

# 8550

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-10-3-60 Office No. H-8550

### LOCALITY

State Maryland

General locality Potomac River

Locality North & West of Piney Point

1960

CHIEF OF PARTY

E. H. Sheridan

LIBRARY & ARCHIVES

DATE October 25, 1961

USCOMM-DC 5087

8550

HWB

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-8550

Field No. CO-10-3-60

State MARYLAND

General locality POTOMAC RIVER  
North & West of Piney Pt.

Locality POTOMAC RIVER

Scale 1:10,000 Date of survey 17 June thru 1 August 1960

Instructions dated 23 April 1959 and 23 February 1960

Vessel Launch 178 and Skiff 749

Chief of party E. H. Sheridan

Surveyed by R. L. Newsom, J. D. Bossler, Robert M. Hagan, C. W. Randall,  
O. C. Swindell

Soundings taken by fathometer, ~~and 16' pole~~ and 16' pole

Fathograms scaled by W. R. Wilson, J. D. Bossler

Fathograms checked by W. M. Smith, J. D. Bossler, O. C. Swindell, R. L. Newsom

Protracted by W.L. Jonns (Norfolk Processing Office)

Soundings penciled by W.L. Jonns

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

REMARKS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8550

(FIELD NO. CO-10-3-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

A. PROJECT:

The work was executed under ORIGINAL INSTRUCTIONS dated 23 April ✓  
1959 and SUPPLEMENTAL INSTRUCTIONS dated 23 February 1960.

B. SURVEY LIMITS AND DATES:

The area surveyed encompasses both sides of the Potomac River  
including Jackson, Gardner, Herring and Blake Creeks. The survey  
extends northward from Latitude  $38^{\circ} 06.0'$  at a junction with Hydrographic  
Surveys CO-10-2-60 and CO-10-1-60 to Latitude  $38^{\circ} 13.0'$ . The survey  
extends westward from Longitude  $76^{\circ} 31.0'$  to Longitude  $76^{\circ} 36.0'$ , omitting  
a strip approximately 1 mile in width, in the middle of the river, which  
was surveyed by the Ship COWIE on hydrographic sheet CO-20-1-60.  
(H-8553)

H-8548

H-8549

P5  
Review

The work on this sheet began on 17 June and ended on 1 August 1960. ✓  
The sheet layout was furnished by the Washington Office.

C. VESSELS AND EQUIPMENT:

Launch 178 and Skiff 749 were used for all the sounding on this survey,  
based from the Ship COWIE. Skiff 749 was used for soundings in the creeks ✓  
and in the river from the shore out to a depth of about 10 feet. Launch  
178 sounded in depths from 4 to 80 feet.

All the sounding by Launch 178 was done using 808 Fathometer No.  
160-SPX, calibrated at 820 fms/sec. with the transducer units set in the ✓  
bilges. All sounding by Skiff 749 was done with a 16 foot sounding pole.

The launch was operated at speeds varying from 4 to 7 knots and the ✓  
skiff from 3 to 7 knots. The turning radius of the boats was not determined.

D. TIDE AND CURRENT STATIONS:

A standard tide gage was maintained at Piney Point, Maryland and a  
portable tide gage was maintained at Kinsale, Virginia during the entire ✓  
period of this survey. The portable station at Kinsale was used for the  
reduction of all soundings on this survey. A 100 hour current station  
was observed at Latitude  $38^{\circ} 08.35'$ , Longitude  $76^{\circ} 33.40'$ . The Descriptive  
Report on Sheet CO-20-1-60 covered this station.

(H-8553)

Not used  
Not plotted

E. SMOOTH SHEET:

*was plotted at thc*  
 This survey ~~will be transferred to~~ the Norfolk District Office  
 for ~~smooth plotting.~~

F. CONTROL STATIONS:

The basic triangulation in this area was executed by P.M.T., 1919, US OD 1919, E.B.L., 1929, J.B.JR., 1934 and Virginia Fishery Commission in 1932. The majority of the signals on this survey were located by photogrammetric methods on Shoreline Manuscripts T-10657, T-10658, T-10664, T-10665 and T-10670. A number of supplemental signals were located by sextant angles (see list of signals) and are shown as blue circles on the boat sheet. Signals <sup>near</sup> Ach, Jam, Pin and Sal were located or relocated by personnel aboard the Ship COWIE. The photogrammetric signal location was executed by Photo Party No. 723 under Ensign George Wirth. *see addendum*

The signals were very adequate and their positions were accurate except for the signals relocated by the Ship COWIE. Although triangulation stations were not used extensively for hydrographic signals the control was adequate because the photogrammetric control was very rigid.

A great deal of the basic triangulation in this area is missing or is in danger of being washed out.

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topographic details were obtained from Blueline Manuscripts T-10657, T-10658, T-10664, T-10665 and T-10670 at a scale of 1:10,000. The manuscripts were ruled in November 1958, however the photographs were taken in 1955 and 1958. *See P 2 Review*

The shoreline in this area has changed considerably. The party in charge of the inshore hydrography did not do any extensive relocating of the shoreline as it is changing too rapidly. All the relocating is noted in the sounding volumes. *Revisions shown in red. P 6 Review*

It may be noted that the Corps of Engineers, U. S. Army, at the time the surveying was taking place, were dredging out and building a channel into Herring Creek. (BP 60159-1960). *P 7 B Review*

A large amount of sea weed was encountered in the small creeks included in this survey but it did not effect the accuracy in any manner.

H. SOUNDINGS:

All soundings taken with Skiff 749 were taken with a 16' sounding pole. The character of the bottom for the inshore hydrography was noted in the sounding volumes every time the character of the bottom changed.

Launch 178 or offshore hydrography was sounded using 808 Fathometer No. 160-SPK. Bottom samples on this work were obtained by use of soap on the end of a lead line.

I. CONTROL OF HYDROGRAPHY:

The hydrography was principally controlled by three-point fixes taken on hydrographic signals and natural objects. The positions very close to the shore and particularly in the creeks were determined by estimating the distance from a signal or by spotting the position relative to points and other land features.

J. ADEQUACY OF SURVEY:

The survey is considered to be complete and should supersede all prior surveys for charting purposes. The junctions with all adjoining surveys are satisfactory.

K. CROSSLINES:

Crosslines were run at about 10% of the regular system of lines. The soundings at the crossings were generally in good agreement and no significant discrepancies were noted.

L. COMPARISON WITH PRIOR SURVEYS:

The only prior survey of this area is H-2753, scale 1:20,000 surveyed in 1905.

The prior survey has an average line spacing of approximately 800 meters, making it difficult to make an accurate comparison. Several spot checks compare favorably; the new survey showing a slight shoaling. The depth curves are generally in agreement.

M. COMPARISON WITH CHART:

The present survey has been compared with C&GS Chart No. 558, scale 1:40,000, revised through 21 March 1959. The charted soundings and depth curves compare very favorably. In general the recent survey shows a slight shoaling.

PRELIMINARY REVIEW, Item No. 8., was investigated by both the Ship COWIE and Launch 178. The Ship COWIE, while running a routine line of hydrography on Sheet CO-20-1-60, picked up a ~~65~~<sup>66</sup> foot sounding, in 80 feet of water, at Latitude 38° 08.17', Longitude 76° 33.13'. Further investigation by Ship COWIE revealed no trace of a wreck. On 19 July 1960 and again on 1 August 1960 Launch 178 investigated the charted sounding. After extensive investigation the Launch found only a slight shoaling of the bottom in this area. This shoaling, after studying the fathograms, is thought to be the hull of a sailing sloop whose mast rises to a depth of ~~65~~<sup>66</sup> feet. A detailed study of both the Ship COWIE's fathograms and those of Launch 178 should reveal exactly what the obstruction is. Refer to CO-20-1-60, "Y" day, Pos. 39, 31 July 1960; CO-10-3-60, "s" day, 19 July 1960 and "t" day, 1 August 1960.

The 17 foot sounding in Latitude 38° 07.70', Longitude 76° 35.08' was investigated by Launch 178; the extensive investigation was not recorded as no trace of this shoal sounding appeared. (TPG REVIEW)

P7  
REVIEW

Plotted  
WK  
with  
66 ft  
water  
over  
it.

M. COMPARISON WITH CHART: (CONTINUED):

A new obstruction was found in Latitude  $38^{\circ} 08.27'$ , Longitude  $76^{\circ} 34.60'$ , having a shoal depth of 25 feet. This was found by Launch 178 on "j" day, 2 July 1960. *Wreck (131-132 J)* *See TPN below*

A second obstruction was found in Latitude  $38^{\circ} 10.41'$ , Longitude  $76^{\circ} 33.54'$ , having a shoal depth of 18 feet in about 26 feet of water. This was found by Launch 178 on "s" day, 19 July 1960. *(12-13 & 22-23 B) Chart letter 297 (1960) calls this feature "rocks"*

The 23 foot sounding in Latitude  $38^{\circ} 10.90'$ , Longitude  $76^{\circ} 33.77'$ , was not given a lot of attention because the sounding is not out of order in this area. A line of hydrography over the charted sounding showed a depth of 25 feet. (

The 35 foot charted sounding in Latitude  $38^{\circ} 11.32'$ , Longitude  $76^{\circ} 36.03'$ , disagrees with the new survey depth of 30 feet. The new depth should be used. No reason can be given for this discrepancy. *Falls in 29 ft. on this survey.*

N. DANGER AND SHOALS:

The obstruction in Latitude  $38^{\circ} 08.27'$ , Longitude  $76^{\circ} 34.60'$ , and another in Latitude  $38^{\circ} 10.41'$ , Longitude  $76^{\circ} 33.54'$  could be considered to be dangers to navigation. These can be found in Volume 4, pages 12, 13 and 14 and Volume 7, pages 64, 65 and 66 respectively. *Wreck. see TPN above*

Most all charted shoals have shoaled a little more.

O. COAST PILOT INFORMATION:

The coast pilot information was forwarded to the Washington Office 25 October 1960 in a separate report.

P. AIDS TO NAVIGATION:

The positions of fixed aids to navigation will be reported on Form 567. ✓

FIXED AIDS

RAGGED POINT LIGHTHOUSE, 1919 - Flashing white every 10 seconds, 44 feet, Latitude  $38^{\circ} 09.26083'$ , Longitude  $76^{\circ} 36.0971'$ , in 9 feet of water, located on Shoreline Manuscript T-10664. ✓

PINEY POINT LIGHTHOUSE, 1858 - Fixed white, 34 feet, Latitude  $38^{\circ} 08.1126'$ , Longitude  $76^{\circ} 31.8023'$ , on land, located on Shoreline Manuscript T-10665. ✓

PINEY POINT OIL PIER LIGHTS, 1958 - A, B, C & D, fixed red, privately maintained lights on the pier, average position for 4 lights, Latitude  $38^{\circ} 08.00'$ , Longitude  $76^{\circ} 31.98'$ , located on Shoreline Manuscript T-10665. *(1955-59)* ✓

P. AIDS TO NAVIGATION: (CONTINUED):FLOATING AIDS

Black and White Spar Buoy No. "19W" - Latitude 38 09.48', Longitude 76 35.83', in 34 feet of water, located by Launch 178 on 18 July 1960, position 74-r. ✓

Black and White Spar Buoys Nos. "19DW" and "19EW" were not located by the hydrographic party. ✓

The lighted Black Buoy, flashing green every 5 sec., No. "9" and the Lighted Red Bell Buoy, quick flashing red, No. "10" were located by Ship COWIE on CO-20-1-60. (H-8553, 1960) ✓

Q. LANDMARKS FOR CHARTS:

There are no landmarks charted in the area and none are recommended for charting. ✓

R. GEOGRAPHIC NAMES:

*gmb* No discrepancies were found in the charted geographic names. ✓

U. FATHOMETER CORRECTIONS:

A bar check was taken on the average of one every two days at depths ranging from 5 to 80 feet. The initial was set on zero for all bar checks. The results were averaged as a total, the curve drawn and the correction was applied to the whole survey. A tabulation of the fathometer corrections follows:

FATHOMETER CORRECTIONSFATHOMETER NO. 160-SPX

<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	15.0	✓ 0.4	35.0	43.3	✓ 1.0
15.1	39.9	✓ 0.2	43.4	53.1	✓ 1.2
40.0	55.0	0.0	53.2	66.7	✓ 1.4
			66.8	85.0	✓ 1.6

Z. TABULATION OF APPLICABLE DATA:

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

ACCOMPANYING THIS REPORT:

18 each - Fathograms, "a" thru "t" day  
4 sheets - Tide reducers  
2 " - Fathometer corrections  
2 copies - Descriptive Report  
12 volumes - Soundings, Vol. I thru 12  
2 each - Boat Sheets, CO-10-3-60 (1-sheet, Launch 178, 1-sheet, Skiff 749)  
5 each - Blue-line Manuscripts, Nos. T-10657, T-10658, T-10664, T-10665 and T-10670  
5 each - Signal Manuscripts, Nos. T-10657, T-10658, T-10664, T-10665 and T-10670

A list of signals is attached to the inside cover of Volume I.

Respectfully submitted,

*John D. Bossler*

John D. Bossler,  
ENS., C&GS., USC&GSS COWIE.

APPROVED AND FORWARDED:

*Pentti A. Stark*  
Pentti A. Stark,  
LCDR., C&GS., Comdg. Ship COWIE  
for: CAPT. Emmett H. Sheridan

APPENDIX:

"A" Tide Note  
"B" Statistics  
"C" List of Signals



APPENDIX "A"T I D E   N O T E

HYDROGRAPHIC SURVEY H-8550

(FIELD NO. CO-10-3-60)

The tide station at Kinsale Marine, Kinsale, Virginia was used for the tide corrections on the entire survey.

## LOCATION OF KINSALE, VIRGINIA TIDE STATION:

Latitude  $38^{\circ} 01.85'$   
Longitude  $76^{\circ} 34.67'$  } *off sheet*

MDW on tide staff. 1.9'

APPENDIX "B"S T A T I S T I C SHYDROGRAPHIC SURVEY H-8550(FIELD NO. CO-10-3-60)LAUNCH 178

<u>DATE</u>	<u>DAY LETTER</u>	<u>VOL. NO.</u>	<u>NO. OF POS.</u>	<u>NAUT. MI. SDG.</u>
6/17/60	a (blue)	1	44	5.9
6/18/60	b "	1	93	12.6
6/19/60	c "	1	20	2.7
6/20/60	d "	1 & 2	197	31.7
6/21/60	e "	2	59	8.7
6/22/60	f "	2	109	16.5
6/30/60	g "	2 & 3	237	44.1
7/1/60	h "	3	167	28.5
7/2/60	j "	3 & 4	136	18.8
7/4/60	k "	4	99	17.2
7/6/60	l "	4 & 5	253	45.0
7/14/60	m "	5	104	16.6
7/15/60	n "	5 & 6	208	34.5
7/16/60	p "	6	182	27.7
7/17/60	q "	6 & 7	241	38.0
7/18/60	r "	7	147	21.6
7/19/60	s "	7 & 8	116	13.4
8/1/60	t "	8	31	4.0
TOTALS - LAUNCH 178			2443	387.5

SKIFF 749

6/22/60	a (purple)	1	103	9.3
6/29/60	b "	1	166	15.0
6/30/60	c "	2	146	14.4
7/2/60	d "	2	144	15.2
7/3/60	e "	2 & 3	114	7.5
7/5/60	f "	3	113	13.0
7/14/60	g "	3	109	8.7
7/15/60	h "	3	110	5.6
7/16/60	j "	4	100	3.8
7/17/60	k "	4	91	9.7
7/18/60	l "	4	49	2.7
TOTALS - SKIFF 749			1245	104.9
GRAND TOTALS			3688	492.4

Total square nautical miles of sounding - 19.5

APPENDIX "C"LIST OF SIGNALS

HYDROGRAPHIC SURVEY H-8550

(FIELD NO. CO-10-3-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Abe	T-10665	Cue	T-10670
Ace	T-10665	Cur	T-10657
Act	T-10670	Cut	T-10665
Add	T-10657	Daw	Photo-hydro T-10670
Ado	T-10665	Day	T-10670
Ago	T-10657	Deb	T-10670
Aha	T-10670	Dif	T-10670
Als	T-10670	Dim	T-10665
Alp	T-10670	Dip	T-10657
Amy	T-10657	Dix	T-10665
Ann	Photo-hydro T-10665	Dog	T-10657
Apt	" " T-10670	Don	Photo-hydro T-10664
Arm	T-10665	Dor	T-10658
Art	T-10665	Dot	T-10670
Ask	T-10665	Dud	T-10665
Ave	T-10670	Dul	T-10670
Axe	T-10665	Duo	T-10670
Azo	T-10665	Ear	T-10670
Bag	T-10657	Eat	Photo-hydro T-10665
Bah	T-10670	Ebb	T-10665
Bak	T-10670	Eel	T-10670
Bam	T-10664	Elf	Photo-hydro T-10670
Bat	T-10665	Elk	" " T-10664
Bed	T-10665	Emo	T-10657
Bel	T-10670	End	T-10665
Bib	T-10670	Epi	T-10670
Bin	T-10670	Era	T-10664
Boa	T-10670	Erl	Photo-hydro T-10670
Bob	T-10665	Est	T-10670
Bon	T-10665	Eva	T-10657
Box	T-10657	Fat	T-10665
Boy	T-10657	Fed	T-10665
Bus	T-10657	Few	Photo-hydro T-10665
But	T-10670	Fez	T-10670
Cab	T-10665	Fig	T-10657
Cam	T-10665	Fin	T-10657
Can	Photo-hydro T-10670	Fit	T-10670
Car	T-10657	Fix	T-10665
Cat	T-10658	Fly	T-10665
Caw	T-10665	Foe	T-10665
Com	Photo-hydro T-10670	Fog	T-10665
Coo	T-10658	Fop	T-10665
Cow	Photo-hydro T-10665	Fox	T-10665
Cro	T-10670	Fro	T-10665
Cry	T-10657	Fry	T-10665

APPENDIX "C"LIST OF SIGNALS (CONTINUED):

HYDROGRAPHIC SURVEY H-8550

(FIELD NO. CO-10-3-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Fun	T-10665	Jim	T-10665
Gad	T-10665	Joe	T-10665
Gal Photo-hydro	T-10665	Joy	T-10665
Gam	T-10665	Jug	T-10670
Gas	T-10657	Jut	T-10670
Gem	T-10658	Ken Photo-hydro	T-10665
Geo	T-10657	Key	T-10665
Get	T-10657	Kid	T-10657
Gig	T-10665	Kit	T-10670
Got Photo-hydro	T-10670	Lam	T-10670
Gul	T-10657	Lay	T-10665
Gup Photo-hydro	T-10670	Leg	T-10664
Had	T-10670	Lig	T-10670
Hag	T-10665	Lil	T-10670
Hat	T-10665	Lit	T-10670
Haz Photo-hydro	T-10670	Liz	T-10670
Hem	T-10670	Lop	T-10670
Her	T-10664	Lug	T-10665
Hex	T-10657	Luk	T-10670
Hid	T-10670	Lum	T-10670
Hil	T-10664	Lux	T-10665
Hip	T-10665	Mal	T-10670
His	T-10670	Mar Photo-hydro	T-10670 — ? see Verifier's remarks.
Hod	T-10665	Maw	T-10665
Hoe	T-10665	Max Photo-hydro	T-10665
Hor Hydro-sextant cuts, Vol. 4, Mes		Mes	T-10670
pg. 39-40		Mid	T-10665
How	T-10658	Moo	T-10670
Hub	T-10670	Mop	T-10657
Ice <sup>T-10665</sup>	T-10665	Mum	T-10670
Ich Photo-sextant cuts, Vol. 12, pg. 15		Nat	T-10665
Ida	T-10665	Nay	T-10657
Ion	T-10670	Ned	T-10664
Irk	T-10665	Neo	T-10670
Ita	T-10670	Nig	T-10665
Ivy Photo-hydro	T-10665	Nil Photo-hydro	T-10670
Jar	T-10665	Nit	T-10665
Jam Hydro-sextant cuts, Vol. 4, pg. 39-40		Nix	T-10657
Jap	T-10665	Now	T-10665
Jaw	T-10657	Nub	T-10670
Jel	T-10670	Nut	T-10665
Jet	T-10665	Nux Photo-hydro	T-10670
Jew	T-10670	Obi	T-10670
		Off Photo-hydro	T-10665
		Ohm	T-10670
		Oil Triang.	T-10665 PINEY POINT LIGHT
		Oma Photo-hydro	T-10670 HOUSE, 1858
		Ont " "	T-10670

NAR

T-10670 - see remarks in Verifier's report.

APPENDIX "C"LIST OF SIGNALS (CONTINUED)

HYDROGRAPHIC SURVEY H-8550

(FIELD NO. CO-10-3-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Opp	T-10670	Sue	T-10657
Ora	T-10665	Sun	T-10670
Ozy	T-10670	Sty	T-10657
Pad	T-10665	Tap Photo-hydro	T-10665
Pak	T-10670	Tat	T-10665
Pal	T-10665	Tee	T-10665
Par Photo-hydro	T-10665	Tim	T-10670
Paw	T-10665	Tit	T-10665
Pee	T-10670	Toe	T-10665
Peg	T-10665	Tor Photo-hydro	T-10670
Pet	T-10657	Tur	T-10670
Pie	T-10657	Use	T-10665
Pin Hydro-sextant cuts Vol. 4, pg. 39		Val	T-10665
Poi	T-10670	Van	T-10665
Poo	T-10664	Vex	T-10664
Pre	T-10664	Via	T-10670
Put Photo-hydro	T-10670	Vid	T-10670
Que " "	T-10664	Vim	T-10670
RAGG Triang, RAGGED POINT LIGHTHOUSE, 1919		Vol	T-10657-
Red	T-10665	Vop	T-10670
Rev	T-10665	Wag	T-10670
Rex	T-10665	Wan	T-10665
Rig	T-10665	Wax	T-10657
Rio	T-10665	Wed Photo-hydro	T-10665
Rot	T-10665	Wit	T-10665
Rul	T-10670	Wiz	T-10670
Rum	T-10657	Woo	T-10670
Rus	T-10670	Yak	T-10670
Sad	T-10665	Yea	T-10658
Sal Hydro-sextant cuts, Vol. 4, pg. 39-40		Yel	T-10665
Sic	T-10670	Yes Photo-hydro	T-10665
Sig	T-10670	Yet	T-10665
Sir	T-10665	Yip	T-10670
Sim	T-10658	Yud Photo-hydro	T-10670
Ski	T-10670	Zag	T-10665
Sky	T-10665	Zig	T-10670
Sly	T-10665	Zit	T-10670
Soc	T-10665		
Son	T-10665		

NORFOLK PROCESSING OFFICE  
ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8550 (Co-10-3-60)

GENERAL

This appears to be an excellent basic survey, and except for the relatively minor discrepancies listed below, no particular difficulties were experienced during the smooth plot. Soundings are in generally good agreement at crossings. ✓

DISCREPANCIES

Station ICH was transferred from T-10665. <sup>(1955-59)</sup> The sextant cuts ✓ recorded on page 15, vol. 12, are weak, and the point thus located caused jumps in the sounding lines.

Station ABE is obviously misplotted on T-10665 as frequent ✓ jumps in the sounding lines of from 1 to 3 MM were noted. No corrective action was taken as the bottom in the area affected is ✓ relatively flat, and the amount of displacement did not warrant a return of the field party to the area for relocation purposes.

Station BAK was incorrectly transferred to the Launch boat ✓ sheet. Sounding lines controlled by this station will not agree ✓ exactly in position with those plotted on the smooth sheet.

A possible obstruction, with a sounding of 21 feet in surrounding depths of 25 feet, was found at Lat. 38-08.16', Long. ✓ 76-34.77'. It was not investigated. *possibly oyster mound.*

SHORELINE

Revisions in the HWL by the hydrographer occur at Lat. 38- ✓ 08.1' Long. 76-31.8' and at 38-10.6' Long. 76-32.9'.

Norfolk, Va.  
Oct 18, 1961

Respectfully submitted,

*Hugh L. Proffitt*  
Hugh L. Proffitt  
Cartographer

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8550

FIELD NO. CO-10-3-60

Maryland, Potomac River, North and West of Piney Point

SURVEYED: June-August 1960

SCALE: 1:10,000

PROJECT NO. CS-409

SOUNDINGS: 808 Depth Recorder  
Sounding Pole

CONTROL: Sextant  
fixes on shore  
signals

Chief of Party-----E. H. Sheridan  
Surveyed by-----R. L. Newsom, J. D. Bossler,  
R. M. Hagan, C. W. Randall and  
O. C. Swindell  
Protracted by-----W. L. Jonns  
Soundings plotted by-----W. L. Jonns  
Verified and inked by-----H. W. Quimby  
Reviewed by-----I. M. Zeskind  
Inspected by-----R. H. Carstens

Date: 7/6/62

1. Description of the Area

This is a survey of the Potomac River between lat.  $38^{\circ}06.0'$  and lat.  $38^{\circ}13.0'$ , and between long.  $76^{\circ}31.0'$  and  $76^{\circ}36.2'$ , except for a strip about 1 mile wide in the center of the river. The survey includes Blake, Herring, Piney Point, Jackson and Gardner Creeks. The bottom is slightly irregular in depths less than 18 ft. and fairly smooth in greater depths, except in several areas where steep gradients occur. An example of this occurs in the vicinity of Piney Point. Here the bottom drops abruptly from 6 ft depths to depths of about 40 ft.

2. Control and Shoreline

Signals Elk, Que, Yud, and Haz located inshore on the west side of the Potomac River by field photogrammetric methods are not described in the records of the present survey. These signals are possibly on duck blinds or fish stakes. The source of all other signals are given in the Descriptive Report.

The shoreline originates with unreviewed photogrammetric surveys T-10665 (1955-59), and T-10657, T-10658, T-10664 and T-10670 of 1955-58, supplemented by several corrections to the shoreline made by the hydrographic party. These corrections are shown by dashed red lines. *check against reviewed copies 9/2/63 EET OKAY, no changes.*

### 3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated. The 3-ft., 24-ft., and 36-ft were drawn to better define the bottom configuration. The least depths on shoals were adequately determined.

### 4. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth-plotting was accurately done.

### 5. Junctions

The junctions with H-8552(1960) and H-8610(1960) on the west, with H-8549(1960) on the south, with H-8548(1960) on the southeast, and with H-8553(1960) in the unsurveyed portion of the present survey, will be considered in the reviews of those surveys.

### 6. Comparison with Prior Surveys

- A. H-701(1859-60), 1-20,000  
H-793(1860), 1-20,000

Except for the creeks which empty into the Potomac River, these early prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals that the bottom in the common area in general has shoaled 1-3 ft., except



in several areas where the shoaling has been greater. An example of this latter shoaling occurs in lat.  $38^{\circ}09.28'$ , long.  $76^{\circ}35.6'$ , where a prior depth of 39 ft falls in present depths of 30 ft. Occasional deepening of the bottom is also noted, as for example, in lat.  $38^{\circ}11.27'$ , long.  $76^{\circ}35.65'$ , where a prior depth of 21 ft. falls in present depths of 27-28 ft. The most extensive shoaling occurs on the east side of the Potomac River in depths of less than 18 ft. As a result of this shoaling, the 6-ft. depth curve has moved offshore as much as 200 meters. On the west side of the Potomac River, in depths of less than 18 ft., the bottom has generally shoaled 1-2 ft.

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

- B. H-2753 (1905), 1-20,000  
H-2754 (1905), 1-20,000

These small-scale reconnaissance surveys, except for the tributaries, cover the area of the present survey. A comparison between the prior and present surveys reveals changes in shoreline and bottom configuration. These changes are attributed to natural and artificial causes, such as the eroding of the shoreline, the depositing of sediment from the tributaries which empty into the Potomac River, the reclaiming of land and to dredging operations. The most extensive shoaling is found on the east side of the River in depths of less than 18 ft where the bottom has shoaled 1-3 ft. As a result of the shoaling on this side of the River the present 18-ft curve is located about 300 meters further offshore than its prior location. On the west side of the River, shoaling of 1-2 ft is generally noted, except off Ragged Point in the vicinity of lat.  $38^{\circ}08.94'$ , long.  $76^{\circ}36.20'$  where a prior depth of 15 ft. falls in present depths of 7-8 ft. Shoreline changes have occurred on both sides of the Potomac River. The shoreline has eroded as much as 90 meters in the vicinity of lat.  $38^{\circ}07.8'$ , long.  $76^{\circ}36.2'$ . The island located at the entrance to Jackson Creek was formerly part of the south shore of the Creek. The spit at the south end of Piney Point has shifted about 60

meters south southeastward from its former location. The shoreline has eroded about 100 meters in the vicinity of lat.  $38^{\circ}08.95'$ , long.  $76^{\circ}32.3'$ . The 17-ft sounding charted in lat.  $38^{\circ}07.73'$ , long.  $76^{\circ}35.08'$ , from H-2753 (1905) should be deleted from the chart. An extensive investigation of the area failed to reveal the existence of this sounding. (See paragraph M., page 3 of the Descriptive Report.)

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

7. Comparison with Chart 558 (Latest print date 10-2-61)

A. Hydrography

The charted hydrography originates principally with the previously discussed prior surveys which need no further consideration, with the U. S. Corps of Engineers' survey of 1939 (Bp 33592), and with a few critical soundings from the present survey prior to verification and review.

The wreck with 65-ft over it charted in lat.  $38^{\circ}08.16'$ , long.  $76^{\circ}33.12'$ , originates with HON to M 48, 1949, which states that this is a wreck with 65 ft swept over it. The existence of the wreck was confirmed by a 66-ft. sounding on a single line of soundings on H-8553 (1960). Development of this area on H-8550 failed to confirm the existence of the wreck. The 66-ft. sounding on the wreck has been transferred to the present survey from H-8553. In view of the above stated facts, "65 WK" should be retained on the chart.

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

B. Controlling Depths

The charted controlling depth of 6-ft through the entrance to Herring Creek originates with after dredging survey of the U. S. Corps of Engineers of 1960 (Bp 60159). This channel was being dredged at the time the present survey was taking place. The 1-ft. reported ~~shoal~~ charted at the entrance to Her-

ring Creek originates with chart letter 564(1961) subsequent to the present survey.

C. 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 Project Instructions

The 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.


Only two triangulation stations were recovered on this survey.

Examined and Approved:

  
Chief,  
Nautical Chart Division

  
Assistant Director,  
Office of Cartography

  
Projects Officer,  
Operations Division

  
Assistant Director,  
Office of Oceanography

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8550

Records accompanying survey: Smooth sheets ...1.;  
 boat sheets 1(2parts) .....; sounding vols. ..12.; wire drag vols. ....;  
 Descriptive Reports ..1...; graphic recorder envelopes ...9.;  
 special reports, etc. ..4 Sheet Tide corrections, 2 Sheets.....  
 Bar check corrections and 4 Boat sheet Film Positives.  
 ..2 Boat sheet overlays.....

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

Number of positions on sheet	3688
Number of positions checked	2100
Number of positions revised	41 (493) 1 (104) 1-117d 1-953
Number of soundings revised (refers to depth only)	251
Number of soundings erroneously spaced	19
Number of signals erroneously plotted or transferred	0
Topographic details	Time 50
Junctions	Time 0
Verification of soundings from graphic record	Time 20
Special adjustments	Time

Verification by Helen M. Dumbly Total time 590 Date May 31, 1962

Reviewed by [Signature] Time 60 Date July 6, 1962

GEOGRAPHIC NAMES

Survey No. H-8550

Name on Survey											
	A	B	C	D	E	F	G	H	K	B&N	
Blake Creek	✓										1
Coles Neck	✓									✓	2
Gardner Creek	✓									✓	3
Herring Creek	✓										4
Jackson Creek	✓									✓	5
<del>Piney Creek</del> Point	✓										6
<del>Piney Creek Point</del>	✓										7
Ragged Point	✓										8
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*George M. Bace*  
*Geographic Names*  
*3 Nov 1961*

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

27 November 1961

Division of Charts: R. H. Carstens

Plane of reference approved in  
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8550

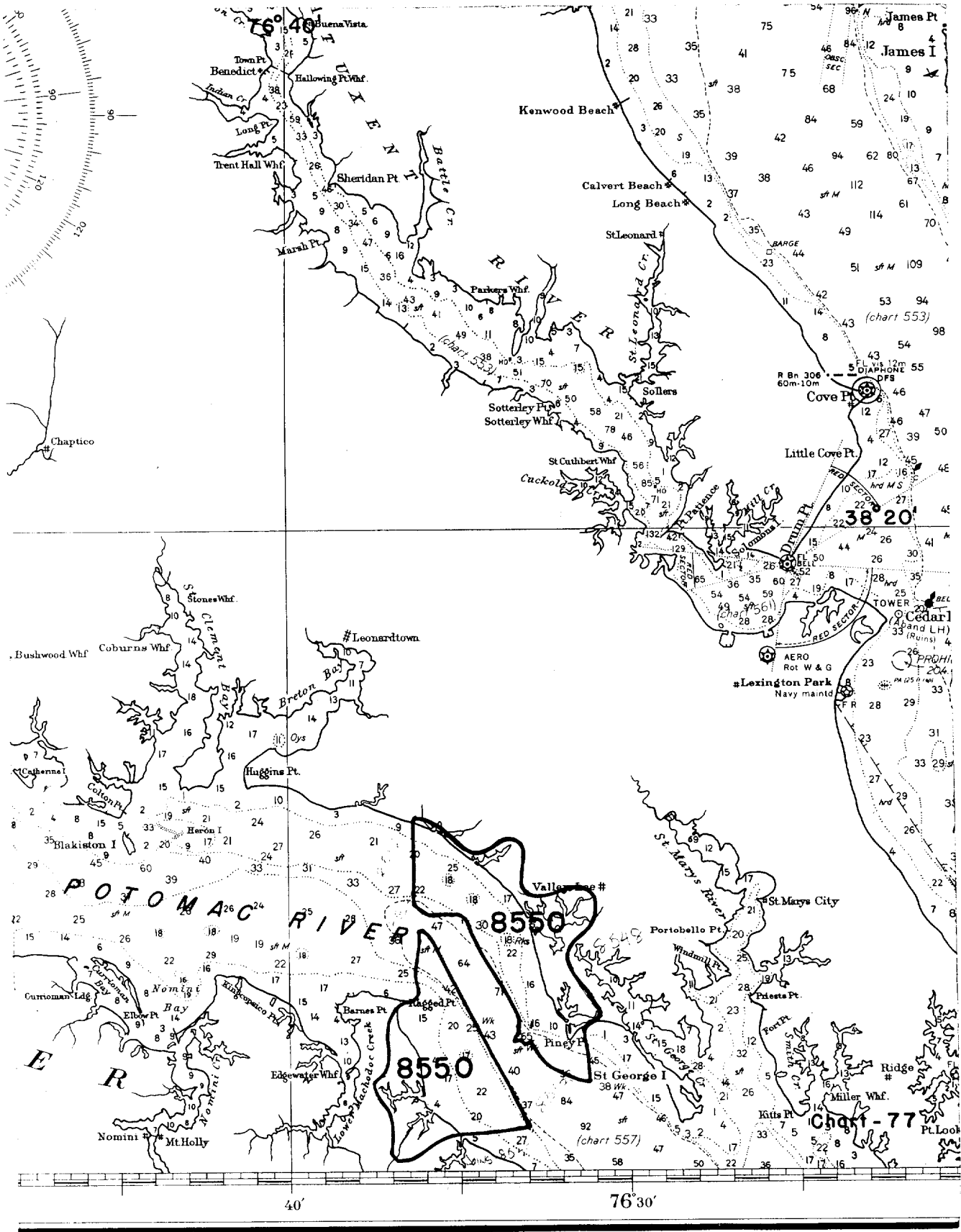
Locality Potomac River

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

Height of mean high water above plane of reference is: 1.4 feet.

Condition of records satisfactory except as noted below:

J. M. Simmons  
Chief of Tides and Currents Branch  
~~Chief of Division of Tides and Currents~~



# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8550

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-27-62	101-1	Chas R. Wittmann	<del>Before</del> <del>After</del> Verification and Review <i>Examined only no chart correction.</i>
7-30-62	558	G.R. Johnson	<del>Before</del> After Verification and Review <i>before Insp.</i>
			<i>Partly Applied</i>
10/2/62	557	Wm. Rogers	<i>Partly appl'd</i> <del>Before</del> After Verification and Review <i>before inspection.</i>
			<i>thru envelope of chart 558 (dg. #19)</i>
10-9-62	78	R.H. Richardson	<i>Partly appl'd</i> <del>Before</del> After Verification and Review <i>before inspection.</i>
			<i>thru ch't 557 dwg #21 A.</i>
10-23-62	77	J.P. Weir	<i>Partially applied thru chart 557 drawing #21 A</i> <del>Before</del> After Verification and Review <i>before inspection</i>
			<i>Chart 558 drawing #19 critical corr. only</i>
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
2/26/64	77	O. Svendsen	<del>Before</del> After Verification and Review
9/20/66	78	John P. Weir	<del>Before</del> After Verification and Review <i>No correction, consider fully applied.</i>
			<del>Before</del> 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.