

8506

1212
Diag. Cht. Nos. 78-3 and 1222-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-1559 Office No. H-8506

LOCALITY

State Virginia

General locality Chesapeake Bay

Locality Vicinity of Hungar Creek

19 59

CHIEF OF PARTY

H. S. Cole

LIBRARY & ARCHIVES

DATE August 8, 1960

USCOMM-DC 5087

8506

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-8506

Field No. ECFP - 1559

State Virginia

General locality Chesapeake Bay - Eastern Shore

Locality Vicinity of Hungar Creek, Mattawoman Creek, & Offshore.

Scale 1:10,000 Date of survey 8-Oct. - 11 Dec. 1959

Instructions dated 222/MEK, ECFP 19 August, 1959

Vessel CS - 1177 and Skiff No. one.

Chief of party Howard S. Cole, CDR.

Surveyed by ENS. J.D.WINGFIELD, Jr. and ENS. A.H.Goldberg

Soundings taken by *fathometer, graphic recorder, hand lead, wire Sounding Pole

Fathograms scaled by Party Personnel

Fathograms checked by Party Personnel

Protracted by G.L.Fernandes

Soundings penciled by G.L.Fernandes

Soundings in ~~10 fathoms~~ feet at MLW ~~MLLW~~ and are true depths

REMARKS:

DESCRIPTIVE REPORT
TO ACCOMPANY

Hydrographic Survey H-8506, Field No. ECFP-1559
Hungar Creek, Mattawoman Creek, & Offshore
Vicinity of Exmore, on Virginias Eastern Shore

PROJECT: CS-287
EAST COAST FIELD PARTY
SURVEYED BY: ENS. J.D. WINGFIELD
ENS. A.H. GOLDBERG

SCALE: 1:10,000
HOWARD S. COLE, CDR.
CHIEF OF PARTY

A. PROJECT

Project CS-287 was assigned to the East Coast Field Party for completion via Supplemental Instructions 222/MEK, ECFP, dated 19 August 1959. Prior instructions and supplements in effect were so stated in the aforementioned supplemental instructions. Instructions and correspondence were addressed to LCDR. Howard S. Cole, Officer in Charge, East Coast Field Party.

B. SURVEY LIMITS AND DATES.

Locality of the survey was the Virginia shore of Chesapeake Bay in the vicinity of the entrance to and inside Hungar and Mattawoman Creeks. Limits of the survey were north $27^{\circ} 26' 15''$, south $37^{\circ} 20' 00''$, west from $76^{\circ} 02' 00''$ to $76^{\circ} 00' 30''$, and east to the head of navigation up Hungar and Mattawoman Creeks to $75^{\circ} 56' 30''$.

Field work on H-8506 began on 8 October 1959 and ended on 11 December 1959.

H-8448 This survey makes a junction with prior surveys: Field number CO-2158, 1958, scale 1:20,000 and Registry number 3659, H-3659 1914, scale 1:20,000. Junction is made with contemporary survey registry number H-8505, 1959, scale 1:10,000. and H-7911 (1950-2-3) on the south. on the north.

C. VESSELS AND EQUIPMENT

Launch CS-1177 was used to survey the offshore area from just inshore of the one fathom curve out to the western limits of the Survey. A 25 foot Chesapeake Bay Skiff was used to survey Hungar and Mattawoman Creeks and the shoal water offshore, making a satisfactory junction with the area surveyed by Launch CS-1177.

The launch and skiff operated under the command of the East Coast Field Party and was moored at Clarke's Wharf in Hungar Creek.

All echo-type depth recording was achieved utilizing EDO-type 255 machines. Serial number C-16 was used during the survey. Sounding poles were used by the skiff in shoal waters and leadlines used in depths over 12 feet. Armed leads were used for bottom samples.

D. TIDE AND CURRENT STATIONS

The tide station used for control of the entire survey was a portable automatic tide gage located at Wilsonia Neck on Hungar Creek (Lat. $37^{\circ}24.19' N$, Long. $75^{\circ}58.40' W$). ✓

Data for reduction of the sounding volumes was taken directly from the station records without time or range correction.

There were no current stations within the limits of the survey.

E. SMOOTH SHEET

The projection was made in the Washington office by a projection ruling machine. The shoreline and signals were transferred in the usual manner and were verified in accordance with 757 of the Hydrographic Manual.

F. CONTROL STATIONS

Only one triangulation station was used for control on this survey.

<u>Station</u>	<u>G.P. Page</u>	<u>Chief of Party</u>
Rose, 1898	72 of 1953-55	F.W.P. ✓

All topographic control was located on black-line prints of manuscripts T-11243 and T-11244. Appendix A of this report contains a complete list of control used and the quality of the control.

G. SHORELINE AND TOPOGRAPHY

The shoreline and topography was transferred from blue-line prints of manuscripts T-11243 and T-11244. Changes in the shoreline are noted in "red" on the smooth sheet. These revisions were made by the photogrammetrist using the plane-table method. Changes in the HWL were found on Honeymoon Island, on the island just to the north of Honeymoon Island in the entrance to Mattawoman Creek, and on the western shoreline in "The Gulf". These changes were not examined and can only be explained as marsh grass. ✓

H. SOUNDINGS

Soundings were obtained as stated in SECTION C of this report. Methods were in accordance with the Hydrographic Manual, Hydrographic Instructions, and technical circulars. ✓

Soundings from Skiff number one were taken with a 12 foot sounding pole at 15 second intervals. Lead lines were used in depths over 12 feet.

I. CONTROL OF HYDROGRAPHY

Horizontal control for this survey was by three point sextant

fixes as outlined in Section 333 and the following applicable sections of the Hydrographic Manual.

J. ADEQUACY OF SURVEY

This survey is complete and is considered adequate to supercede prior surveys.

Coast and Geodetic Survey Chart 1223 and the Coast Pilot show a channel running into Mattawoman Creek from Light 4 at Wilsomia Neck. A sufficient number of soundings were not obtained to clearly define this channel, however, there is evidence that this channel still exists. (See soundings between positions 4p -5p (RED), 113k - 114k (RED), 125L - 128L (RED) and 133L - 134L (RED). Also, see U.S. Coast Pilot 3, Atlantic Coast, Sandy Hook to Cape Henry, Page 299.) (1959)

Junction with the adjoining survey H-8505 is satisfactory and depth curves can be adequately drawn at the junction.

K. CROSSLINES

Crosslines to the extent of 12 to 15 percent were run. Favorable crossings were found.

L. COMPARISON WITH PRIOR SURVEYS

Comparison was made with prior survey number 3659 (1914, 1:20,000)

There is general agreement with the prior survey and the contemporary survey with the following exceptions:

1. The soundings in the entrance to The Gulf on the prior survey are 3 feet to 7 feet. On the contemporary survey a ~~maximum~~ depth of 5 feet was found. *Controlling 1/2*
2. The O curve jutting out into Chesapeake Bay in the south, south-westerly direction from the vicinity of Lat. 37° 25.8'N and Long. 75° 59.1 W is not shown on the prior survey.

M. COMPARISON WITH CHARTS

The examination of Coast and Geodetic Survey charts 1222 and 1223 show a good comparison with the following exceptions:

Chart Number 1222 (Scale 1:80,000)

1. The charted shoal enclosed by the Ø curve off the entrance to the Gulf is a sand bar that is now enlarged and extends from Lat. 37° 21.75'N to Lat. 37° 23.35'N.

2. The 7 foot sounding at the entrance to "The Gulf" was not verified. Depths of 2 feet were found in this area. ✓
3. The charted 2 foot shoal at Lat. $37^{\circ} 20.52' N$, Long. $76^{\circ} 00.72' W$ was not verified. A least depth of 4 feet was found in this area. ✓

Chart number 1223 (Scale 1:80,000)

1. The 16 foot sounding at Lat. $37^{\circ} 24.92' N$, Long. $76^{\circ} 00.66' W$ and the 17 foot sounding at Lat. $37^{\circ} 24.89' N$, Long. $76^{\circ} 00.40' W$ are now enclosed within the same 18 foot depth curve. ✓

2. The 0 curve north of Mattawoman Creek entrance has shifted to the east and now runs North-South from approximately Long. $75^{\circ} 59.00' W$ to $75^{\circ} 59.10' W$. The 0 curve juts out in a south, south-westerly direction from approximately Lat. $37^{\circ} 25.3' N$ to Lat. $37^{\circ} 24.0' N$, Long. $75^{\circ} 59.1' W$, thus forming an inlet, at MLW, with depths from $\frac{1}{2}$ foot to 6 feet ; formerly enclosed by the 0 curve. ✓

The 0 curve also juts out from approximately Lat. $37^{\circ} 26.0' N$ in a south, south-westerly direction to approximately Lat. $37^{\circ} 25.4' N$, Long. $75^{\circ} 59.4' W$, thus forming another inlet ^{course} at MLW, with depths from $\frac{1}{2}$ foot to 3 feet, formerly enclosed within the 0 curve.

3. In the channel entering ^{Hungar} Mattawoman Creek, there is a least depth of ~~6~~⁷ feet at Lat. $37^{\circ} 23.76' N$, Long. $75^{\circ} 59.19' W$. ✓
4. The 6 foot curve between Lat. $37^{\circ} 23.40' N$ and Lat. $37^{\circ} 24.60' W$ has shifted to the west to approximately Long. $75^{\circ} 59.70' W$. The channel entrance to Mattawoman Creek is now in the vicinity of Lat. $37^{\circ} 23.30' N$, Long. $75^{\circ} 59.20' W$. ✓
5. The charted 6 foot shoal at Lat. $37^{\circ} 23.69' N$, Long. $75^{\circ} 59.73' W$, was not verified. This area contains a depth of 9 feet. *bottom changed* ✓
6. The charted 5 foot shoal at Lat. $37^{\circ} 23.50' N$, Long. $75^{\circ} 59.85' W$ was not verified, however, a 5 foot depth was found approximately 300 meters to the south-east, and 4 foot depths were found approximately 500 meters to the south. *bottom changed* ✓
7. A 12 foot sounding was found at Lat. $37^{\circ} 23.30' N$, Long. $76^{\circ} 00.69' W$, surrounded by depths of 15 to 17 feet. ✓

This maybe a stray

8. The 13 foot sounding in Hungar Creek, Lat. $37^{\circ} 24.95'N$, Long. $75^{\circ} 58.10'W$ was not verified. Depths of 5 feet were found in this area. ✓
9. The 0 curve south of the channel in the entrance to Mattawoman Creek has shifted to the south approximately one-half mile. Depths of $\frac{1}{2}$ foot to 4 feet found in this area were formerly enclosed within the 0 curve. ✓
10. The wreckage charted at Lat. $37^{\circ} 24.35'N$, Long. $75^{\circ} 59.54'W$, was found as charted and referred to on page 40, Vol. 9. ✓

N. DANGERS AND SHOALS

Development of items listed in the Preliminary Review is noted in the sounding record. ✓

All charted dangers and shoals were found as charted except for those listed in item L. COMPARISON WITH PRIOR SURVEYS, and item M. COMPARISON WITH CHARTS. ✓

Numerous oyster beds are found in Hungar Creek. Stakes outline these areas. ✓

In addition to those dangers presently charted the following numbered dangers and shoals included under item M. COMPARISON WITH CHART, chart number 1223, are recommended to be charted: 3,4,6,7,8. ✓

Also recommended to be charted are numbers 1 and 2 under item M. COMPARISON WITH CHARTS, chart number 1222, and number 1 listed under item L. COMPARISON WITH PRIOR SURVEYS. ✓

O. COAST PILOT INFORMATION

MATTAWOMAN CREEK:

The Creek has depths of 1 to 4 feet for one mile, and thence 1 to 2 feet to the head of navigation. The best approach to the Creek is to follow the lights as if entering Hungar Creek, and when to the innermost light at Wilsonia Neck, turn right sharply passing the light just to the north and follow the bush stakes south-eastward and southward along the shore. (See United States Coast Pilot 2, Atlantic Coast, Sandy Hook to Cape Henry, Page 299, Line 21.)

P. AIDS TO NAVIGATION

There are four fixed aids to navigation on this survey. They are listed on form 567 attached to this report. ✓

There are no floating aids to navigation within the limits of this survey. ✓

Two overhead cables exist within the survey, but neither were checked for clearance. ✓

Q. LANDMARKS FOR CHARTS.

There is one new landmark to report. This landmark is
a VOR-TAC Station and is described on form 567 attached to this
report. ✓

2-706(60)

R. GEOGRAPHIC NAMES

There are no new geographic names to report. ✓

S. SILTED AREAS

None ✓

T. BY-PRODUCT INFORMATION ✓

None

U-Y. MISCELLANEOUS ✓

None

Respectfully submitted,

George L. Fernandes

George L. Fernandes,
Cartographer, C & G S

APPENDIX ATTACHMENTS

- A. List of Control Stations
- B. Statistics
- C. Abstract of Fathometer Corrections
- D. Tidal Notes
- E. Fathometer Report
- F. Approval Sheet

APPENDIX A
LIST OF CONTROL STATIONS
Hydrographic Sheet H-8506 (ECFP-1559)

TRIANGULATION:
ROSE, 1898 - 1959

TOPOGRAPHIC:

Manuscript T-11243

ABE	EEL	GOB	LAX	MUM	ROT
ACE	EGO	BOL	LIP	NIC	RUM
ACT	ELF	GUS	LIT	OAK	SAD
ALP	ELM	GUT	LUG	OIL	SOD
BAS	EON	GUY	MAG	OLD	TAP
BOX	ERA	ION	MAN	ORB	TAW
BUS	EST	IRK	MAR	OWL	TUB
CAB	GAB	IVY	MAT	PAL	VAN
CAR	GAD	JAP	MAX	PAD	VET
CAM	GAM	JAR	MEL	PIN	VEX
CON	GEM	JAY	MID	RAT	WAN
EAR	GEO	JEF	MOO	REV	WET
EAT	GET	JIM	MUC	RIP	

Manuscript T-11244

ADD	HER	ODD	RIG	TOM	WIL
CAT	JAW	OFF	RIM	USE	ZAG
EMO	LUX	OHM	ROY	VOR	
GIG	MAL	ORA	TAX	WAT	

HYDRO-SIGNALS:

AIM	BUT	ERG	JOE	MOP	YES
BUM	EGG	GAS	MAC	OBI	

APPENDIX B
STATISTICS TO ACCOMPANY
Hydrographic Sheet H-8506 (ECFP-1559)
Launch 1177

<u>1959 DATE</u>	<u>VOL. NO.</u>	<u>DAY LTR.</u>	<u>NO. POS.</u>	<u>NAUTICAL MILES SOUNDING</u>
0				
8 Oct.	1	a	35	4.7
13 Oct.	1	b	18	3.0
16 Oct.	1	c	71	8.8
23 Oct.	1	d	9	1.0
26 Oct.	1 & 2	e	216	25.8
29 Oct.	2 & 3	f	200	22.5
30 Oct.	3	g	194	22.0
3 Nov.	4	h	120	13.5
5 Nov.	4	j	145	15.1
6 Nov.	5	k	96	10.2
10 Nov.	5	l	14	1.4
11 Nov.	5	m	125	16.7
12 Nov.	6	n	80	7.6
13 Nov.	6	p	79	6.4
17 Nov.	6	q	16	1.4
18 Nov.	6	r	16	1.7
20 Nov.	6	s	52-46	4.5
23 Nov.	7	t	68	5.3
24 Nov.	7	u	6	---
			<u>1560</u>	<u>171.6</u>
			14	
			1574	

APPENDIX B, CONT.
 STATISTICS TO ACCOMPANY
 Hydrographic Sheet H-8506 ECFP-1559
 Skiff No. 1

<u>1959</u> <u>DATE</u>	<u>VOL. NO.</u>	<u>DAY LTR.</u>	<u>NO. POS.</u>	<u>NAUTICAL</u> <u>MILES SOUNDING</u>
5 Nov.	8	a	125	15.2
6 Nov.	8 & 9	b	124	13.2
9 Nov.	9	c	12	----
10 Nov.	9	d	44	3.2
11 Nov.	9	e	64	2.0
12 Nov.	9	f	44	3.2
13 Nov.	9 & 10	g	122	12.5
17 Nov.	10	h	45	4.9
18 Nov.	10	j	17	1.7
19 Nov.	10 & 11	k	114	10.3
20 Nov.	11	l	140	15.1
23 Nov.	11 & 12	m	140	16.2
2 Dec.	12 & 13	n	152	15.0
3 Dec.	13	p	129	11.5
4 Dec.	13 & 14	q	147	13.6
8 Dec.	14	r	97	5.5
9 Dec.	14	s	66	3.3
10 Dec.	15	t	73	5.0
11 Dec.	15	u	38	2.0
			<u>1693</u>	<u>153.4 N.M.</u>
			<u>1524</u>	
			3217	

Total nautical miles of Hydrography 325
 Total area of survey 12 square nautical miles

APPENDIX C
ABSTRACT OF FATHOMETER CORRECTIONS.

H
HYDROGRAPHIC SURVEY H-8596

FIELD NO. ECFP -1559

PROJECT CS-287

CHESAPEAKE BAY

EAST COAST FIELD PARTY

1959 FIELD SEASON

LAUNCH CS - 1177

FATHOMETER EDO 255, C-16

FATHOMETER DEPTH
(FT.)

FATHOMETER CORRECTION
(FT.)

"a" day through "f" day

0.0 to 18.0
18.1 to 33.0

-0.4
-0.2

"g" day through "t" day

0.0 to 24.0
24.1 to 30.0
30.1 to 33.0

-0.4
-0.2
0.0

2 Feet

Let 1 inch equal 2 fathoms for deep water and 1 inch equal 0.4 fathom for shoal

CORRECTIONS IN FEET, ~~FATHOMS~~

Curve "A"

Curve "B"

VELOCITY CORRECTIONS
 U.S. Coast and Geodetic Survey
 Ship EAST COAST FIELD PARTY
 Howard S. Cole Comdg.
 These corrections are to be used
 between 8 Oct. 1959 and 23 Nov. 1959
 in the locality Eastern Shore of
 Chesapeake Bay, VIRGINIA
 for hydrographic surveys Nos. H-8506
 (ECFP-1559)

Launch CS-1177
 EDO Depth Recorder 255 C No.16

Curve "A"

Depth RangeCorrection

0.0' thru 18.0'

-0.4'

18.1' thru 33.0'

-0.2'

These corrections are to be
 applied to:

"a" day thru "f" day

(10/8/59, 10/13/59, 10/16/59, 10/23/59,
 10/26/59, 10/29/59)

Curve "B"

Depth RangeCorrection

0.0' thru 24.0'

-0.4'

24.1' thru 30.0'

-0.2'

30.1' thru 33.0'

0.0'

These corrections are to be
 applied to:

"g" day thru "t" day

(10/30/59, 11/3/59, 11/5/59, 11/6/59,
 11/10/59, 11/11/59, 11/12/59, 11/13/59,
 11/17/59, 11/18/59, 11/20/59, 11/23/59)

DEPTHS IN ~~FATHOMS~~ FEET

(from deep water and 0 to 10 in these figures)

10

20

30

40 0

-1.0

0

+1.0

50 10

60 20

70 30

80

90

100

110

120

130

140

150

160

170

180

190

APPENDIX D
TIDAL NOTES FOR
Hydrographic Sheet 8506 (ECFP-1559)

Gage location: Wilsonia Neck, Hangars Creek
 Latitude 37° 24.19'N ✓
 Longitude 75° 58.40'W ✓

Staff: Mean low water corresponds to 1.0 feet on the
 staff.

Correction: No time or height correction was applied to the
 results obtained from the gage in reducing
 soundings.

APPENDIX E
FATHOMETER REPORT
PROJECT CS-287

Hydrographic Sheet H - 8506 (ECFP - 1559)

An EDO 255C type fathometer, serial No. 16, was used to obtain soundings in depths deeper than 6 feet. Sounding poles were used in shoal water.

Transducers for the fathometer were mounted through the hull. A Kato Converter was used as a source of power for the fathometer. An input power frequency of 60 cps was used for the entire survey.

Bar checks and vertical casts were taken daily to determine instrumental and velocity corrections.

Difficulty was encountered with the stylus system and considerable time was lost due to breakage of the marking stylus. This problem was solved by making a modification in the method of securing the stylus to the belt and by changing the shape of the stylus. No further difficulty was experienced.

APPENDIX F
APPROVAL SHEET TO ACCOMPANY
Hydrographic Sheet H-8506 (ECFP-1559)
Project CS-287

The record, corrections, and all field and office work was supervised by Cdr. Howard S. Cole.

All soundings were taken with an EDO 255C type depth recorder, serial no. 16, a 12 foot sounding pole, and a hand lead line.

The descriptive report was written by George L. Fernandes.

The report and the records for this survey are complete and adequate to the best of my knowledge.

Approved and forwarded,



Howard S. Cole
Cdr., C&GS
Officer-in-Charge

NONFLOATING AIDS IMMEDIATELY FOR CHARTS

EAST COAST FIELD PARTY

Nov., 1959

TO BE CHARTED

STRIKE OUT ONE

TOURCOUX

I recommend that the following objects which have been inspected from seaward to determine their value as indicated on ~~the charts~~ the charts indicated.

George T. Remondos
 Edward A. Cole

The positions given have been checked after listing by George L. Fernandes
The De-5's + De-4's listed are only approximations, and should not

Edward S. Cole, Cdr., CLASS

the positions from 11-8506 to 11243, be used for charting scale trip positions.

Chief of Party.

[illegible]

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.

Comm-DC 61327

CONTRIBUTING TO CHARTS

TO BE CHARTED
~~XXXXXXXXXXXXXXXXXXXX~~
STRIKE OUT ONE

EAST COAST FIELD PARTY

Oct., 1959

I recommend that the following objects which have ~~been~~ been inspected from seaward to determine their value as landmarks be charted on ~~the~~ the charts indicated.

The positions given have been checked after listing by George L. Fernandes

Howard S. Cole, Cdr., CGCS

Chief of Party.

[illegible]

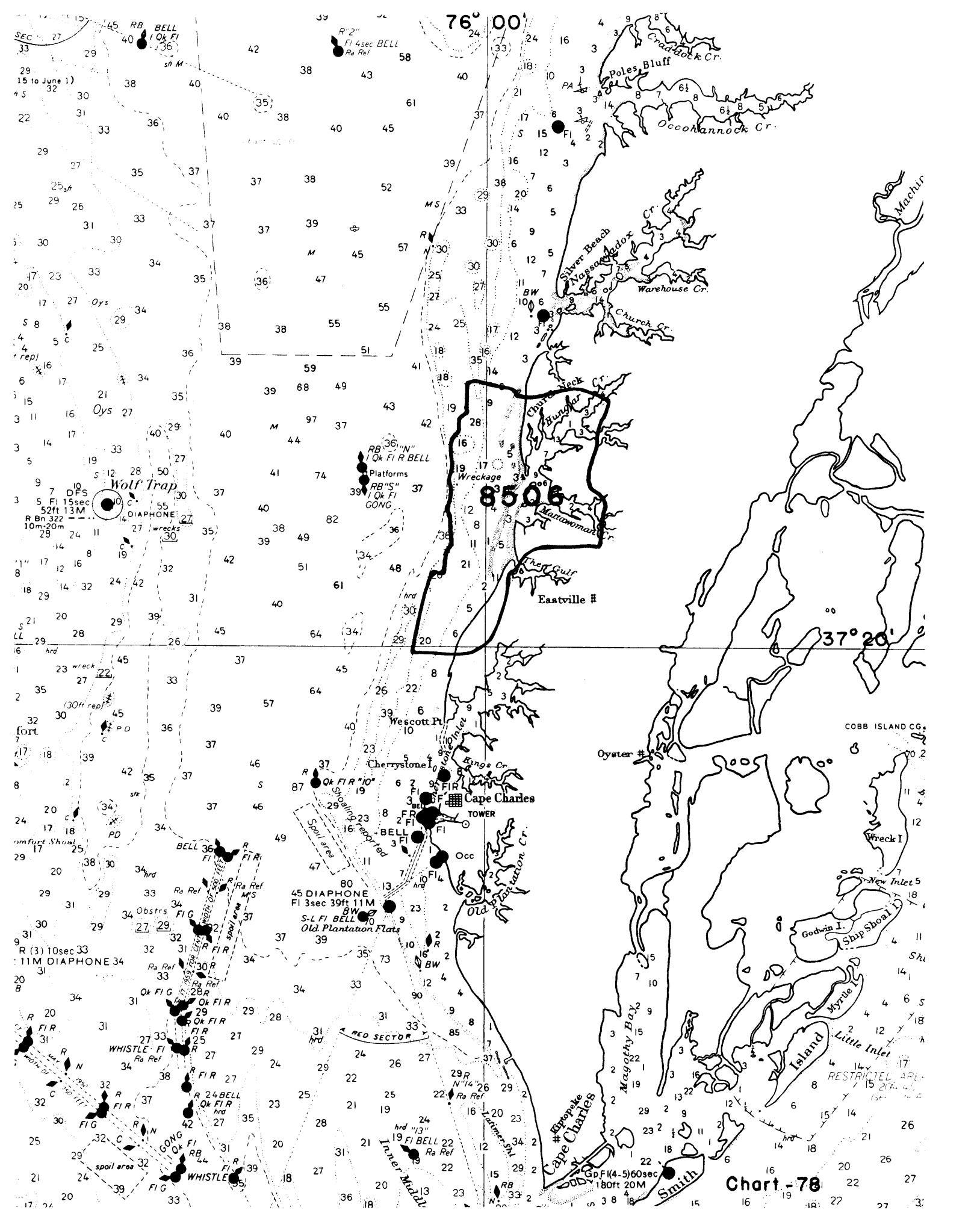
This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids to navigation*, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

COM-DC 61327

GEOGRAPHIC NAMES
Survey No. **H-8506**

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 B&N	
Barlow Creek	a									1
Chesapeake Bay (title)								x		2
Church Neck	b									3
Hungar Creek	b							x		4
Mattawoman Creek	a									5
Old Town Neck	a									6
The Gulf	a									7
Waterford Neck	b									8
Wilsonia Neck	b									9
a is chart 1222										10
b " " 1223										11
										12
										13
Jacobus Creek										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

George M. Bue
GEOGRAPHIC NAMES SECTION
12 AUGUST 1960



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8506...

Records accompanying survey: Smooth sheets ..1...;
 boat sheets ...2...; sounding vols. .15...; wire drag vols.;
 Descriptive Reports ..1...; graphic recorder envelopes ...8...;
 special reports, etc.

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

Number of positions on sheet	3267
Number of positions checked	346
Number of positions revised	0
Number of soundings revised (refers to depth only)	0
Number of soundings erroneously spaced	15
Number of signals erroneously plotted or transferred	0
Topographic details	Time 8
Junctions	Time 16
Verification of soundings from graphic record	Time 4
Special adjustments	Time 0

Verification by *J.C. Chambers* Total time 240 hrs Date 11/3/61..

Reviewed by *Augespund* Time 47 Date 1/10/62..

OFFICE OF CARTOGRAPHY

REVIEW SECTION-NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8506

FIELD NO. ECFP-1559

Virginia, Chesapeake Bay, vicinity of Hungar Creek

SURVEYED: Oct. - Dec. 1959

SCALE: 1:10,000

PROJECT NO. CS-287

SOUNDINGS: Leadline
Sounding Pole
EDO Depth Recorder

CONTROL: Sextant fixes
on shore signals

Chief of Party-----H. S. Cole
Surveyed by-----J. D. Winfield, Jr., A. H. Goldberg
Protracted by-----G. L. Fernandez
Soundings plotted by-----G. L. Fernandez
Verified and inked by-----J. C. Chambers
Reviewed by-----I. M. Zeskind
Inspected by-----R. H. Carstens

DATE: 1-10-62

1. Description of the area

This is an inshore survey of the east side of Chesapeake Bay in the vicinity of Hungar Creek. It covers Hungar and Matta-woman Creeks to the heads of navigation and extends from shore to depths as great as 36 ft. The bottom is fairly irregular. Submarine features such as sand bars and ridges and oyster bars contribute to the bottom irregularity.

2. Control and shoreline

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

The shoreline originates with reviewed photogrammetric surveys T-11243 and T-11244 of 1953-55, except south of lat. $37^{\circ}21.0'$, where the shoreline on T-11244 was revised by planetable by the field party on the boat sheet of H-8506 and is shown in red on the smooth sheet.

3. Hydrography

Depths at crossings are in good agreement.

The usual depth curves were adequately delineated. The 3-ft. curve was drawn to better define the bottom configuration. The least depths on shoals and the bottom configuration were adequately developed.

4. Condition of survey

a. The Descriptive Report is complete and comprehensive.

b. The sounding records are complete.

c. The smooth plotting was accurately done.

5. Junctions

Adequate junctions were effected with H-8505 (1959) on the north and H-7911 (1950-53) on the south. The junction with H-8448 (1958) on the west will be considered in the review of that survey.

6. Comparison with prior surveys

- A. H-285 (1851) 1:40,000
- H-364 (1852) 1:40,000
- H-368 (1853) 1:20,000
- H-976c (1868) 1:20,000

These surveys together cover the area of the present survey. A comparison between the prior and present surveys reveals the principal changes in bottom configuration to have occurred in Chesapeake Bay. Here depths in general have decreased, although in a few areas the present depths are deeper than the prior depths. An example of shoaling of the bottom is noted in lat. $27^{\circ}24.59'$, long. $75^{\circ}59.98'$, where a present depth of 6 ft. falls in prior depths of 16 1/2 ft. The channel leading from Hungar Creek into Chesapeake Bay which formerly ran in a south-south-westerly direction from approximately lat. $27^{\circ}23.8'$, long. $75^{\circ}59.0'$, now runs in a southwesterly direction from there. A sand bar now covers a portion of this former channel. The peninsula which formerly extended in a northerly direction from the vicinity of lat. $27^{\circ}23.10'$, long. $75^{\circ}59.1'$, has

eroded about 800 meters, except for its northern end which is now an island. The shoreline in the vicinity of lat. $27^{\circ}20.9'$, long. $76^{\circ}00.2'$, has accreted as much as 175 meters. A general shoaling of 1-2 ft. is noted in Hungar Creek. No significant changes between the prior and present survey depths are noted in Mattawoman Creek. The direction of the channel leading from Hungar Creek to Mattawoman Creek has not materially changed; however, the present controlling depth here is 1 ft. as compared with the former controlling depth of 6 ft. The changes in depth on the present survey are attributed to the depositing of sediment from adjacent tributaries, to the eroding of the shoreline, to the action of the current on the bottom, and to dredging operations.

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

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

The prior survey covers the area of the present survey.. A comparison between the prior and present surveys shows that depths have in general shoaled as much as 5 ft. In several areas, however, greater shoaling has occurred, as for example, in lat. $37^{\circ}24.21'$, long. $75^{\circ}59.53'$, where a prior depth of 9 ft. is superseded by depths of $1/2$ ft. on the present survey. Only slight changes in the shoreline have occurred since the early surveys discussed in paragraph A above. The axis of the approach channel leading into Hungar Creek runs in a northeasterly direction whereas formerly it ran in a north-northeasterly direction. The present controlling depth here is 5 ft. It formerly was 2 ft. Depths in Mattawoman Creek have not changed materially. The channel to Mattawoman Creek which begins at Light No. 4 at Wilsonia Neck and parallels the shore, has not been adequately developed on the present survey. In order to better delineate this channel, several soundings from H-3659 (1914) have been brought forward to the present survey. The controlling depth in this channel is 2 ft. The controlling depth of the channel leading into the Gulf formerly was 1 ft. At present the controlling depth here is $1/2$ ft. Several shoals have either shifted in location or have been formed. An example of shoal formation begins on the present survey in lat. $37^{\circ}25.5'$, long. $75^{\circ}59.0'$, and extends in a south southwesterly direction to approximate lat. $37^{\circ}23.5'$. This shoal which now bares as much as 1 ft. at MLW was formerly covered by as much as 11 ft. of water. The changes in shoreline and depths are attributed to causes similar to those stated in paragraph A above.

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

7. Comparison with Chart 1222 (Latest print date 12-25-61)
Chart 1223 (Latest print date 10-30-61)

A. Hydrography

The charted hydrography originates with the present survey prior to verification and review, supplemented by a few soundings from the prior surveys. No significant differences between the charted and present survey depths were noted.

The present survey supersedes the charted hydrography.

B. Aids to navigation

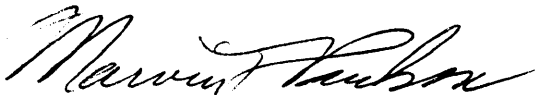
The present survey positions of the aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended.

8. Compliance with instructions

The survey adequately complies with the project instructions.


9. Additional field work recommended

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



Chief,
Nautical Chart Division

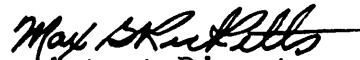
Examined and Approved:



Assistant Director,
Office of Cartography



Projects Officer,
Operations Division



Assistant Director,
Office of Oceanography

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Survey~~
~~XXXXXXXXXXXXXXXXXXXX~~

19 August 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEET 8506

Locality Hungar Creek, Virginia

Chief of Party: H. S. Cole (1959)
Plane of reference is mean low water reading
1.0 ft. on tide staff at Wilsonia Neck, Va.
3.6 ft. below B. M. 1 (1958)

Height of mean high water above plane of reference is 1.9 feet.

Condition of records satisfactory except as noted below:


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

✓

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8506

Record of Application to Charts

[illegible]

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.