

# 8553

Diag. Cht, Nos. 77-3 and 78-3.

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. CO-20-1-60 Office No. H-8553

### LOCALITY

State Maryland

General locality Potomac River

Locality Point Lookout to Ragged Pt.

1960

### CHIEF OF PARTY

E. H. Sheridan

### LIBRARY & ARCHIVES

DATE August 31, 1961

USCOMM-DC 5087

8553

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 - 8553

Field No. CO - ~~188~~ 20-1-60

State MARYLAND

General locality POINT LOOKOUT TO RAGGED POINT

Gen. Locality POTOMAC RIVER, MARYLAND

Scale 1 : 20,000 Date of survey 12 April-31 JULY, 1960

Instructions dated 23 APRIL, 1959 and 23 FEBRUARY, 1960

Vessel USC&GS SHIP COWIE

Chief of party CDR. E. H. SHERIDAN

Surveyed by E.H. SHERIDAN, R.L. NEWSOM, C.W. RANDALL, J.D. BOSSLER & R.M. HAGAN

Soundings taken by fathometer, ~~graph recorder, beam trawl, etc.~~ AND HAND LEAD

Fathograms scaled by PERSONNEL OF SHIP COWIE  
" " " "

Fathograms checked by

Protracted by A.K. SCHUGELD (NORFOLK PROCESSING OFFICE)

Soundings penciled by A.K. SCHUGELD " " "

Soundings in ~~1000M~~ feet at MLW ~~MLW~~ and are true depths.

REMARKS:

212

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

A. PROJECT:

Work on this sheet was executed under ORIGINAL INSTRUCTIONS dated 23 April 1959 and SUPPLEMENTAL INSTRUCTIONS dated 23 February 1960.

B. SURVEY LIMITS AND DATES:

The surveyed area is a continuous area in the center of the Potomac River from Longitude  $76^{\circ} 22'$  on the east side to Longitude  $76^{\circ} 36.1'$  on the west side. It's northern boundary is Latitude  $38^{\circ} 11.2'$  and it's southern boundary is Latitude  $38^{\circ} 02'$ . The total surveyed area covers about 27 square miles.

This survey makes an adequate junction with Hydrographic Survey H-8496, scale 1:20,000, 1959, on the east side and along part of the south side, H-8550 (1960), H-8549 (1960) H-8548 (1960) H-8547 (1959-60)

The field work was done from 12 April 1960 to 31 July 1960.

C. VESSELS AND EQUIPMENT:

The Ship COWIE was used for about 95% of the work using an 808 fathometer calibrated at 820 fms/sec. with the transducer units installed in keel mounts. Fathometer No. 164 was used for the entire ship work. The turning radius of the ship at full speed and hard over rudder was approximately 360 meters.

Launch 178 was used on seven different days to run splits and some of the short lines on the fringe areas of the survey. 808 Fathometer No. 160-SPX, calibrated at 820 fms/sec. with transducer units set in the bilge, was used for this work. The turning radius of the launch was not determined.

Hand lead soundings were taken for bottom samples.

D. TIDE AND CURRENT STATIONS:

During the period of this <sup>off limits of survey</sup> survey there was a portable tide gage at Kinsale, Va., Latitude  $38^{\circ} 01.85'N$ , Longitude  $76^{\circ} 34.62'W$ , and a standard tide gage at Piney Point, Md., Latitude  $38^{\circ} 08.00'N$ , Longitude  $76^{\circ} 31.95'W$ . The portable tide gage at Kinsale, Va. was used to obtain tide reducers for this survey. No time or height corrections were applied to the observed tides. See tide not for additional information.

Not used for reducers

D. TIDE AND CURRENT STATIONS(CONTINUED):

One 100 hour current station was observed in the middle of the channel off Piney Point at Latitude  $38^{\circ} 08.18'$ , Longitude  $76^{\circ} 33.40'$ , in about 75 feet of water. Observations were made with the Price meter and current pole. *Not filed with this survey records.*

E. SMOOTH SHEET:

No work has been performed on the smooth sheet at the time of this report. *(Boat sheet references)*

F. CONTROL STATIONS:

*Signals originate through inshore surveys (blacklines).*

The basic triangulation in this area was done by E.B.L, 1929, J.B.JR, 1934 and G.W.L, 1945. Signals LOOK, OIL, PINE, RAGG and TANK are published triangulation stations.

Signals Joe, Red and San are geodetic positions computed by a sufficient number of theodolite cuts. Signals Red and San were computed in 1959 for Survey H-8946, (Field No. CO-2159), the computations for these signals are attached to the original copy of the Descriptive Report for that survey. Signal Joe was computed for CO-1795, Special Survey for the Army Engineers, and is included in the list of signals for that survey.

*CO-1795 (Sp 58372 CL. 806/59)*

The remaining signals were located by a shore based party from Shoreline Manuscripts Nos. T-10665, T-10666, T-10667, T-10670, T-10671, T-10672, T-10673, T-10674, T-11046 and T-11289, scale 1:10,000, and transferred to 1:20,000 on the boat sheet.

G. SHORELINE AND TOPOGRAPHY:

No shoreline or topography changes were recorded on this sheet since the complete survey was executed in the middle and deeper part of the river.

*see inshore surveys for shoreline survey discussions.*

*H-8495* There were inshore surveys on both sides of the river around this sheet. *H-8549* Sheets CO-1859, CO-1959, CO-10-2-60 and CO-10-3-60 were completed on the south side and Sheets CO-1-1059, CO-10-1-60 and CO-10-3-60 were completed on the north side. *H-8550* Sheet CO-10-3-60 included both sides of the river. These surveys show all shoreline and topography changes. *H-8547* *shoreline on present sheet is for general reference only.*

H. SOUNDINGS:

Soundings by the Ship COWIE were obtained by using 808 Fathometer No. 164, calibrated at 820 fms/sec. Soundings by Launch 178 were made using 808 Fathometer No. 160-SPX, calibrated at 820 fms/sec. A hand lead was used to obtain all bottom samples.

Bar checks were obtained at various intervals and used to correct the fathometer soundings.

I. CONTROL OF HYDROGRAPHY:

The entire hydrography was controlled by three-point sextant fixes taken on hydrographic signals. Satisfactory results were obtained from using these signals.

J. ADEQUACY OF SURVEY:

This survey is considered to be complete and adequate to supercede <sup>see review</sup> all prior surveys for charting purposes. The junctions with all adjoining surveys are satisfactory and the depth curves can be adequately drawn at the junctions.

K. CROSSLINES:

Crosslines are about 7 to 8 percent of the regular system of lines. ✓  
The discrepancies found were attributed to the worn phase heads on the fathometer. These discrepancies have been adjusted for by phase corrections (See fathometer corrections).

L - M. COMPARISON WITH PRIOR SURVEYS AND CHARTS:

The only prior surveys are H-2739, H-2753, and H-2754 on a scale of <sup>see review</sup> 1:20,000. These surveys were executed in 1904 and 1905 with a line spacing of 800 to 1000 meters which makes detailed comparison with the 1960 survey impossible. However, general agreement is very good. Comparing with the boat sheet, the depth curves follow the same general pattern.

An uncharted shoal of 25 feet was found at Latitude  $38^{\circ} 08.3'N$ , ✓  
Longitude  $76^{\circ} 34.6'W$ . Local fishermen say a tugboat sank at this spot. This shoal sounding is in 30 feet of water. *See H-8550*

Another uncharted wreck was located at Latitude  $38^{\circ} 06.95'N$ , Longitude ✓  
 $76^{\circ} 30.7'W$  in 46 feet of water. The shoal depth over this wreck is 38 feet. <sup>see</sup> *H-8548*

The charted wreck at Latitude  $38^{\circ} 02.5'N$ , Longitude  $76^{\circ} 23.4'W$  could not be located. It is believed that this wreck is either not in this area or has been completely silted over. This was review note #2. However, an uncharted shoal depth was found in 1959 on Survey H-8496 at Latitude  $38^{\circ} 01' 51''$ , Longitude  $76^{\circ} 22' 23''$ . (See Descriptive Report H-8496). <sup>see review</sup>

It is believed that a more thorough comparison should be made following smooth plotting of this survey.

N. DANGERS AND SHOALS:

A shoal of <sup>66</sup> ~~65~~ feet was found in 80 feet of water at Latitude  $38^{\circ} 08.16'N$ , ✓  
Longitude  $76^{\circ} 33.25'W$ . This was review note #8 and confirmed the charted depth. This was found on Y-day, however, subsequent investigation by the Launch proved futile. See CO-10-3-60(H-8550). <sup>see review of that survey.</sup>

No uncharted shoals were found within the limits of this survey. ✓

O. COAST PILOT INFORMATION:

The coast pilot information for this area was forwarded to the Washington Office 20 October 1960 in a separate report.

P. AIDS TO NAVIGATION:FIXED AIDS

No fixed aids to navigation were located within the area of this survey by the hydrographic party. ✓

FLOATING AIDS

See NPO list this report

Red Lighted Bell Buoy No. 10 in <sup>73</sup>28 feet of water, Latitude 38° 06.85'N, Longitude 76° 32.2'W, located by Ship COWIE, pos. 22, B-day, 14 April 1960. ✓

Red and Black Lighten Buoy in <sup>24</sup>25 feet of water, Latitude 38° 05.27'N, Longitude 76° 26.80'W, located by Ship COWIE, pos. 30, D-day, 28 April 1960. ✓

Q. LANDMARKS FOR CHARTS:

No additional landmarks other than those already located are recommended. ✓

R. GEOGRAPHIC NAMES:

The inshore surveys surrounding this survey contain the information concerning geographic names. ✓

U. FATHOMETER CORRECTIONS:

Fathometer 164 was used on the Ship COWIE throughout the survey. Bar checks were taken to determine velocity corrections for this fathometer. An abstract of these corrections is in the appendix. Due to the nature of these corrections, four curves were drawn. Since this survey involves deep water it was necessary to draw separate curves for the "A" scale and the "B" scale. These curves were also divided with a curve covering "A" through "K" day and a curve covering "L" through "Y" day for both scales. Also, due to the worn phase head on the fathometer, the phase difference was constantly changing. This made it necessary to apply a daily phase correction to all "B" scale soundings. This daily phase correction is the difference between the average phase difference on the bar checks and the average phase difference for that particular day. (Average daily phase difference - Average bar check phase difference = daily phase correction). See review ✓

Bar check phase difference was averaged for two different periods, "A" through "K" day and "L" through "Y" day. ✓

Bar checks taken during the period of the Launch work, using Fathometer 160-SPX, were used to obtain the velocity corrections for the Launch work. Since the phase difference for this fathometer was constant, a daily phase correction was not needed. These corrections are also in the appendix. ✓

Z. TABULATION OF APPLICABLE DATA:

26 Marigrams - Kinsale, Va. tide station - forwarded to Washington  
Office 1/5/61

ACCOMPANYING THIS REPORT

Two sheets - Tide reducers  
Six sheets - Fathometer corrections  
Two copies - Descriptive Report ORIGINAL RETAINED  
Seven volumes - Sounding, Vol. I thru Vol. 7  
Twenty-three - Fathograms, A day thru Y day, Ship 60WIE  
Five - Fathograms, a day thru e day, Launch 178  
One - Boat Sheet, CO-20-1-60 Destroyed after Review.  
Ten Manuscripts Nos. T-10655, T-10666, T-10667, T-10670, <sup>290</sup>  
T-10671, T-10672, T-10673, T-10674, T-11~~545~~  
and T-11289.

Blue line manuscripts; same as above manuscripts except  
1:20,000 scale. DESTROYED AFTER REVIEW

Respectfully submitted,

*Clifford W. Randall*

Clifford W. Randall  
ENS., C&GS.

APPROVED AND FORWARDED:

*Pentti A. Stark*  
Pentti A. Stark  
LCDR., C&GS., Comdg. Ship 60WIE  
for: E. H. Sheridan  
CAPT., C&GS.

APPENDIX "A"T I D E    N O T E

HYDROGRAPHIC SURVEY H-8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409POTOMAC RIVER, MD.

A portable tide gage was used to obtain tide reducers on this survey. This gage was located at Kinsale, Virginia, Latitude  $38^{\circ} 01.85'N$ , Longitude  $76^{\circ} 31.95'W$ .

No time or height corrections were applied to these observed tides. The tide corrections were scaled and checked directly from the marigrams by personnel of the Ship COWIE.

The height datum for Kinsale, Virginia tide gage is MLW which was 1.9' on the tide staff.



APPENDIX "B"STATISTICS

HYDROGRAPHIC SURVEY H-8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409

SHIP COWIE

POTOMAC RIVER, MD.

<u>DATE</u>	<u>DAY LETTER</u>	<u>VOL. NO.</u>	<u>NO. POS.</u>	<u>NAUT. MI. SDG.</u>	<u>TOTAL MI. RUN</u>
4/12/60	A (BLUE)	1	209	55.0	61.0
4/14/60	B "	1	27	6.5	40.4
4/19/60	C "	1	48	11.8	44.9
4/28/60	D "	1	54	12.1	18.6
5/3/60	E "	1	25	5.0	39.8
5/12/60	F "	1	15	3.5	33.0
5/17/60	G "	1	49	10.8	51.0
6/1/60	H "	2	62	14.1	51.9
6/4/60	J "	2	75	17.2	30.3
6/7/60	K "	2	219	55.8	69.8
6/9/60	L "	2 & 3	58	12.9	50.5
6/14/60	M "	3	89	20.4	55.1
6/21/60	N "	4	102	22.0	32.3
6/23/60	P "	4	20	4.5	42.0
6/28/60	Q "	4	71	15.7	45.7
6/29/60	R "	4 & 5	202	42.6	62.1
7/7/60	S "	5	43	8.0	43.4
7/13/60	T "	5	29	6.0	39.0
7/20/60	U "	5	64	14.8	51.3
7/21/60	V "	5	70	16.2	50.4
7/26/60	W "	5	73	15.6	38.6
7/27/60	X "	6	107	20.8	43.9
7/31/60	Y "	6	47	11.0	41.0
SHIP COWIE TOTALS			1758	402.3	1036.0

LAUNCH 178

4/20/60	a (Blue)	1	13	2.0	8.0
5/21/60	b "	1	15	3.2	5.5
5/22/60	c "	1	8	1.5	11.0
5/23/60	d "	1	40	6.6	20.0
6/17/60	e "	1	55	6.2	10.8
LAUNCH 178 TOTALS			131	19.5	55.3

Total square nautical miles of sounding - 27.0

Ship COWIE - CAPITAL LETTERS IN BLUE

Launch 178 - lower case letters in blue

APPENDIX "C"FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409POTOMAC RIVER, MD.SHIP COWIEFATHOMETER 164

"A" day, 12 April thru "K" day, 7 June 1960

<u>"A" SCALE</u>			<u>"B" SCALE</u>		
<u>From</u>	<u>To</u>	<u>Corr'n</u>	<u>From</u>	<u>To</u>	<u>Corr'n</u>
14.6	16.5	- 0.2	37.3	41.3	0.0
			41.4	45.3	- 0.2
16.6	20.7	- 0.4	45.4	49.3	- 0.4
			49.4	53.4	- 0.6
20.8	26.6	- 0.6	53.5	57.5	- 0.8
			57.6	61.5	- 1.0
26.7	32.5	- 0.8	61.6	65.5	- 1.2
			65.6	69.5	- 1.4
32.6	38.9	- 1.0	69.6	73.4	- 1.6
			73.5	77.4	- 1.8
39.0	48.0	- 1.2	77.5	81.4	- 2.0
			81.5	85.4	- 2.2
48.1	55.0	- 1.4	85.5	89.4	- 2.4

"L" day, 9 June thru "Y" day, 31 July 1960

10.0	17.1	≠ 0.2	37.9	39.6	≠ 2.0
			39.7	41.6	≠ 2.2
17.2	27.6	0.0	41.7	45.7	≠ 2.4
			45.8	55.0	≠ 2.6
27.7	54.0	- 0.2	55.1	65.0	≠ 2.4
			65.1	75.0	≠ 2.2
54.1	55.0	0.0	75.1	85.0	≠ 2.0
			85.1	95.0	≠ 1.8

APPENDIX "C"DAILY PHASE CORRECTIONFATHOMETER NO. 164

HYDROGRAPHIC SURVEY H-8553

SHIP COWIE

(FIELD NO. CO-20-1-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

<u>DAY LETTER</u>	<u>CORR'N(A-B SCALE)</u>	<u>DAY LETTER</u>	<u>CORR'N(A-B SCALE)</u>
A	/ 0.7	P	0.0
B	- 0.1	Q	/ 0.4
C	/ 0.1	R	- 1.6
D	- 0.5	S	- 1.4
E	- 0.3	T	- 2.2
F	- 0.9	U	- 0.8
G	- 0.3	V	- 1.6
H	- 0.3	W	- 1.6
J	/ 0.7	X	- 1.4
K	/ 0.9	Y	- 0.6
L	- 0.8		
M	- 0.4		
N	- 0.6		

APPENDIX "C"FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H - 8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409POTOMAC RIVER, MD.LAUNCH 178FATHOMETER 160-SPX

"a" day, 20 April thru "e" day, 17 June 1960

<u>"A" SCALE</u>			<u>"B" SCALE</u>		
<u>From</u>	<u>To</u>	<u>Corr'n</u>	<u>From</u>	<u>To</u>	<u>Corr'n</u>
0.0	10.5	+ 0.4	35.0	50.2	+ 1.2
10.6	24.5	+ 0.2	50.2	66.7	+ 1.4
24.6	38.7	0.0	66.8	83.1	+ 1.6
38.8	52.5	- 0.2	83.2	95.0	+ 1.8
52.6	55.0	- 0.4			

## APPENDIX "D"

LIST OF SIGNALS

HYDROGRAPHIC SURVEY H-8553

(FIELD NO. CO-20-1-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

<u>NAME</u>	<u>ORIGIN</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
Abe	T-10665	38° 09' (41083.7)	76° 32' (4847.2)
Fog	T-10666, T-10667	38° 08' (41683.6)	76° 26' (4447.1)
Fro	T-10671	38° 04' (41561.4)	76° 33' (455.5)
George	T-10672	38° 06' (4301.4)	76° 28' (4846.8)
Ivy	T-10674	38° 02' (41565.4)	76° 31' (4482.8)
Joe H-8446	Theodolite cuts (1959) <sup>Cowie 1959</sup>	38° 09' (4334.9)	76° 37' (41312.9)
Knat	T-11690	38° 03' (41550.6)	76° 21' (41138.0)
LOOK	Triangulation	Point Lookout Lighthouse, 1846	
Man	T-10673	38° 06' (4524.2)	76° 24' (41390.2)
OIL	Triangulation	Piney Point Lighthouse, 1858	
PINE	Triangulation	Piney Point Water Tank, 1942	
Point	T-10673	38° 06' (4234.6)	76° 24' (4694.3)
RAGG	Triangulation	Ragged Point Lighthouse, 1919	
Red H-8446	Theodolite cuts — H-8496 (1959) T-10674	38° 02' (4779.0)	76° 30' (474.3)
Ron	T-11289	38° 04' (41270.1)	76° 22' (4312.8)
Sad	T-10665	38° 10' (4851.4)	76° 32' (41229.0)
San H-8446	Theodolite cuts → H-8496 (1959) T-10671	38° 04' (4750.6)	76° 32' (4224.5)
Sir	T-11289	38° 04' (41230.2)	76° 22' (4251.9)
Sun	<del>T-11670</del> T-10670	38° 05' (41113.4)	76° 33' (4819.5)
TANK	Triangulation	Point Lookout Tank, 1934	
Ten	T-10667	38° 08' (4381.0)	76° 26' (4328.0)
Wee	T-10673	38° 05' (4450.3)	76° 22' (4396.5)
Woo	T-10673	38° 05' (41181.6)	76° 23' (4729.5)

Photo-hydro stations were scaled from <sup>in the Processing office</sup> 1:10,000 control blacklines for application to the smooth sheet.

NORFOLK PROCESSING OFFICE  
FLOATING AIDS TO NAVIGATION

H-8553

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
<u>CHESAPEAKE BAY</u>					
<u>POTOMAC RIVER</u>					
Lighted Bell Buoy 10	38-06.84	76-32.20	73'	22B	4/14/60 ✓
St. George Bar Junction Lighted Buoy	38-05.27	76-26.79	24'	30D	4/28/60 ✓
Spar 18AW	38-05.62	76-31.31	55'	35V	7/21/60 ✓

NORFOLK PROCESSING OFFICE  
ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8553 (Co-20-1-60)

GENERAL

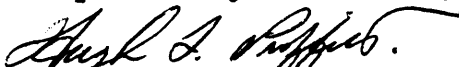
This appears to be an excellent basic survey except for some depth discrepancies on Ship Cowie work, amounting to 1 to 2 feet on the "B" scale in the mid-channel area East of Longitude 76-31'.

These discrepancies appear to be caused by an inadequate number of bar checks - 8 checks for 23 working days - and to erratic phase jumps caused by a worn phasing head as mentioned in paragraph "K".

*adequately revised during verification.*

Norfolk, Va.  
Aug. 25, 1961

Respectfully submitted,



Hugh L. Proffitt  
Cartographer

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8553

Records accompanying survey: Smooth sheets .1...;  
 boat sheets .1...; sounding vols. .7...; wire drag vols. ....;  
 Descriptive Reports .1...; graphic recorder envelopes 13...;  
 special reports, etc. .1 Cahier - Tide & Fathometer Corrections;  
 .2-Film Positives and 1-Beat sheet Overlay .

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

Number of positions on sheet ..... 1889  
 Number of positions checked ..... 76  
 Number of positions revised ..... 2  
 Number of soundings revised (refers to depth only) ..... 40  
*In addition all of K-day revised by one foot (645 sdgs)*  
 Number of soundings erroneously spaced ..... NONE  
 Number of signals erroneously plotted or transferred ..... NONE  
 Topographic details Time ..... NONE  
 Junctions Time ..... 40 MINS  
 Verification of soundings from graphic record Time ..... 10 hrs.  
*an additional +1' phase correction has been applied to all of K-day to agree with the daily phase correction of +2 feet showing on the photographs. This brings better agreement on crosslines for K-day and proper agreement in junctional area with H-8549 (1960)*  
 Special adjustments Time .....

Verification by *George A. Kozemczak* Total time 472 Date *April 24 1963*

Reviewed by *E. E. Shover* Time 37 Date *5/14/63*



GEOGRAPHIC NAMES

Survey No. H-8553

Name on Survey	On Chart No. 557		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	K BGN
	A	B								
Lynch Point	/									1
Piney Point	/									2
Point Lookout	/									3
Ragged Point	/								/	4
St. George Island	/								/	5
										6
										7
										8
										9
										10
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										23
										24
										25
										26
										27

*George M. Bae*  
*Geographic Names*  
*21 Sept 1961*

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8553

FIELD NO. CO-20-1-60

Maryland, Potomac River, Point Lookout to Ragged Point

SURVEYED: April-July 1960

SCALE: 1:20,000

PROJECT NO. CS-409

SOUNDINGS: 808 Depth Recorders

CONTROL: Sextant fixes  
on shore objects

Chief of Party-----E. H. Sheridan  
Surveyed by-----E. H. Sheridan, R. L. Newsom, C. W.  
Randall, J. D. Bossler, R. M. Hagan  
Protracted by-----A. K. Schugeld  
Soundings plotted by-----A. K. Schugeld  
Verified and inked by-----G. A. Kozemzak  
Reviewed by-----E. E. Thomas  
Inspected by-----R. H. Carstens

Date: 5/14/63

1. Description of the Area

This survey is located in the central portion of the Potomac River between Point Lookout to Ragged Point. Generally, the survey covers an area of smooth bottom and includes the natural deep water channel of the river. Depths along the axis of the channel range from 39-to 86-ft. Depths shoal gradually along the slopes of the natural channel except off Deep Pt., at the entrance to St. Mary's River, where abrupt changes occur.

The graphic sounding records reveal numerous areas of heavy sedimentary deposits over an irregular sub-surface.

2. Control and shoreline

The control is adequately described in the Descriptive Report.

The shoreline shown on the smooth sheet of the present survey is for reference only. A detailed discussion is made of the shorelines in the reviews of the inshore surveys.

3. Hydrography

- A. Depths at the crossings are in good agreement.
- B. The usual depth curves are adequately delineated. The 24-ft and 36-ft curves were added to more adequately define the bottom configuration.
- C. The development of the bottom configuration and the investigation of least depths is considered adequate.

4. Condition of the survey

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

An additional 1-ft phase correction was applied to 645 sdgs during verification to effect harmony with crosslines and junctional depths.

5. Junctions

An adequate junction was effected with H-8550 (1960) on the west, H-8547 (1959-60) on the northeast, H-8496 (1959) on the southeast and H-8495 (1959) and H-8549 (1960) on the south.

The junction with H-8548 (1960) on the north and H-8610 on the northwest will be discussed in the review of those surveys.

6. Comparison with prior surveys

H-640 (1857)	1/20,000	H-2739 (1904-05)	1/20,000
H-701 (1859-60)	1/20,000	H-2753 (1905)	1/20,000
H-793 (1860)	1/20,000	H-2754 (1905)	1/20,000

These surveys comprise the prior coverage of the area common with the present survey. A comparison with the present survey reveals no important changes other than the disposition of silt in the natural river channel. Generally, this silting

has been 1-to 2-ft in depths less than 38 feet and as much as 4 ft in depths greater than 38 ft since the 1904-05 surveys. Silting which has occurred since the earliest survey of 1857-60 is indicated as being as much as 5 to 9 ft in depths greater than 55 ft. An example occurs in approximate lat.  $38^{\circ}07.6'$ , long.  $76^{\circ}32.5'$  where prior depths greater than 15 fms from H-793 fall in present depths of 76-77 ft.

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

7. Comparison with Chart 557 (latest print date 10/29/62)  
558 (latest print date 11/5/62)

A. Hydrography

The charted hydrography originates principally with the 1904-05 surveys (H-2739, H-2753, H-2754) and is supplemented by application of only critical depths from the boat sheet and the unverified smooth sheet of the present survey.

Although the wreck charted in lat.  $38^{\circ}02.49'$ , long.  $76^{\circ}23.41'$  may be the same wreck found on H-8496 (1959) in lat.  $38^{\circ}01.82'$ , long.  $76^{\circ}22.40'$ , the present development and method of investigation is not considered adequate to disprove the wreck in the former location and it should be retained on the chart.

Except as noted above, the present survey is considered adequate to supersede the charted hydrography in the common area.

B. Aids to Navigation

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

Renumbering of the floating aids has occurred subsequent to the present survey.

8. Compliance with Project Instructions

The survey adequately complies with project instructions.

9. Additional Field Work

The survey is considered to be a good basic survey and no additional work is necessary.

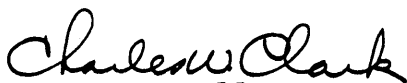
Examined and Approved:




Chief,  
Nautical Chart Division



Assistant Director,  
Office of Cartography



Projects Officer,  
Operations Division



Assistant Director,  
Office of Oceanography

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COASTAL SURVEYS~~

3 November 1961

Division of Charts: R. H. Carstens

Plane of reference approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8553

Locality Potomac River

Chief of Party: E. H. Sheridan (1960)  
Plane of reference is mean low water reading  
1.9 ft. on tide staff at Kinsale, Virginia  
5.2 ft. below B. M. 1 (1960)

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

Condition of records satisfactory except as noted below:

J. M. Symons  
Chief, Tides and Currents Branch  
~~CHIEF, DIVISION OF TIDES AND CURRENTS~~

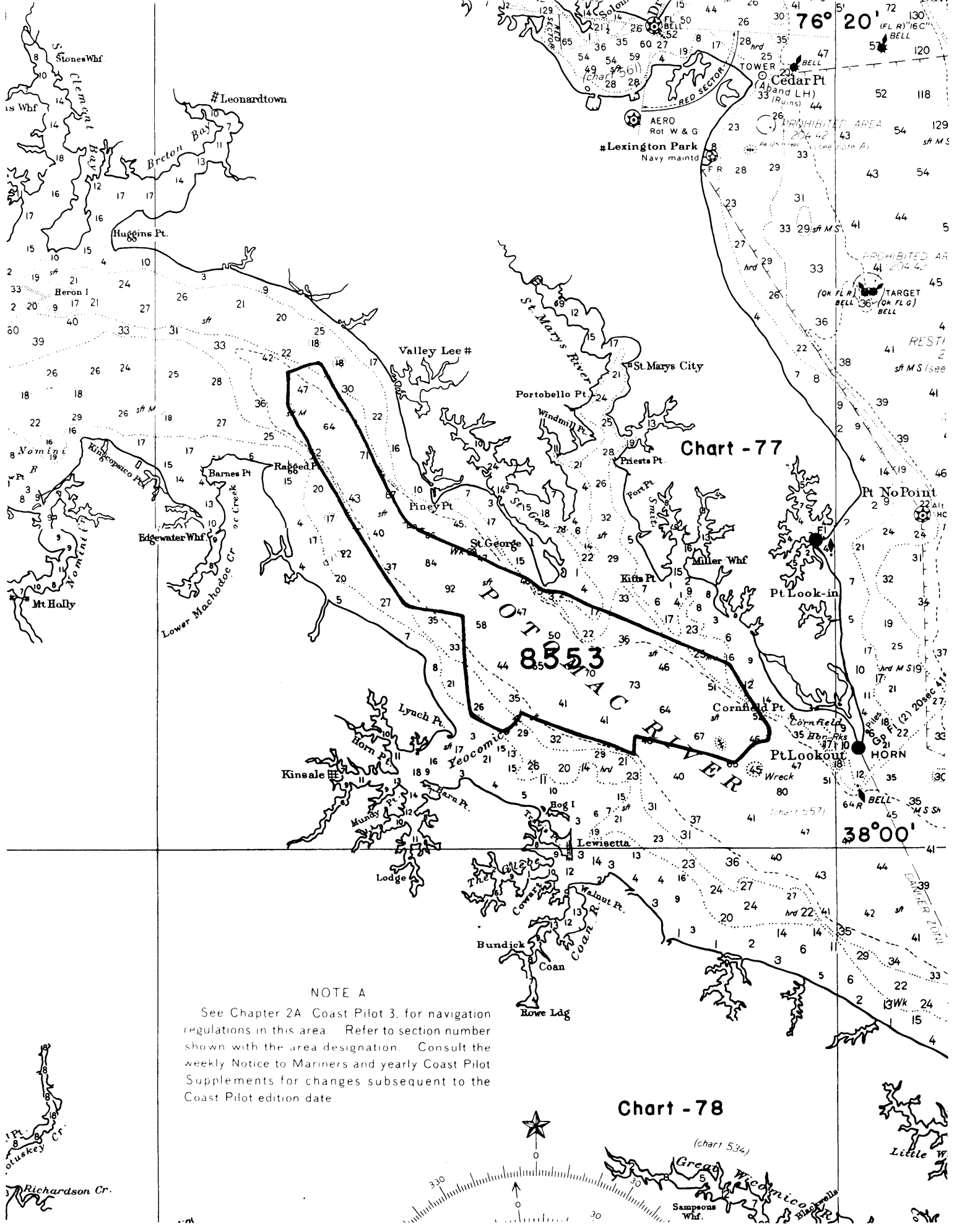


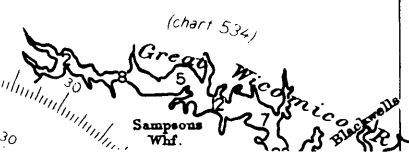
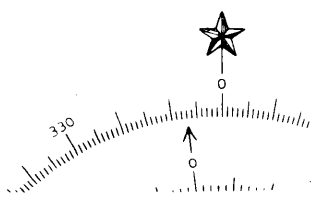
Chart - 77

8353

Chart - 78

**NOTE A**

See Chapter 2A, Coast Pilot 3, for navigation regulations in this area. Refer to section number shown with the area designation. Consult the weekly Notice to Mariners and yearly Coast Pilot Supplements for changes subsequent to the Coast Pilot edition date.



# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8553

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/17/62	1224	J. H. Eaton	<i>Part. App'd.</i> Before <del>After</del> Verification and Review <span style="float: right;">VRD</span>
7-30-62	558	G. R. Johnson	Before <del>After</del> Verification and Review <i>Partly Applied</i> <i>No. Correction</i>
10-1-62	557	M. Rogers	<i>Examined before</i> Before <del>After</del> Verification and Review <i>critical corr. only.</i> <span style="float: right;">VRD 10-4-62</span>
10-9-62	78	R. H. DeLauder	<i>Part. appl.</i> Before <del>After</del> Verification and Review <i>then edit</i> <i>78 along # 21 A.</i>
10-22-62	77	J. P. Weir	<i>Part. Applied thru Chart 557 drawing # 21</i> Before <del>After</del> Verification and Review <i>critical corr. only</i> <span style="float: right;">VRD 10-27-62</span>
9/3/63	557	J. H. EATON	<i>Comp. App'd.</i> <del>Before</del> After Verification and Review
9/11/63	558	J. H. EATON	<i>Comp. App'd.</i> <del>Before</del> After Verification and Review
12/4/63	1224	G. R. Johnson	<i>Comp. App'd.</i> <del>Before</del> After Verification and Review <i>thru Ch 557</i> <span style="float: right;">VRD</span>
2/26/64	77	O. Sundeen	<del>Before</del> 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.