# 8347

Diag. Cht. Nos. 78-3 and 1221-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

# DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. CO-1156 Office No. H-8347

#### LOCALITY

State Virginia

General locality Chesapeake Bay

Locality Pocomoke Sound, Beasley Bay

to Deep Creek

1956

CHIEF OF PARTY

L. G. Taylor

LIBRARY & ARCHIVES

DATE December 8, 1959

USCOMM-DC 5087

#### **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 8347 Field No. CO-1156

StateVirginia
General locality Chesapeake Bay
Locality Pocomoke Sound, Beasley Bay to Deep Creek.
Scale 1:10,000 Date of survey 23 August 1956 to 25 October
Instructions dated 5 Feb. 1953, 25 Feb. 1954, 14 Jan. 1955 & 17 Nov. 1955.
Vessel USC&GS Ship COWIE
Chief of party Lieutenant Commander Lorne G. Taylor
R.T. Schoolbred, B.E. Green Surveyed by Officers, Ship COWIE Charles I. Harding, G.T. Susi
Soundings taken by fathometer, graphic recorder; hand lead, wire and sounding pale.
Fathograms scaled by personnel, Ship COWIE
Fathograms checked by personnel, Ship COWIE
Protracted by Fred Bean
Soundings penciled by Fred Bean
Soundings in fathoms feet at MLW MLLW and are five depths.
Remarks: Smooth plotted by the Hydrographic Section of the
Norfolk District Office.
<u>-</u>

#### DESCRIPTIVE REPORT

#### TO ACCOMPANY

HYDROGRAPHIC SURVEY H 8317

FIELD NO. CO-1156

CHESAPEAKE BAY

POCOMOKE SOUND

SHIP COWIE

BEASLEY BAY TO DEEP CREEK

SCALE: 1:10,000

LCDR. L. G. TAYLOR

#### COMMANDING

#### A - PROJECT:

Project CS-12870, supplemental instructions dated 5 February 1953, 25 February 1954, 14 January 1955 and 17 November 1955.

#### B - SURVEY LIMITS AND DATES:

This survey covers the eastern side of Pocomoke Sound extending from Beasley Bay southward to Deep Creek and from the Eastern Shore westward to long. 75°45.50' North of Halfmoon Point, and westward to long. 75°44.75' from Halfmoon Point southward. The survey makes a junction with H 7945 on the North, H-8405 (1956-57) on the West and H-8406 (1956-57) on the Southwest.

The survey was commenced on 23 August 1956 and concluded on 25 October 1956.

#### C - VESSEL AND EQUIPMENT:

Launch 178 using 808 fathometers Nos. 118S and 120S, and Model 255 Edo Fathometer No. 210, was used to sound the deeper water. Skiff 749, using a sounding pole, carried the work to the shoreline and up all creeks and tributaries.

#### D - TIDE AND CURRENT STATIONS:

A portable tide gage was installed and maintained throughout the period of the survey at the mouth of Muddy Creek. Tide gage records and soundings are on Eastern Standard Time. No current stations were observed on this sheet.

#### E - SMOOTH SHEET:

BAT

BED

BIB

BOB

DIM

EBB

**EGO** 

END

FLY

FOX

FRY

GAG

HER

HEX

HID

HIP

IVY

JAR

JOB

JOE

LIP

MAL

MAN

ODD

OFF

OHM

PAW

SEX

TAX

THY

TOM

RAM

REV

RIG

SAD

WAS

WED

WEE

WHO

YET

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

See Processing Office List of Signals, pg 14. F - CONTROL STATIONS: TRIANGULATION STATIONS Bernard, 1953 - Hydrographic Name - BERN Hunting Creek Light No. 4, 1953 - Hydrographic Name - HUN RECOVERABLE TOPOGRAPHIC STATIONS MANUSCRIPT NO. T-11232 BOOT, 1953 COLD, 1953 MOON, 1953 SHACK, 1953 RECOVERABLE TOPOGRAPHIC STATIONS MANUSCRIPT NO. T-11233 CRAB 1942 BOAT, 1956 RECOVERABLE TOPOGRAPHIC STATIONS MANUSCRIPT NO. T-11234 HUNT, 1942-53 DONE, 1953 REW. 1942-53 / ANN, 1942-53 HYDROGRAPHIC SIGNALS MANUSCRIPT NO. T-11232 ACÉ CAM FAT GAL HIS KEN MAR PEG SAG USE WHY ACT CAR FED HUG KEY GAM NAY PEN SAM VAN WIG ADD CAT FEW GOT HUT KID NEE PIE SAX VEX WOO FIG **GUS** ADO CAW IDA LAG NIX PIER SKY VIA YAK ANT COW FIN GUM ION LAM NOW POT SLY WAG YEA BAH DAY FIX HAT ITS LET PUP SOW WAR OBI YES

HYDROGRAPHIC SIGNALS MANUSCRIPT NO. T-11234

ALP EEL FOG JIM LUX NOR **A**GO OLD RAT SIC SUP WAX AHA BOA ELF GIG MAX NUB KIMORB RIO SIR SUB WEN AIMDIP ELM GOD LEC MOO <del>OHM</del> PAL SET SKE SUE ALM FEZ DIX GUY LOW NOD OIL PRO SHE SOL TUB HYDROGRAPHIC SIGNALS MANUSCRIPT NO. T-11235

AMY BIG

#### G - SHORELINE AND TOPOGRAPHY:

The shore line for the boat sheet was transferred from Photogrammetric

Manscripts T-11232 and T-11234. \* T-11233 Adv. manuscripts, Field Insp. 1456. \*

\*\* Reviewed Surveys applied to Smooth Sheet. See Review 72

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

The course of the skiff should be fitted along the centerline of guts in places where fixes plot outside the High Water Line. These apparent errors in shoreline could have been caused by boat sheet distortion or partially obscured signals. It also possible that the photogrammetric manuscripts were erroneously compiled in these areas.

#### H - SOUNDINGS:

Soundings were taken with 808 fathometers, an Edo fathometer and a sounding pole. Edo and 808 soundings agree very well. Junctions between pole and fathometer soundings generally agree within one foot. At several points there are discrepencies of two feet between pole and fathometer soundings. Possible reasons for this disagreement are:

(1) An insufficient number of comparisons were taken between pole and fathometer soundings to determine adequate connections for depths of less than ten feet. (See fathometer Report submitted under separate cover).

On pos. 189 blue fintr & HL 3dg differs by 1 in 6' depth on brd Sand bottom

- (2) Sand waves and bottom irregularities up to four feet in height exist along portions of the junction. These sand waves were apparent on field photos of the area.
- (3) A large number of the pole soundings at the junction with the launch work were taken while the sea was quite choppy.

  This could cause a considerable error.

No one factor can be definitely blamed for the discrepancies at the junction of pole and fathometer soundings. They should be reconciled after corrected soundings have been plotted in the smooth sheet.

On some days during the survey, observed and predicted tides differed from one to two feet, hence the depth curves appear ragged on the boat sheet. Investigation of the questionable soundings where observed tides had been used, indicated that these curves will smooth out on the smooth sheet.

#### I - CONTROL OF HYDROGRAPHY:

Sounding lines were controlled by three-point fixes taken on natural objects or signals erected along the shore line, except in the narrow upper reaches of tributaries where boat sheet positions, related to indentifiable topographic features, were used to control the soundings. Satisfactory results were obtained with the signals used.

#### J - ADEQUACY OF SURVEY:

This survey is considered complete and adequate for charting purposes and it should supersede all prior surveys. The junction with the adjoining survey is satisfactory as no holidays exist and depth curves can be adequately drawn at the junction.

#### K - CROSSLINES:

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

## L-M - COMPARISON WITH PRIOR SURVEYS & CHARTS; LAUNCH 178 & SKIFF 749:

A comparison with Chart 568 (August 1954 edition) shows good agreement between the old and new surveys, maximum differences being one to three feet.

(1) The charted 6-foot shoal in Lat. 37°50.38, Long. 75°16.60, was not verified. The minimum depths obtained in this vicinity was 8 feet.\*It is recommended that the 6-foot sounding be removed from the chart. \*Do not concur. See par 6 of Review.

#### N - DANGERS AND SHOALS:

\*No new dangers or shoals were located within the limits of the survey. \*An isolated 5' shoul in depths of 7-9' was located in lat. 37°50.63

#### O - COAST PILOT INFORMATION:

The 1956 Coast Pilot Report is being prepared as a separate report.

### P - AIDS TO NAVIGATION:

Form 567, Non-floating Aids to Navigation, is being prepared as a separate report. See 7-//232 (1953-55)

Floating aids to Navigation within the limits of this survey are as follows: See Processing office List, pg 13, this report.

(1) Num-buoy "2", Lat. 37°51.43', Long. 75°42.5% in 9 feet of water.

(2) Can buoy "1", Lat. 37°51.05', Long. 75°45.02' in 13 feet of water.

- (3) Can buoy "3", Lat. 37°49.29; Long. 75°43.88' in 7 feet of water.
- (4) Can buey "5", Lat. 37°48.45', Long. 75°43.88' in 8 feet of water.

# Q - LAND MARKS FOR CHARTS:

Form 567, Land marks for charts is being prepared as a separate report. Naut Chart Ltr 141 (1957)

No new landmarks are recommended for charting.

## R - GEOGRAPHIC NAMES:

Geographic names as shown on the chart in this area are adequate and no additional names are recommended.

## U-Y - MISCELLANEOUS:

The fathometer corrections were obtained by averaging the bar checks according to the fathometers used.

An abstract of the above corrections is included as part of this report.

# Z - TABULATION OF APPLICABLE DATA:

A list of signals is attached to Volume No. 1 of the sounding records.

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

Respectfully submitted,

Charles I. Harding Ensign, USC&GS

#### FORWARDED:

The field work for this survey was done under the supervison of Lieutenant Commander L. G. Taylor, who it is understood inspected the

hoat sheets daily.

Muttanle

Robert A. Earle Commander, USC&GS Commanding Ship COWIE

-8- CO-1156

# STATISTICS FOR HYDROGRAPHIC SURVEY H 8347 SHIP COWIE CS-12870

SKIFF 749

ONTIT 17				
VOLUME NO.	DAY LETTER	DATE	POSITIONS	STATUTE MILES
I	a	8/23	81	12•2
I	ъ	8/27	64	7.8
I	С	8/28	134	15•5
II	đ	8/29	115	11.6
II	е	8/30	211	22•8
III	${\bf f}$	9/4	21	2.0
III	g	9/5	192	16.7
III	h	9/6	156	19.4
IA	j	9/10	42	3•9
IA	k	9/11	84	<b>8.</b> 9
IA	1	9/12	73	5.1
IV	m	9/13	77	5•8
IV	n	9/17	56	7•5
Λ	р	9/18	195	19•4
IV & V	q	9/19	233	33•4
VI	r	9/20	122	12.2
VII	S	9/25	195	26.5
VII & VIII	t	10/9	213	22•3
VIII	u	10/10	162	16.9
TX	v	10/11	176	18.4
IX & X	w	10/15	150	14.0
X	x	10/16	215	22•7
XI	у	10/24	162	16.1
TOTAL:			3129	341.1

# STATISTICS FOR HYDROGRAPHIC SURVEY H 8347

SHIP COWIE

GS-12870

LAUNCH	17	78
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VOLUME NO.	DAY LETTER	DATE	POSITIONS	STATUTE MILES
XII	а	8/27	7	1.4
XII	b	8/28	137	23.6
XII & XIII	c	8/29	276	45.0
VIX & IIIX	d	8/30	210	34•2
VIX	е	9/19	102	14.7
XIV & XV	f	9/25	131	24.6
XV	g	10/2	86	12 •2
XV	h	10/19	26	2.8
ΧV	j	10/23	71	11.4
XVI	k	10/25	514	_£.3_
TOTAL:			1100	178.0
GRAND TOTAL:			4229	519•1

AREA: 16.3 Square Statute Miles.

#### TIDAL NOTE

A portable automatic tide gage was maintained at the mouth of Muddy Creek, Lat. 37°51.28' North, Long. 75°40.46' West, throughout the entire period of this survey. The height on the tide staff corresponding to Mean Low Water was 0.4'. No time or height difference was applied to the observed Muddy Creek tides. The hourly heights were scaled from the marigrams, and the tide curves plotted by personnel of the Ship COWIE.

#### FATHOUETER CORRECTIONS

Laun	ch	178

Day a, b, c & d		tion Ft.	to Depth 20.0 Feet
e	0	Ft.	14.5 Feet
	<b>≠</b> 0•2	Ft.	18.5 Feet
	<b>≠</b> 0•li	Ft.	20.0 Feet
f, g, h, j & k	0	Ft.	20.0 Feet

-/3-NORFOLK PROCESSING OFFICE FLOATING AIDS TO NAVIGATION

٠.	AIDS	TO	NAVIG.
	H-834	47	

BUOY	LATITUDE LONGITUDE	DEPTH	POS.	DATE
HUNTING CREEK APPR. SHOAL BUOY 1	,			8/29/56
GUILFORD CREEK BUOY 2	37-51.43 75-42/5X			
HUNTING CREEK CHAN. BUOY 3	37-49.29 75-43.8 <b>%</b>	,	233q	
HUNTING CREEK CHAN. BUOY 5	37-48.45 75-43.88 <sup>7</sup>	7'	14t	10/9/56 🗸

#### - 14-NORFOLK PROCESSING OFFICE LIST OF SIGNALS н-8347

#### TRIANGULATION STATIONS

BERN

BERNARD, 1953

HUN

HUNTING CREEK LIGHT 4, 1953

#### MARKED TOPOGRAPHIC STATIONS

<u>T-11232</u>			12	<u>33</u>		34	
	BOOT, 1953 COLD, 1953 MOON, 1953 TREE, 1953	CRA	В,	1942			1942 <b>-</b> 53 1953
	TOPOGRAPHIC	STATIONS			(SOURCE	T-11232	2)

Ace	Act	Add	Ado	Ant	Bah	Bat	Bed	Bib	
Bob	Cam	Car	Cat	Caw	Cow	Day	Deb	Dim	
Ebb	Ego	End	Fat	Fed	Few	Fig	Fin	$\mathtt{Fix}$	
Fox	Fry	Gag	Gal	Gam	Got	Gus	$\operatorname{\mathtt{Gum}}$	Hat	
Hex	Hid	Hip	His	Hug	Hut	Ida	Ion	Its	
Jar	Jav	Jew	Job	Joe	Ken	Kev	Kid	Tag	

Ivy Lam Jar Jay Jew Job Joe меу THR Mal Man Mar Nay Nee NixNow Obi Let Lip Owl Pen Pie Pier Pot Ohm Paw Peg Odd Off Shack Sky Rev Rig Sad Sag Sam Sax Pup Ram Val Van Sow Sox Tap Tax Thy Tom Use Sly War Was Wed Wee Who Why Wig Vex Via Wag Yak Yea Yes Yet Zag Zig Woo

(SOURCE T-11233)

Boat Eat Fly Her

Big

(SOURCE T-11234)

Ago	Aha	Aim	Alm	Alp	Boa	Dip	Dix	Eel	Elf
${ t Elm}$	Fez	Fog	Gig	Cod	Gob	Guy	${\tt Hem}$	Hunt	Jim
Kim	Lay	Leo	Low	Lux	Max	Moo	Ned	Nod	Old
Orb	Pal	Pro	$\mathtt{Rat}$	Rio	Rew	Se ${ t t}$	$\mathtt{She}$	Sic	Sir
Ski	Sol	Sop	Sub	Sue	Tub	Wax	Wen		

#### HYDROGRAPHIC STATIONS

Vol. 4, pg. 11 & 15 Gum Vol. 4, Pg. 11 Odd Vol. 2, Pg. 5 Pie

# NORFOLK PROCESSING OFFICE ADDENDUM TO-Accompany

HYDROGRAPHIC SURVEY H-8347 (CO-1156)

#### GENERAL

This appears to be an excellent basic survey except for the general disagreement between pole and fathometer soundings. The probable reasons for the disagreement are given in paragraph H, in the body of this report.

These discrepancies are noticeable at all overlaps and junctions where both sounding methods were used, the pole soundings averaging from 1 to 2 feet deeper than fathometer soundings. They are particularly prevalent in the vicinity of Hunting Creek Light and along the 6 foot curve leading off to the northeastward. (Note irregularaties in the depth curve caused by line 19 thru 23g (blue), just south of the light.) Fathometer sags indicate the bottom to be very irregular in this area. Showler secondings generally accepted.

In some instances, the reliability of the pole soundings appear to be questionable. This condition may be attributed to rough seas or bottom irregularaties as noted in paragraph H, however, the obvious discrepancies created by the shoal soundings on line 139 thru 145h (purple), starting at Lat. 37-50.7' and Long. 75-41.3', appear to be caused by faulty pole readings. Incorrect tide reducers were used inthis areas Proper tide reducers applied by the vertier reconciled this

The smooth plotters list of additional major crossing discrepancies is being submitted as an aid to the adjustment bothe soundings on this survey. Conditions explained on pg 344 this report. Differences were received during verification. See Review P 3, SHORELINE

A small island was located by the hydrographic party at Lat. 37-51.0. Long. 75-40.51. Shown in red on smooth sheet.

Lat. 37-51.8' Long. 75-41.65. A small island was removed from the boat sheet at this point. It was left on the smooth sheet as notes at position 49c (purple) mention tall marsh grass.

Island removed. Buttom characteristic "Grs" shown here.

Norfolk, Va. 3 December 1959

Respectfully submitted,

Hugh L. Proggitt Cartographer FORM 197 (3-16-55)

GEOGRAPHIC NAMES Survey No. H-8347

O. Cuide of Man Rand Methol M. Russ

No. 1	100	40	/ oʻ	` ∻₀.∕	00	_/`	6, 10,		O <sub>C</sub>		<b>Q</b> ·		6.0		ે.	/
Name on Survey	A	/	В	/ (	ر ٥	/ D		E		F		<u>_G</u>		<u>H</u>		K

Virginia			(tit	le)				ļ	BGN	1
Chesapeake Bay			11						BGN	2
Pocomoke Sound		. '								3
Deep Creek										4
Custis Cove										5
Custis Point					-					
Doe Creek							l			
Wills Gut										
The Notch										1
Webb Island										1
Halfmoon Point	<del> </del>									1:
Hunting Creek									,	1:
Dix Cove										14
Bagwell Creek										1!
Katy Young Branch									<b>†</b>	
Zare Point									BGN	10
Little Back Creek										1
France Creek					<u>.</u>				BGN	18
Cedar Cove Gut			-	<u> </u>	•				<u> </u>	1
Bagwell Cove		ļ						<del> </del>		2
Cedar Cove					ļ	ļ				2
Ebb Point									BGN	2
Guilford Creek	(giv	e lar	ger app	licati	on on	chart	568		BGN	2
Young Creek	aft	er in	ding)							2
Brewer Gut										2
Old Cove						<u>.</u> .				2
Justis Gut				1						2

No. 2		Chor. Or	Ac. Or	S. Mod	or location	Sc. Oct. No. Co.	O. Guide o	And Market Marke	S. S
Name on Survey	A	В	/c ·	_ D	E	F	G	/н	<u>/ k</u>
Bridge Gut									
Muddy Creek		('	Tide s	tation	locat	on)			
Island Field Cove									
Rock Gut					•				
Great Gut					•				
Beasley Bay			<u> </u>		ļ				
Bernard Islands					1				BGN
To be applied after	inking-	-see	chart	568):					
The Thorofare				·					Ţ
Bernard Flats				<u>.</u>					BGN
			Na	mes ar	proved				
					<b> </b> -	Hea	X		
All known names appl	lied to	bod <b>i</b> e	s of w	eter c	21				
streams showing sour are desired, any on	ndings. the 6-	If a 30-58	dditio	nal na	ines				
chart 568 are approv	red.								
1									
Weir Pt. Hopkins									
				,	2			-	
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	1								
	1 .		1			,			

# Hydrographic Surveys (Chart Division)

# HYDROGRAPHIC SURVEY NO. 8347...

Records accompanying survey:	
Boat sheets; sounding vols; w	ire drag vols;
bomb vols; graphic recorder rolls	
special reports, etc. 1-Smooth sheet and	l-Descriptive report.
The following statistics will be submitted wirepher's report on the sheet:	th the cartog-
Number of positions on sheet	4229
Number of positions checked	330
Number of positions revised	•
Number of soundings revised (refers to depth only)	App. 462
Number of soundings erroneously spaced	
Number of signals erroneously plotted or transferred	
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time
Verification by . J. C. Chambes Total time	423 hrs Date 31 Mag. 1961
Reviewed by A.K. Engle Time	9.6. Dete 9.Nov.1961

#### OFFICE OF CARTOGRAPHY

#### REVIEW SECTION -- NAUTICAL CHART DIVISION

#### REVIEW OF HYDROGRAPHIC SURVEY

#### REGISTRY NO. H-8347

FIELD NO. CO-1156

Virginia, Chesapeake Bay-Pocomoke Sound-Beasley Bay to Deep Creek

SURVEYED: Aug. - Oct. 1956

SCALE: 1:10,000

#### PROJECT NO. 12870

SOUNDINGS: 808 Depth Recorder

EDO 255 Depth Recorder

Sounding Pole Hand Lead

CONTROL: Sextant fixes

on shore signals

Chief of Party ------ L. G. Taylor
Surveyed by ------ R. T. Schoolbred; B. E. Green;
C. I. Harding; G. T. Susi
Protracted by ----- F. Bean
Soundings plotted by ----- F. Bean
Verified and inked by ----- J. C. Chambers
Reviewed by ----- D. R. Engle
Inspected by ----- R. H. Carstens

# 1. Description of the Area

The survey covers the area in Pocomoke Sound between Beasley Bay and Deep Creek and extends to the upper reaches of the numerous creeks in the area.

The character of the bottom in Pocomoke Sound is muddy and sandy and generally smooth except in the area northeast of Halfmoon Point and at the entrance to France Creek where sand waves cause irregularity.

The numerous creeks and tributaries have bottoms of mud and grass. The larger creeks have natural channels to their upper reaches.

### 2. Control and Shoreline

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

The shoreline originates with reviewed Photogrammetric Surveys T-11232, T-11233, and T-11234 of 1953-55. The small island in lat. 37°50.99', long. 75°40.52' shown in red on the survey was located by the hydrographer.

#### 3. Hydrography

The sounding line crossings after verification are in adequate agreement. Some of the crossing differences noted in the Descriptive Report on pages 3, 4, and 15 were corrected or improved during verification by revising incorrect tide reducers in one area, and by considering the normal differences between fathometer and pole soundings on irregular or muddy bottom or in choppy seas when accepting or rejecting conflicting soundings on numerous other crossings. Those remaining differences are generally within one foot. Supplementary simultaneous comparisons between the fathometer and pole soundings would have been of value in evaluating the conflicts.

The usual depth curves are adequately delineated. The 3-ft. curve was added to delineate the shoals and the creek channels.

The development of bottom configuration and least depths is adequate.

# 4. Condition of Survey

The field plotting, records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

# 5. Junctions

Adequate junctions were effected with H-7945 (1951) on the north, H-8405 (1956-57) on the west and H-8406 (1956-57) on the southwest.

The present survey supersedes a small area of H-7945 (1951) at lat. 37°52', long. 75°45' which is 1 foot deeper on the present survey than on the 1951 survey.

#### 6. Comparison with Prior Surveys

H-993 (1869) 1:20,000 H-1447 (1878) 1:40,000 H-2899 (1907) 1:20,000

These prior surveys cover the area of the present survey. A comparison of the prior and present surveys reveals changes in shoreline and in the bottom.

Radical changes have occurred in most of the shoreline of Pocomoke Sound because of erosion. The peninsula north of Great Gut, which formerly extended a half mile into Pocomoke Sound, is now covered by 1 to 3 feet of water except for a small island 150 meters offshore. The numerous islands in Pocomoke Sound have been drastically altered in size and shape. Many of the smaller ones shown on the prior surveys are now covered by 1 to 2 feet of water. Examples of the latter are islands shown on H-993 (1869) south of Great Gut, east of Bernard Island, in Cedar Bay, southwest of Halfmoon Point and west and south of Webb Island.

Variable changes of 1 to 2 feet in depths have occurred throughout the survey area. These changes are considered to be due to erosion, silting, and shifting of sand ridges. Generally shoal areas just offshore have deepened from erosion, and adjacent deep channels have silted 1 to 2 feet. The area of greatest change is in lat. 37°51', long. 75°45.3' where the channel is 4 to 6 feet shoaler on the present survey than on prior surveys.

The charted 2-ft. sounding in lat. 37°47.84¹, long. 75°43.18¹ originating with H-2899 (1907) is considered to have been incorrectly plotted on the prior survey and should have fallen about 75 meters NNE¹ly of its plotted position. The present survey is adequate to disprove this sounding and it should be removed from the chart.

The charted 6-ft. shoal in lat. 37°50.4', long. 75°43.97' originating with H-2899 (1907) falls in present depths of 8 to 9 feet. Since this shoal falls between two sounding lines on the present survey and there are other similar shoals of small extent in this general area, this 6-ft. shoal is not considered disproved and has been carried forward.

With the above addition the present survey is considered adequate to supersede the prior surveys in the common area.

# 7. Comparison with Chart 568 (Latest print date 4-17-61)

#### A. Hydrography

Charted hydrography originates with H-2899 (1907) and partial application of the present survey before verification and review. Minor revisions in depth and position were made during verification, and final survey depths may vary by 1 foot from those charted prior to verification.

The present survey is adequate to supersede the charted information in the common area.

### B. Aids to Navigation

The following aids shown on the present survey are in substantial agreement with the chart and adequately mark the features intended:

Hunting Creek Approach shoal buoy No. 1 Hunting Creek Light No. 4 Hunting Creek Channel buoy No. 3

The following aids shown on the present survey were removed subsequent to the date of the survey:

Hunting Creek buoy No. 5 Guilford Creek buoy No. 2

All other charted aids in the area of the present survey were established subsequent to the date of the present survey and mark the bottom features charted from our prior surveys. Some of the aids as presently charted do not adequately mark the present survey features. Examples are as follows:

(1) Hunting Creek Channel Lt. No. 5 marks Sandy Point shoal as presently charted from H-2899. However, the present survey indicates that this shoal has shifted about 150 meters SSW'ly and is no longer adequately marked by the light in its present position.

- (2) Hunting Creek Channel daybeacon No. 7 marks a shoal at Weir Pt. as presently charted. The present survey, which supersedes the prior survey, indicates that this shoal falls 60 meters NNE'ly of its charted position, and is no longer adequately marked by the beacon in its present position. Moreover, the charted position of this beacon falls in 8 feet of water instead of 5 feet as noted by H. O. N. to M. 29, 1957, the source of this aid.
- (3) Muddy Creek daybeacon No. 3 marks the channel as presently charted. The present survey indicates a change in position and depth of the channel which would place the beacon as presently charted on the wrong side of the channel and about 50 meters SSE'ly of the shoal it is intended to mark.
- (4) Guilford Creek daybeacon No. 8 marks the channel as presently charted from H-2899 (1907). The present survey shows 1 foot of water at the charted position of the beacon instead of 4 feet as noted in H. O. N. to M. 29, 1957, the source of this aid. The conflict in depths indicates the reported position to be doubtful. Moreover, the present survey depicts a low water shoal extending out to the edge of the channel about 150 meters south of the charted position of this beacon. It would seem desirable to mark this shoal.
- It is recommended that the Coast Guard be furnished a copy of the present survey and requested to move the four aids mentioned above as necessary to mark the features as they are depicted by the present survey. In addition to these four major changes, it may be desirable to move other aids in Hunting Creek and Guilford Creek a lesser distance to mark the present features adequately.

# 8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

# 9. Additional Field Work

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

\* Copy of the present survey with request for recommended and revisions turnished the Coast Guard on or about 11-15-61 according to Mr. Anderson, which of Aids Section.

Examined and Approved:

Chief,

Nautical Chart Division

Projects Officer, Operations Division Assistant Director, Office of Cartography

May States
Assistant Director,
Office of Oceanography

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

#### TIDE NOTE FOR HYDROGRAPHIC SHEET

xDivision of x Coastal Surveys:x

12 January 1960

Division of Charts: R. H. Carstens

Plane of reference approved in 16 volumes of sounding records for

HYDROGRAPHIC SHEET 8347

Locality Chesapeake Bay, Va.

Chief of Party: L. G. Taylor in 1956 Plane of reference is mean low water, reading 0.4 ft. on tide staff at Muddy Creek Entrance 3.9 ft. below B. M. 1 (1956)

Height of mean high water above plane of reference is 2.2 feet.

Condition of records satisfactory except as noted below:

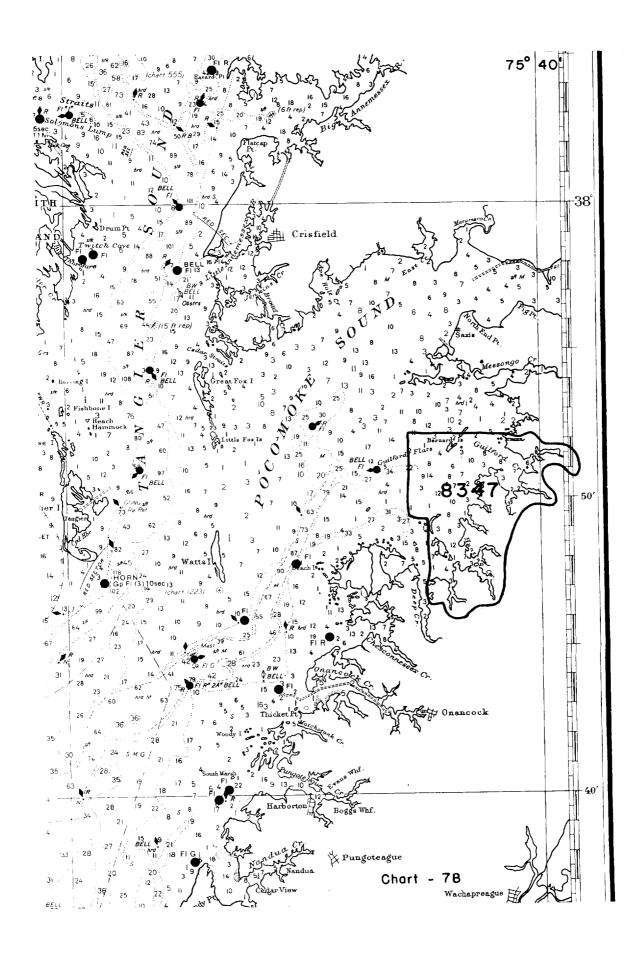
Tide reducers for the positions listed below have been revised in red and verified. VOL.

POSITIONS

116h - 156h corrected in volume.

Chief, Division of Aldes and Currents.

U. S. GOVERNMENT PRINTING OFFICE 877933



# NAUTICAL CHARTS BRANCH

## SURVEY NO. H-8347

# Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3/29/60	568	Illrane #	Before Verification and Review - outin
			corrins only.
4-5-60	1223	R.K. De Lawden	Before After Verification and Review Three eff
			57.8
7-13-60	78	Wittmann	Before After Verification and Review thru dwg 1223 3ml
12/4/61	568	J. Heaton	Comp appd:  Before After Verification and Review
1/17/61	1224	J. HEaton	Compaped The chi 168  Record After Verification and Review
2/9/.	/223	9. HEatro	Compagnation and Review
3/7/62	/ / / / 3	J.A Cutro	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.