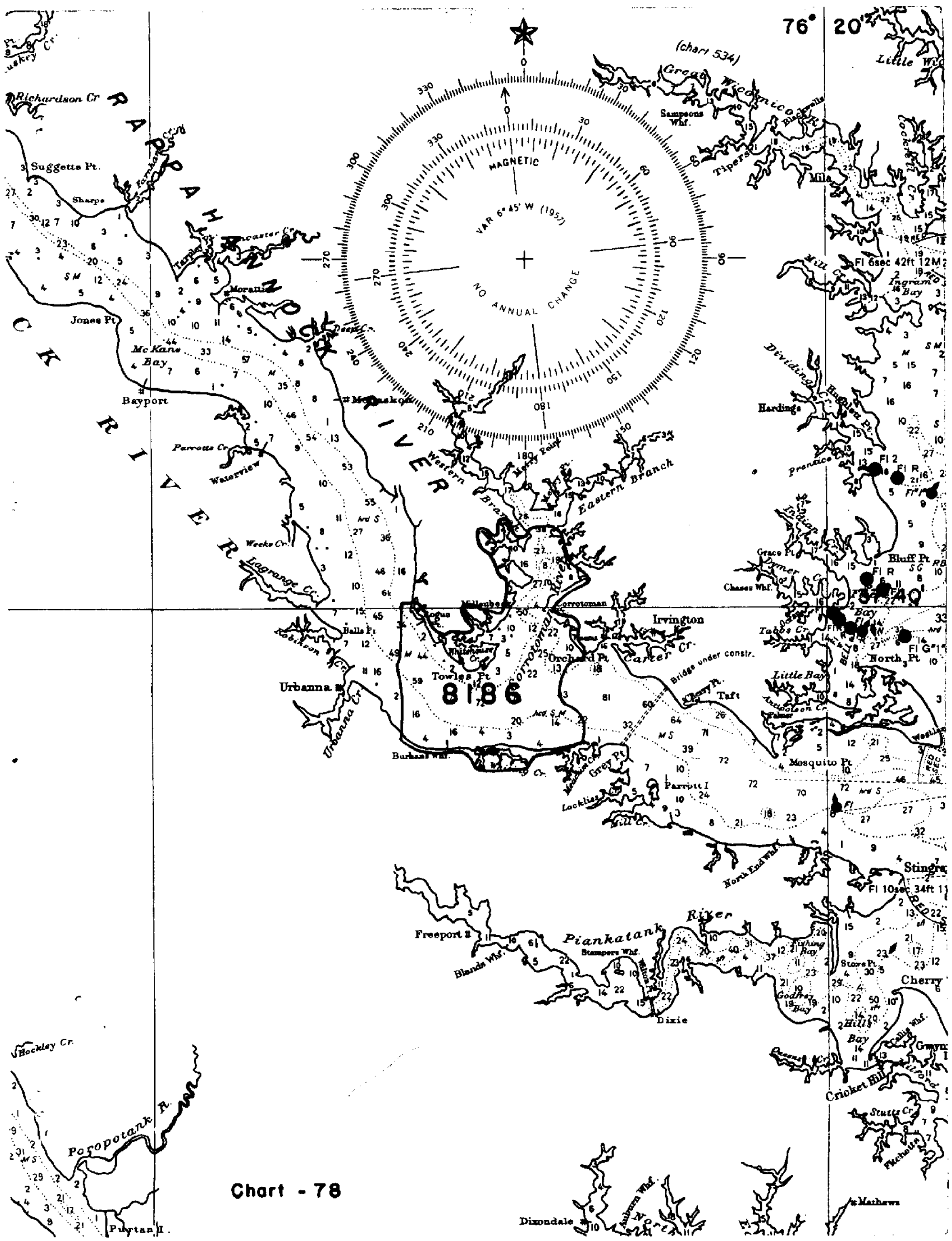
76° 20'
(chart 534)
MAGNETIC
VAR 6°45' W (1957)
NO ANNUAL CHANGE
RAPPAHANNOCK RIVER
Richardson Cr
Suggetts Pt.
Sharps
Morattico
Jones Pt
McKans Bay
Bayport
Parrotts Cr
Waterview
Weeks Cr
Lagrange Cr
Balls Pt
Robinson Cr
Urbanna
Urbanna Cr
Burhans Whf.
Towles Pt
8186
Millenbeck
Corrotoman
Western Branch
Eastern Branch
Irvington
Carter Cr.
Orchard Pt.
Bridge under constr.
Taft
Grey Pt
Parrott I
Locklies Cr
Mill Cr
Mosquito Pt
Little Bay
Antipoison Cr
Sampsons Whf.
Great Wicomico R
Tipers
Mila
Mill Cr
Fl 6sec 42ft 12M
Ingram Bay
Dividing Cr
Hardings
Prentice Cr
Bluff Pt
Grace Pt
Dymer Cr
Chases Whf.
Tabbs Cr
North Pt
Stingray
Fl 10sec 34ft
Freeport
Blands Whf.
Piankatank River
Stampers Whf.
Dixie
Fishing Bay
Godfrey Bay
Hills Bay
Cherry
Cricket Hill
Stutts Cr
Hockley Cr.
Poropotank R.
Purtan I.
Dixondale
Auburn Whf.
Mathews

Chart - 78

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8186

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3-8-57	534	R.K. deLauder	Partially Applied. Before ~~After~~ Verification and Review. Critical corrections only.
5/14/57	1223	D.M. McGann	Before ~~After~~ Verification and Review (Partially applied.)
15 Apr 58	535	H. Nichols USS	Before ~~After~~ Verification and Review Partial only.
9/23/59	534	J.W. Eaton	~~Before~~ After Verification and Review Fully Applied
5-2-60	1223	R.K. deLauder	Before After Verification and Review thru chart 534.
1/4/61	78	J.W. Eaton	~~Before~~ After Verification and Review thru chart 1223
2/11/63	535		
2/11/63	535	F. Brovold	~~Before~~ After Verification and Review thru chart 534 in area covered by that chart.
			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.