

8187

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-1354 Office No. H-8187

LOCALITY

State Virginia

General locality Rappahannock River

Locality Upper Corrotoman River

19 54

CHIEF OF PARTY

K. S. Ulm

LIBRARY & ARCHIVES

DATE July 16, 1956

B-1870-1 (1)

8187

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-8187

Field No. Co-1354

State VIRGINIA

General locality RAPPAHANNOCK RIVER, ~~CHESAPEAKE BAY~~

Locality UPPER CORROTOMAN RIVER

Scale 1:10,000 Date of survey 25 May to 19 June 1954

Instructions dated 5 Feb. 1953 & 25 Feb. 1954

Vessel SHIP COWIE

Chief of party K.S. ULM, COMDR.

Surveyed by K.S. ULM; J.M. OGILVIE; ^I ~~X~~ HERTELENDY; ^P A.J. RAMEY

Soundings taken by ~~XXXXXXXX~~ graphic recorder, ~~XXXXXXXX~~ POLE

Fathograms scaled by Personnel of Ship Cowie

Fathograms checked by Personnel of Ship Cowie

Protracted by G.O. Wimbro

Soundings penciled by G.O. Wimbro

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXXX~~ AND ARE TRUE DEPTHS

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

947

DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY H _____, FIELD NO. CO-1354

CHESAPEAKE BAY

RAPPAHANNOCK RIVER

SHIP COWIE

SCALE 1:10,000

COMDR. K. S. ULM, COMDG.

A - PROJECT:

Project CS-287; Supplemental Instructions dated 5 Feb. 1953 and
Supplemental Instructions dated 25 Feb. 1954.

B - SURVEY LIMITS AND DATES:

The area covered by this survey is the upper reaches of the Carro-
toman River to the extremities of both the eastern and western branches;
from lat. $37^{\circ}41.6'$ to $37^{\circ}46.1'$, and from long. $76^{\circ}24.5'$ to $76^{\circ}31.5'$. A
junction is made with contemporary survey ^{H-8186(1954)} CO-1254 to the south.

Surveying operations began on 25 May and closed on 19 June 1954.

C - VESSELS AND EQUIPMENT:

Launch no. 175, equipped with the 808 type fathometer no. 118-S
was used in general depths of 3 ft. and upward. Hydrographic skiff no.
749, equipped with the 808 type fathometer no. 128-S, handlead and
sounding pole, was used in shoal areas along the shore, creeks and inlets.
The launch and skiff operated from the ship COWIE.

D - TIDE AND CURRENT STATIONS:

A portable automatic tide gage was maintained at Millenbeck Wharf,
Carrotoman River throughout the entire period of this survey. Tide gage
records and soundings are on Eastern Standard Time.

No current stations were occupied within the limits of this survey.

DE - SMOOTH SHEET:

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

It is recommended that the limits of the sheet be shifted slightly northward to include the northern extremities of the western branch of the Carrotoman River.

F - CONTROL STATIONS:

HYDROGRAPHIC: T-9898, also Norfolk list.

CIG - T-11054	GIN - T-9898	QIC - T-9898	SEX - T-11052 ✓
DYN - T-11054	LON - T-9898	REM - T-9898	VIR - T-9898

TOPOGRAPHIC: MANUSCRIPT NO. T-9898:

ABE	CON	ELF	GEM	HUB	NUB	PRY	RAG	WIG ✓
AIM	DOC	FIX	GUS	IVY	NUT	PUG	REV	WIT
ALP	EAR	FUN	HER	MAN	OLD	PUT	STY	YAK

TOPOGRAPHIC: MANUSCRIPT NO. T-11052:

CAR	DOG	FOG	GAD	GOB	OIL	PUP	TUB
-----	-----	-----	-----	-----	-----	-----	-----

TOPOGRAPHIC: MANUSCRIPT NO. T-11051:

ADD	AXE	BON	DOT	FOE	GOP	ION	MID	ORB	RIO	VEX ✓
AGE	BAG	BUS	DUN	FRO	HAR	ITS	MUG	PAW	RIP	VIA
AHA	BARB	CAB	EBB	FRY	HID	LAX	NOD	PEP	RUB	WAR
APT	BED	CRY	END	GAG	HON	LEO	NOW	POT	SAD	WEN
ART	BIB	CUR	ERG	GAL	HOP	LET	OBI	PRO	SAG	WEST
ARM	BIG	DAW	EVA	GIN	HUM	LIZ	OFT	PUP	SHE	WHY
AVE	BOB	DIX	FLY	GOT	HUT	LUG	OUT	QUO	SHY	

G - SHORELINE AND TOPOGRAPHY:

The shoreline on the boat sheet was transferred from office compiled manuscripts no. T-9898, T-11052⁽¹⁹⁵²⁻⁵³⁾ and T-11054⁽¹⁹⁵²⁻⁵³⁾ 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 agree satisfactorily, and depth curves can be adequately drawn at the junctions.

G- The following areas have shoreline corrections as shown in red ink on the ~~boat~~ sheet.

- lat. 37°43.89', long. 76°24.99' - lat. 37°43.39', long. 76°25.35'
- lat. 37°43.36', long. 76°26.55' - lat. 37°42.59', long. 76°27.10'
- lat. 37°42.15', long. 76°27.65' - lat. 37°43.57', long. 76°31.25'
- lat. 37°41.91', long. 76°27.8'

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. The junction with the adjoining survey is adequate, no holidays exist and depth curves can be adequately drawn at the junctions.

J - ADEQUACY OF SURVEY:

This survey is considered complete, adequate for charting purposes and should supersede all prior surveys. The junction with the adjoining survey is adequate, 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 of the principal system of lines.

L-M - COMPARISON WITH PRIOR SURVEYS AND CHARTS:

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

1 - Lat. $37^{\circ}43.03'$ ^{05'}, long. $76^{\circ}29.96'$ ^{98'} is the limit of this shoal. It is 2 ft. at this point and drops steeply to 12 ft. The bottom is very grassy.

2 - A small 2 car cable ferry crosses the western branch of the Carrotoman River between signal END and signal NOD.

N - DANGERS AND SHOALS:

LAUNCH NO. 102:

1 - At lat. $37^{\circ}43.15'$, long. $76^{\circ}26.25'$, a lone pile, baring 9 ft., was located in 6.5 ft. of water.

SKIFF NO. 749:

2 - At lat. $37^{\circ}44.38'$, long. $76^{\circ}31.07'$, is the end of some pier ruins in 8 ft. of water, bare ^{3 MLW} 2 ft. (41-e, skiff 749).

3 - At lat. $37^{\circ}42.57'$, long. $76^{\circ}27.18'$, is a wrecked boat in 6 ft. of water, bare ^(3 HMLW) 1 ft., pos. 5-g, skiff 749.

O - COAST PILOT INFORMATION:

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

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:

- 1 - Carrotoman River Spar Buoy "5", lat. $37^{\circ}42.29'$, long. $76^{\circ}29.01'$, in 10.5 ft. of water.

Q - LANDMARKS FOR CHARTS:

No landmarks are recommended for the area of this survey.

R - GEOGRAPHIC NAMES:

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

U-Y - MISCELLANEOUS:

In general, sounding lines were spaced much closer than called for in the project instructions in order to adequately define the limits of the narrow channel in both branches of the Carrotoman River. 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. Ramsey

Albert J. Ramsey,
Lieut. (j.g.), USCGS,

J. Morgan Ogilvie

J. Morgan Ogilvie,
Ensign, USCGS.

Approved and forwarded:

3/25/55

Don A. Jones

Comdg. SHIP COWIE.

TIDE NOTE

A portable automatic tide gage at Millenbeck Wharf, Carrotoman River, lat. $37^{\circ}40.10'$, long. $76^{\circ}29.20'$, 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 COWIE.

STATISTICS:

LAUNCH NO. 175:

<u>VOL. NO.</u>	<u>DATE(1954)</u>	<u>DAY LETTER</u>	<u>NO. OF POS.</u>	<u>STAT. MILES</u>
I	5/27	a	199	29.7
I	6/2	b	115	17.1
II	6/2	b	51	6.7
II	6/10	c	<u>195</u>	<u>24.0</u>
TOTALS:			560	77.5

SKIFF NO. 749:

III	5/25	a	88	7.9
III	5/26	b	169	16.3
III	6/3	c	92	7.8
IV	6/3	c	32	2.6
IV	6/8	d	116	11.0
IV	6/9	e	174	11.2
V	6/17	f	156	12.0
V	6/18	g	136	12.1
V	6/19	h	<u>6</u>	<u>0.3</u>
TOTALS:			969	81.2
GRAND TOTALS:			1529	158.7

AREA: 4.6 Square Statute Miles.

FATHOMETER CORRECTIONS: LAUNCH NO. 175:

<u>DATE</u>	<u>DAY</u>	<u>5'</u>	<u>10'</u>	<u>15'</u>	<u>20'</u>	<u>25'</u>	<u>30'</u>	<u>35'</u>	<u>40'</u>
5/27	a	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0		0.0
6/2	b	0.0	0.0	0.0	0.0	0.0			
6/2	b	0.0	0.0	0.0	0.0	0.0			
6/10	c	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0			
AVERAGE:		0.0	0.0	0.0	0.0	0.0	0.0		0.0

SKIFF NO. 749:

7/17	f	0.0	0.0	0.0	-0.1	-0.6	-0.5		
7/17	f	-1.0(R)	-1.0(R)	-1.0(R)	-1.4(R)	-1.5(R)			
7/18	g	0.0	-0.6	-0.7	-0.7	-1.0	-1.0		
TOTAL:		0.0	-0.6	-0.7	-0.8	-1.6	-1.5		
AVERAGE		0.0	-0.3	-0.35	-0.4	-0.8	-0.75		

0.0 to 6.0 = +0.0
 6.5 to 10.0 = -0.2
 10.5 to 22.0 = -0.4
 22.5 to 24.0 = -0.6
 24.5 to 30.0 = -0.8

PROCESSING OFFICE
LIST OF SIGNALS
H-8187

TRIANGULATION STATIONS

SLATERS, 1942-52 ^{r43 and G.P. Page 455} { 37° 43' 34.668" (1066.8m).
76° 28' 52.614" (1288.5m).

TOPOGRAPHIC STATIONS

T-9898

Abe	Aim	Alp	Con	Doc	Ear	Elf	Fix	Fun	Gem
Gin	Gus	Her	Hub	Ivy	Lon	Man	Nub	Nut	Old
Pry	Pug	Put	Rag	Rem	Rev	Qic	Sty	Wig	Sex
Wit	Vir	Yak							

T-11054

Add	Age	Aha	Apt	Art	Arm	Ave	Axe	Bag	Barb
Bed	Bib	Bob	Bon	Bus	Cab	Cig	Cry	Cur	Daw
Dix	Dot	Dun	Dyn	Ebb	End	Erg	Eva	Fly	Foe
Fro	Fry	Gag	Gal	Gin	Got	Gop	Har	Hid	Hon
Hop	Hum	Hut	Ion	Its	Lax	Leo	Let	Liz	Lug
Mid	Mug	Nod	Now	Obi	Oft	Out	Orb	Paw	Pep
Pot	Pro	Quo	Rio	Rip	Rub	Sad	Sag	She	Shy
Vex	Via	War	Wen	West	Why				

ADDENDUM
TO ACCOMPANY

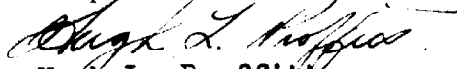
HYDROGRAPHIC SURVEY H-8187 (Field No. Co-1354)

GENERAL

This appears to be an excellent basic survey and no difficulty was experienced with the smooth plot. Agreement of soundings at crossings was very good.

The smooth plot was done by a draftsman with limited experience, and it is suggested that the verifier check the spacing of soundings on crosslines for possible adjustment with the main scheme of hydrographic lines, particularly where the speed of the launch was variable between positions.

Respectfully submitted,


Hugh L. Proffitt
Cartographer.

Norfolk, Va.

10 July, 1956

GEOGRAPHIC NAMES

Survey No. H-8187

Name on Survey	Source									
	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. Quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
<u>Virginia</u>									BM	1
<u>Chesapeake Bay</u>									y	2
<u>Carrotoman River</u>										3
<u>Maran Wharf</u>									BM	4
<u>Maran Creek</u>										5
<u>Eastern Branch</u>										6
<u>Quarter Cove</u>										7
<u>Norris Prong</u>										8
<u>Camps Prong</u>										9
<u>Browns Creek</u>									BM	10
<u>Punches Cove</u>										11
<u>Bells Creek</u>									BM	12
<u>Hills Creek</u>									"	13
<u>Western Branch</u>										14
<u>West Point</u>										15
<u>Merry Point</u>										16
<u>John Creek</u>										17
<u>Davis Creek</u>										18
<u>Little Branch</u>										19
<u>Senior Creek</u>										20
<u>Lawrey Creek</u>										21
<u>Ottoman Wharf</u>										22
<u>Bar Point</u>										23
										24
										25
<u>Millenbeck Wharf</u>										26
										27

} For title

(all other names in this area on 2-9-53 print of chart 534 are also approved)

Names approved
7-23-56.

(tide station, south of this sheet)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8187

Records accompanying survey:

Boat sheets 2; sounding vols. 5; wire drag vols.;
bomb vols.; graphic recorder rolls 3-Envelopes
special reports, etc. 1-Smooth sheet and 1-Descriptive report.....
.....

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

Number of positions on sheet	1529
Number of positions checked	120
Number of positions revised	✓
Number of soundings revised (refers to depth only)	✓
Number of soundings erroneously spaced	12
Number of signals erroneously plotted or transferred	✓
Topographic details	Time 4
Junctions	Time
Verification of soundings from graphic record	Time 12

Verification by *J. L. Chamber* Total time 10.0 Date 7-78-58

Reviewed by *[Signature]* Time 4.5 Date 30 Mar 1959

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

29 August 1956

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 8187

Locality Corrotoman River, Rappahannock R., Va.

Chief of Party: K. S. Ulm in 1954

Plane of reference is mean low water, reading

3.9ft. on tide staff at Millenbeck

4.2ft. 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:



Signature

Chief, Tides Branch

DIVISION OF CHARTS

Review Section - Nautical Chart Branch

Review of Hydrographic Survey

Registry No. 8187

Virginia, Rappahannock River,
Upper Corrotoman River

Field No. CO 1354

Surveyed - May-June 1954

Scale 10,000

Project CS 287

Soundings:

Control:

808 Depth Recorder
Leadline
Sounding Pole

Sextant fixes on
shore signals

Chief of Party - K. S. Ulm
Surveyed by - K. S. Ulm, J. M. Ogilvie, P. Hertelendy, A. J. Ramey
Protracted by - G. O. Wimbro (Norfolk P. O.)
Soundings plotted by - G. O. Wimbro
Verified and inked by - J. C. Chambers
Reviewed by - L. S. Straw 3/30/59
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed 1952-53 shoreline surveys T-9898, T-11052, T-11054 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-ft. curve were adequately delineated.

The bottom is generally smooth except for steep gradients near shore and at shoal bars extending off some of the points, as for example, the vicinity of West Point, lat. $37^{\circ}42.1'$, long. $76^{\circ}28.7'$ and in lat. $37^{\circ}42.3'$, long. $76^{\circ}29.06'$.

4. Junction with contemporary surveys

An adequate junction was made with H-8186 (1954) on the south. On the north, the present survey extends to the limits of navigation.

5. Comparison with Prior Surveys

H-611 (1857) 1:10,000 H-1001 (1869) 1:20,000

A comparison of the present and the prior surveys shows differences in shoreline up to 50 meters in some of the creeks. The discrepancies are due principally to minor natural changes combined with the difference in the old and modern methods of surveying. The depths on the present survey are 1-foot shoaler in the upper reaches to 3-foot shoaler in the lower reaches of the Eastern and Western Branches of the Corrotoman River. The differences in depths are attributed to gradual sedimentation over the period of 90 to 100 years' time between the early and the modern surveys.

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

6. Comparison to Chart 534 (latest print 4-7-58)

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 pile charted in lat. $37^{\circ}42.59'$, long. $76^{\circ}29.50'$ represents the remains of the old Ottoman Wharf originating with T-2840 (1907-08) but shown as piling on T-8344 (1942-44). These piles are not shown on T-11054 (1952-53) and apparently were not seen or searched for by the hydrographer. Since they fall in depths of 6 to 8 feet, danger of underwater obstruction is present. Therefore, they are carried forward from T-8344 (1942-44) to the present survey and marked submerged piles. ✓

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

B. Aids to Navigation

The aids to navigation located on the present survey are in agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

- (a) The sounding records and the Descriptive Report are complete and comprehensive.
- (b) The smooth plotting was done accurately except that the sounding lines run in the center of small streams were not always plotted in accordance with the boat sheet positions.


8. Compliance with Project Instructions


The present survey adequately complies with the Project Instructions.

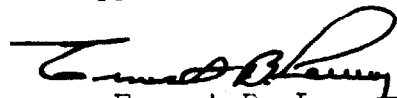
9. Additional Field Work Recommended

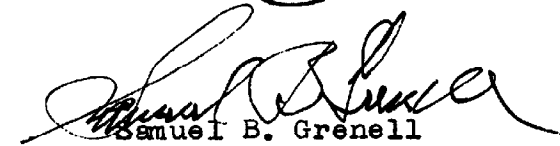
This is a good basic survey and no additional field work is recommended.

Examined and Approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Lorin F. Woodcock
Chief, Hydrographic Branch


Ernest B. Lewey
Chief, Division of Charts


Samuel B. Grenell
Chief, Division of Coastal Surveys

...instructions shown, upon being warned, immediately vacate the area designated, unless given other instructions relative to navigating this area.

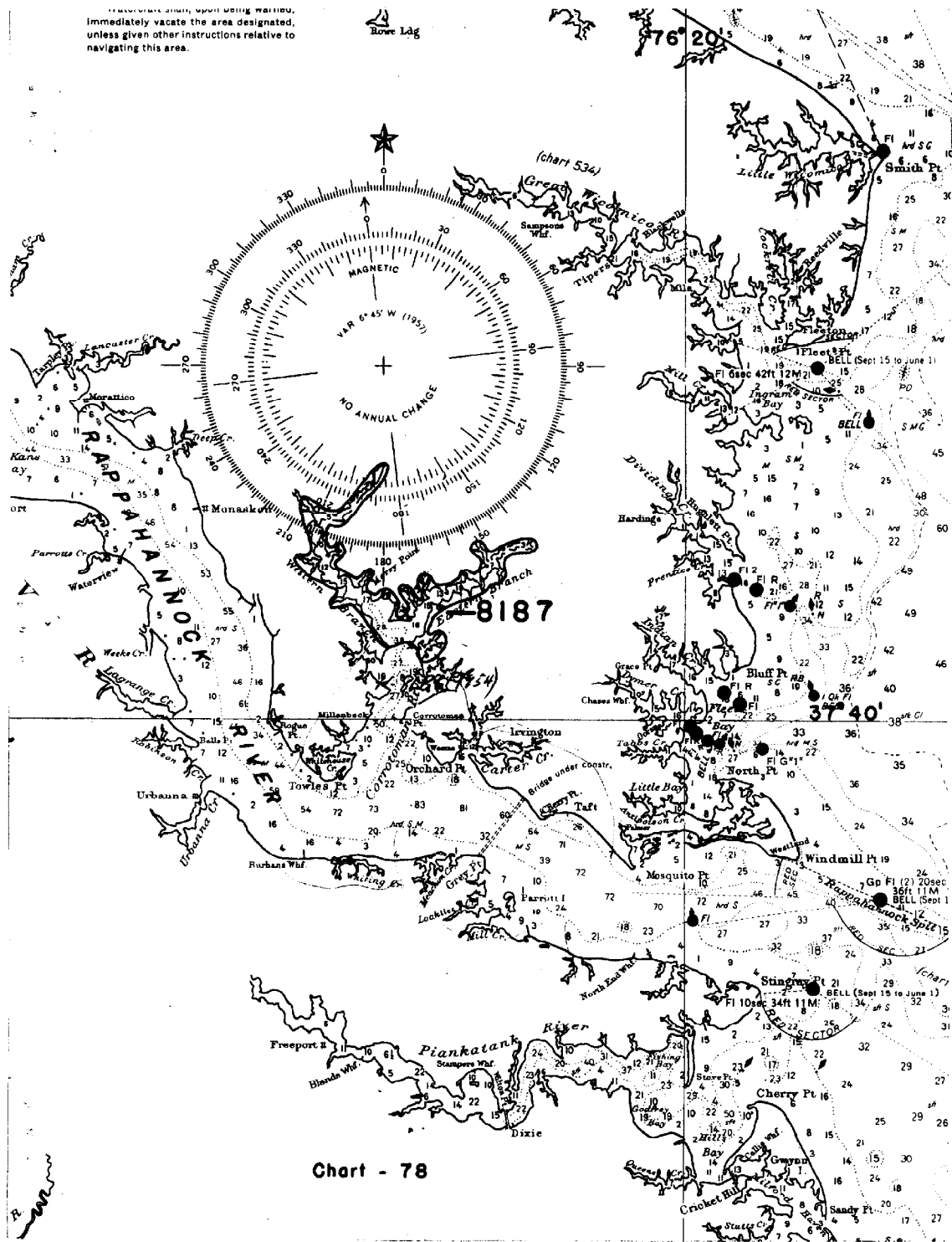


Chart - 78

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8187

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3-7-57	534	R. K. deLander	<i>Partially applied</i> Before After Verification and Review. <i>Critical</i>
			<i>conditions only.</i>
9/23/59	534	J. H. Eaton	Before After Verification and Review <i>Fully applied</i>
5-2-60	1223	R. K. deLander	Before After Verification and Review <i>Then Chd 534</i>
1/4/61	78	J. H. Eaton	Before After Verification and Review <i>then chd 1223</i>
			Before After Verification and Review
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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.

NAUTICAL CHARTS BRANCH

SURVEY NO. _____

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12-13-56	1225	M. Rogers	Before After Verification and Review <i>Partially</i>
6/24/57	78	Stamm	Before After Verification and Review <i>Examined before</i> ✓
			Before After Verification and Review
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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.