

8496

Diag. Cht. No. 78-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 00-2159 Office No. H-8496

LOCALITY

State Maryland - Virginia

General locality Potomac River

Locality Entrance of Potomac River into
Chesapeake Bay

1959

CHIEF OF PARTY

C. A. Schoene

LIBRARY & ARCHIVES

DATE April 26, 1960

USCOMM-DC 5087

8496

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 * 8496

Field No. CO - 2159

State MARYLAND - VIRGINIA

General locality POTOMAC RIVER

Locality ENTRANCE OF POTOMAC RIVER INTO CHESAPEAKE BAY.

Scale 1 : 20,000
~~1 : 10,000~~ Date of survey 6 AUGUST - 22 OCTOBER, 1959

Instructions dated 23 APRIL 1959

Vessel SHIP COWIE

Chief of party CHARLES A. SCHOENE.

Surveyed by PERSONNEL OF SHIP COWIE

Soundings taken by fathometer, ~~and by~~ hand lead, ~~and by~~

Fathograms scaled by PERSONNEL OF SHIP COWIE

Fathograms checked by PERSONNEL OF SHIP COWIE

Protracted by JOHN D. BOSSLER, ENS., C&GS

Soundings penciled by JOHN D. BOSSLER & CLIFFORD W. RANDALL, ENS., C&GS

Soundings in ~~10000~~ feet at MLW ~~10000~~ *And are true depths*

REMARKS: DUE TO CROWDING OF LINES SEVERAL SOUNDINGS WERE OMITTED. HOWEVER, CARE WAS TAKEN SO THAT NO PERTINENT SOUNDINGS WERE LEFT OUT. FAIRLY GOOD AGREEMENT WAS OBTAINED ON THE CROSS LINES. OCCASIONALLY THERE WAS A DISCREPANCY OF ONE FOOT.

*WPS
72*

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

A. PROJECT: CS - 409

Work on this sheet was executed under ORIGINAL INSTRUCTIONS dated 23 April 1959.

B. SURVEY LIMITS AND DATES:

The surveyed area consists of one continuous area in the center of the Potomac River at its entrance into Chesapeake Bay. The area covers about 17.0 square nautical miles from latitude $37^{\circ} 58.2'$ on the south side to latitude $38^{\circ} 03.21'$ on the north side and from longitude $76^{\circ} 18.21'$ on the east side to longitude $76^{\circ} 30.21'$ on the west side.

This survey makes an adequate junction with Hydrographic Survey H-8283, Scale 1:20,000, 1956 on the east side.

(1955-56)

The field work was done from 6 August to 22 October 1959.

C. VESSELS AND EQUIPMENT:

The Ship COWIE was used for about 95% of the work using two 808 fathometers calibrated at 820 fm/sec. with the transducer units installed in keel mounts. Fathometer No. 120-S was used on A day and parts of B and C days and fathometer No. 164 was used for the remainder of the Ship's work. The turning radius of the ship at full speed and hard over rudder was approximately 360 meters.

Launch 178 was used in running splits for one day and obtained bottom samples on another. 808 fathometer 160-SPX, calibrated at 820 fm/sec. with transducer units set in the bilge, was used for this work. The turning radius of the launch was not determined.

Handlead soundings were taken at detached positions for bottom samples.

D. TIDE AND CURRENT STATIONS:

During the period of this report there were two portable tide gages maintained; one at Point Lookout, Maryland, latitude $38^{\circ} 02' 23''$, longitude $76^{\circ} 19' 27''$ and the other at Travis Point, Virginia, latitude $37^{\circ} 59' 45''$, longitude $76^{\circ} 28' 02''$. Both of these stations were used for obtaining tide reducers. /No time or height corrections were applied to the observed tides.
/ $76^{\circ} 27' 55''$

See tide note for additional information.

No current stations were observed.

E. SMOOTH SHEET;

The smooth sheet was started by personnel of the Ship COWIE and transferred to the Norfolk District Office at the end of the layup period.

F. CONTROL STATIONS;

The basic triangulation in this area was done by E.B.L., 1929, J.B.Jr., 1934 and G.W.L., 1945. Signals FIVE, FREY (see letter in appendix), LOOK and TANK are published triangulation stations. Signal Navy was computed from a sextant traverse as a check on the photo location. The photo location was found correct and was used in smooth plotting.

In several instances, a sufficient number of theodolite cuts were taken on photo-hydro stations to permit a computation of geodetic positions. This was done in order to (1) provide a check on the photogrametric datum; (2) to detect any blunders in photo identification and (3) to strengthen the control system. In plotting the smooth sheet, priority was given to the computed positions. The signals plotted by geodetic positions are: Ale, Bak, Car, Cat, Doc, End, Red and San. Attached to the original copy of this report is all the field data used in computing these geodetic positions. *(In Sahier with sdg records)*

The remaining signals were located by a shore based party from Shoreline Manuscripts Nos. T-11049, T-11290, T-11047, T-11046, T-11289, Scale 1:10,000.

G. SHORELINE AND TOPOGRAPHY;

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

There ^{was} some inshore survey^s on both sides of the river around this sheet. Sheet CO-1859 and CO-1959 were completed on the south shore and Sheet CO-1-1059 and CO-1455 were completed on the north side of the river this year. These surveys show all shoreline and topography changes.

H. SOUNDINGS;

Soundings by the Ship were made using two 808 fathometers calibrated at 820 fm/sec. , nos. 120-S and 164. Soundings by launch 178 were made using 808 fathometer no. 160-SPX, calibrated at 820 fm/sec. and a hand lead at all bottom samples.

Bar checks were obtained once or twice daily and used for obtaining fathometer corrections.

I. CONTROL OF HYDROGRAPHY;

The hydrography was entirely 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 supersede 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 8 or 9 percent of the regular system of lines. The crossings are generally in good agreement and no significant discrepancies were found.

L - M. COMPARISON WITH PRIOR SURVEYS AND CHARTS:

The only prior survey is H-2737, Scale 1:20,000, 1904. This survey has a line spacing of 800 to 1,000 meters which precludes a detailed and adequate comparison with the 1959 survey. There is also a large area near shore which apparently had not been previously surveyed. *See Review*

This survey makes a junction with H-8283, 1:20,000, 1956 on the east and H-8279, 1:10,000, 1955 on the north. ¹⁹⁵⁵⁻ H-8494 (1959) on south east. *See Review*

A boat sheet comparison with the old survey indicates good agreement.

The present survey has also been compared with Chart No. 557, Potomac River, Scale 1:40,000, revised 9/29/58. The soundings on the chart are in excellent agreement with the present survey. Any soundings which are not in agreement with this survey should be deleted. *See Review*

N. DANGERS AND SHOALS:

There is one shoal of ⁴⁵ 52 feet in 58 to 60 feet of water, latitude 38° 01' 51", longitude 76° 22' 23". This is probably a wreck that is shown on existing charts. *Charted wreck is about a mile to N.W. of 45' sdg.* *See Review*

P. AIDS TO NAVIGATION:

FIXED AID: - POINT LOOKOUT LIGHTHOUSE, latitude 38° 02' 19", longitude 76° 19' 20", located by triangulation. ^{19.108} *See Review.*

FLOATING AIDS: Black Lighted Buoy No. "5", in 33 feet of water, latitude 38° 01' 50", longitude 76° 25' 37", located by Ship COWIE, pos. 18, 2 October 1959. ^{20.517}

Red Lighted Buoy No. "4", Cornfield Harbor, in 54 feet of water, latitude 38° 00' 49", longitude 76° 20' 39", located by Ship COWIE, pos. 97, 2 October 1959.

Red Bell Buoy No. "2", Cornfield Harbor, in 49 feet of water, latitude 38° 01' 19", longitude 76° 19' 26", located by Ship COWIE, pos. 50, 16 October 1959.

A spar buoy was also located in 38 feet of water, latitude 38° 00' 58", longitude 76° 23' 00", by Ship COWIE, pos. 42, 19 September 1959. ^(5' 17") ₃₄

Q. LANDMARKS FOR CHARTS:

No additional landmarks from those already charted are recommended.

R. GEOGRAPHIC NAMES:

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

U. FATHOMETER CORRECTIONS:

Two fathometers were used in the Ship COWIE's work. Fathometer No. 120-S was used on A and C days and for positions 1 through 166 on B day. A bar check was taken on 6 September and 16 October 1959 with this fathometer and averaged. This average value was used in determining corrections for fathometer No. 120-S to be used for A and C days and positions 1 through 166 on B day. For an abstract of these soundings, see appendix.

The remainder of the ship work was accomplished using Fathometer No. 164. A bar check was taken daily with this machine and two correction curves were drawn. One curve for the remainder of B day and one curve for soundings from position 82, C-day to the end of the ship's work. These bar checks ranged from 5.0 to 70.0 feet. An abstract of these corrections is in the appendix.

A bar check was taken on two days with Fathometer 160-SPX, on launch 178. These values, ranging from 5.0 to 35.0 feet, were averaged and a curve drawn for the fathometer corrections. These corrections are also in the appendix.

It should be noted here that the reason for the Ship COWIE using two fathometers was that Fathometer No. 120-S had a tendency to "jump" thus causing it to give inaccurate soundings. As soon as this "jump" was observed the fathometer was replaced by Fathometer No. 164. *Faulty Governor, records satisfactory*

Z. TABULATION OF APPLICABLE DATA:

A list of signals is attached to the inside cover of Volume 16.

A tabulation of other data is listed below.

Marigrams - Travis Point, Va. - Transferred to Washington Office
5 January 1960.

Marigrams - Pt. Lookout, Md. Transferred to Washington Office
5 January 1960.

Hourly Heights - 4 sheets.

Fathometer Corrections - 4 sheets.

Tide Reducers - 4 sheets.

Descriptive Report - 2 copies.

Sounding Volumes 1 through 6.

Boat Sheet - CG-2159.

Smooth Sheet - CO-2159.

Manuscripts - T-11290, T-11047, T-11046, T-11442, T-11289.

981
11 982
986
985
26-27
30-31

101
Manuscripts

reports

Z. TABULATION OF APPLICABLE DATA: (CONTINUED):

NOTE:- These manuscripts were used on Surveys CO-1859, CO-1959, CO-1455 and CO-1-1059, therefore the signals were scaled from these manuscripts, Scale 1:10,000, and transferred to this survey's sheets, Scale 1:20,000. These manuscripts will be found in the above listed surveys.

H-8494 H-8495

Respectfully submitted,

Ronald L. Newsom

Ronald L. Newsom
Ensign, C&GS.

FORWARDED:

E. H. Sheridan
E. H. Sheridan, CDR., C&GS.
(for) C. S. Schoene, CDR., C&GS.
Comdg. Ship COWIE

APPENDIX:

Tidal Note
Statistics
List of Signals
Fathometer Corrections.
G. P. of Signal FREY (letter 633 MLC/pm).
Field Data for Computation of G.P.'s.

TIDE NOTE

HYDROGRAPHIC SHEET H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

Two portable tide gages were used for obtaining tide reducers on this survey. A gage at the U. S. Coast Guard Pier, Point Lookout, Maryland, latitude $38^{\circ} 02' 23''$, longitude $76^{\circ} 19' 27''$, was used for all tide reducers north of a line down the center of the river. This line is located on the boat sheet by a red line, latitude $38^{\circ} 00' 00''$, longitude $76^{\circ} 19' 00''$ on the east end of the survey and latitude $38^{\circ} 02' 10''$, longitude $76^{\circ} 26' 00''$ on the west end.

All tide reducers south of this line were obtained by using the portable tide gage at Travis Point, Virginia, latitude $37^{\circ} 59' 45''$, longitude $76^{\circ} 28' 02''$.
 $27' 55''$

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

The height datum for Point Lookout, Maryland tide gage is MLW which is 2.0' on the tide staff.

The height datum for Travis Point, Virginia, tide gage is MLW which is 2.5' on the tide staff.

LIST OF SIGNALS

HYDROGRAPHIC SHEET H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

<u>SIGNAL</u>	<u>ORIGIN</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>REMARKS</u>
Abe	T-11049	37° 55' /1136.6	76° 18' /149.5	
Ale	T-11046	See appendix, Triangulation data		Theodolite cuts computed
Bak	T-11046	See appendix, Triangulation data		Theodolite cuts computed
Card	T-11290	38° 03' /140.1	76° 20' /511.0	
Car	T-11442	See appendix, Triangulation data		Hydro & Theodolite cuts computed
Cat	T-11046	See appendix, Triangulation data		Computed Theodolite cuts
Doc	T-11047	See appendix, Triangulation data		Computed Theodolite cuts
Dog	T-11047	37° 56' /610.2	76° 19' /821.8	
End	T-11442	See appendix, Triangulation data		Computed Theodolite cuts
FIVE FREY	BOUNDARY MONUMENT NO. 5, Triangulation PT. LOOKOUT BELFRY & T-11290			See G.P. list, Md. See letter in appendix, this report
Guy	T-11046	37° 58' /182.1	76° 25' /374.1	
Hag	T-11290	38° 03' /535.2	76° 21' /974.8	
Hat	T-11047	37° 57' /58.5	76° 21' /501.3	
Jer	T-11046	37° 59' /1461.6	76° 27' /1107.4	
Knat	T-11290	38° 03' /1550.6	76° 21' /1138.0	
Light	T-11046	37° 59' /1112.1	76° 27' /272.1	
LOOK	PT. LOOKOUT LIGHT HOUSE, 1846, Triangulation			See G.P. list, Md.
Lot	T-11442	38° 01' /390.5	76° 30' /17.1	
Navy	T-11442	38° 00' /1707.9	76° 29' /63.3	Navy RM 1, 1942 & computed sextant traverse
Oak	T-11290	38° 04' /11.5	76° 21' /1427.0	
Pax	T-11442	38° 00' /1268.5	76° 27' /1347.0	
Red		See appendix, Triangulation data		Computed Theodolite cuts
San		See appendix, Triangulation data		Computed Theodolite cuts
Sir	T-11289	38° 04' /1230.2	76° 22' /251.9	
TANK	PT. LOOKOUT TANK, 1934, Triangulation			See G.P. list, Md.
Was	T-11290	38° 03' /1130.1	76° 21' /1119.5	

NOTE:- The above signals were scaled, checked and transferred to the Boat Sheet and Smooth Sheet from various Manuscripts, Scale 1:10,000.

STATISTICS

HYDROGRAPHIC SHEET H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

SHIP COWIE

<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>
9/6/59	A (blue)	1	272	48.4	52.4
9/19/59	B "	1 & 2	266	53.1	58.6
10/2/59	C "	2 & 3	289	70.1	79.1
10/6/59	D "	3	82	16.0	30.0
10/16/59	E "	3	61	13.9	27.9
10/19/59	F "	3 & 4	211	58.9	76.9
10/20/59	G "	4	203	40.7	52.7
10/21/59	H "	5	94	20.2	32.2
10/22/59	J "	5	64	8.2	32.8
		TOTALS	1,542	329.5	442.6

LAUNCH 178

9/9/59	a (blue)	1	79	15.0	20.6
10/5/59	b "	1	4	0.0	8.0
		TOTALS	81	15.0	28.6

Total square nautical miles of soundings - 17.4

SHIP COWIE - CAPITAL LETTERS IN BLUE

Launch 178 - lower case letters in blue

FATHOMETER CORRECTIONS

HYDROGRAPHIC SHEET H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

SHIP COWIE

FATHOMETER 120-S

"A" day, 6 September 1959

"B" day (position 1 through 166) 9 September 1959

"C" day (positions 1 through 80) 2 October 1959

"A" SCALE

"B" SCALE

<u>FROM</u>	<u>TO</u>	<u>CORRECTION</u>	<u>FROM</u>	<u>TO</u>	<u>CORRECTION</u>
0.0	24.6	/ 0.2	35.0	60.0	- 0.2
24.7	45.6	/ 0.4			
45.7	55.0	/ 0.6			

FATHOMETER 164

"B" day (position 168 to end of day) 9 September 1959

"C" day (position 81) 2 October 1959 through "J" day (end of sheet) 22 October 1959.

"A" SCALE

"A" SCALE

0.0	10.0	- 0.2
10.0	13.1	- 0.4
13.2	16.2	- 0.6
16.3	19.2	- 0.8
19.3	22.3	- 1.0
22.4	25.4	- 1.2
25.5	28.5	- 1.4
28.6	31.6	- 1.6
31.7	34.7	- 1.8
34.8	37.7	- 2.0
37.8	40.8	- 2.2
40.9	43.9	- 2.4
44.0	47.0	- 2.6
47.1	50.1	- 2.8

0.0	17.2	- 0.2
17.3	24.8	- 0.4
24.9	32.4	- 0.6
32.5	40.1	- 0.8
40.2	47.6	- 1.0
47.7	55.0	- 1.2

"C" day, 2 October through "G" day, 20 October 1959.

"B" SCALE

35.7	40.2	/ 0.6
40.3	44.5	/ 0.4
44.6	48.8	/ 0.2
48.9	53.2	0.0
53.3	57.7	- 0.2
57.8	62.1	- 0.4
62.2	66.3	- 0.6
66.4	70.8	- 0.8
70.9	75.0	- 1.0

"B" SCALE

Not USED.

FATHOMETER CORRECTIONS

HYDROGRAPHIC SHEET H - 8496 (FIELD NO. CO - 2159)

PROJECT CS - 409

POTOMAC RIVER, MARYLAND

LAUNCH 178

FATHOMETER 160-SPX

"a" day 9 September 1959

"b" day 5 October 1959

"A" SCALE

<u>FROM</u>	<u>TO</u>	<u>CORRECTION</u>
0.0	19.1	- 0.6
19.2	29.0	- 0.8
29.1	38.8	- 1.0
38.9	48.6	- 1.2

NOTE:- This curve is the same as the curve on Sheet CO-1959, which covers the same depths, same fathometer, and same periods. Therefore, there was no curve drawn for this sheet as it very closely approximates the curve of CO-1959.

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D. C.

BE SURE ADDRESS THE DIRECTOR
COAST AND GEODETIC SURVEY
AND NOT THE OFFICE OF THIS LETTER
AND REFER TO NO. 633 NLC/pr

18 January 1960

To: LCDR Dewey G. Rushford
U.S. C&GS Ship Cowie
102 West Olney Road
Norfolk 10, Virginia

Subject: Geographic Position, POINT LOOKOUT BELFRY, FINIAL

The subject station has not been adjusted on the North American 1927 Datum.

A datum transformation has been computed using POINT LOOKOUT LIGHTHOUSE (Md. G.P. pg. 273; S.P. 114 pg. 165) HALL (Md. G.P. pg. 190; S.P. 114 pg. 255) and HOLLAND ISLAND BAR LIGHTHOUSE (Md. G.P. pg. 273; S.P. 114 pg. 164). The value used is the mean of the differences obtained at POINT LOOKOUT LIGHTHOUSE and HALL with HOLLAND ISLAND BAR LIGHTHOUSE used as a check.

POINT LOOKOUT BELFRY, FINIAL (N.A. 1927 datum)

Latitude $38^{\circ} 02' 17.522$ (540.5 meters)
Longitude $75^{\circ} 17' 20.460$ (499.4 meters)

Use for Smith sheet 702.

Chief, Geodesy Division

Poor Copy

GEOGRAPHIC NAMES

Survey No. II - 8496

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
POTOMAC RIVER	✓											1
CHESAPEAKE BAY (TITLE)												2
												3
												4
												5
												6
												7
TIDE STATIONS												7
POINT LOOKOUT	✓											8
TRAVIS POINT	✓											9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

George DuBois
Geographic Names Section
26 April 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8496...

Records accompanying survey: Smooth sheets ..1...;
 boat sheets ..1...; sounding vols. ..6...; wire drag vols.;
 Descriptive Reports ..1...; graphic recorder envelopes ..5...;
 special reports, etc. 1 Cahier-Bar Check Corrections and Miscell-
 aneous Position Computations.....

The following statistics will be submitted with the cartog-
 rapher's report on the sheet:

Number of positions on sheet	..1623.
Number of positions checked	..57..
Number of positions revised	...0..
Number of soundings revised (refers to depth only)	..40..
Number of soundings erroneously spaced	...0..
Number of signals erroneously plotted or transferred	...0..
Topographic details	Time ..3hr.
Junctions	Time ..0hr.
Verification of soundings from graphic record	Time ..2hr.
Special adjustments	Time ..0hr.

Verification by ...*John P. Weir*... Total time .64hr. Date .2/15/61

Reviewed by ...*Ernest E. Thomas*... Time .40... Date 4/19/61.

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8496

FIELD NO. CO-2159

Maryland, Potomac River, Entrance of Potomac River into Chesapeake Bay

SURVEYED: Aug. - Oct. 1959

SCALE: 1:20,000

PROJECT NO. 409

SOUNDINGS: 808 Depth Recorders
Handlead

CONTROL: Sextant fixes
on shore objects

Chief of Party ----- C. A. Schoene
Surveyed by ----- C. A. Schoene; D. G. Rushford
C. W. Randall; B. W. Jester
Protracted by ----- J. D. Bossler
Soundings plotted by ----- J. D. Bossler; C. W. Randall
Verified and inked by ----- J. P. Weir
Reviewed by ----- E. E. Thomas
Inspected by ----- R. H. Carstens

DATE: 4-19-61

1. Description of the area

This survey is located in the central portion of the Potomac River entrance.

The bottom is generally smooth, with some evidence of silting. Depths shoal gradually along the slopes of the natural channel except off Pt. Lookout and Travis Pt. where abrupt changes occur.

2. Control and Shoreline

The source of the control is adequately described in the Descriptive Report.

The shoreline originates with reviewed photogrammetric surveys T-11046, T-11047, and T-11442 (1952-54); T-11289 and T-11290 (1953-54). Revisions to the shoreline are shown on the inshore hydrographic surveys.

3. Hydrography

- A. Depths at the crossings are in good agreement.
- B. The usual depth curves are adequately delineated. The color designation of the 60-ft. curve should have been orange instead of green.
- 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.

5. Junctions

An adequate junction was effected with H-8283 (1955-56) on the east. The junctions with the unverified surveys H-8494 (1959) on the south, and H-8279 (1955-59) on the northeast will be considered in the reviews of those surveys.

The remaining project surveys, which join the present survey have not yet been received in the Washington Office.

6. Comparison with Prior Surveys

H-211 (1849) 1:20,000
H-701 (1859-60) 1:20,000
H-2739 (1904-15) 1:20,000
H-4920 (1929) 1:20,000

These surveys comprise the prior coverage of the area. A comparison with the present survey reveals no important changes other than the deposition of silt in the natural river channel. Generally this is as much as 3 feet in general depths of 40-50 feet. In the area at lat. 38°01.3' long. 76°21.6' the silting has been as great as 12 ft. since 1904-05 (H-2739).

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

7. Comparison with Chart 557 (Latest print date 11-7-60)

A. Hydrography

The charted hydrography originates principally with the 1904-05 surveys (H-2739, 2754) and is supplemented by partial application of the present survey through the boat sheet (Bp 59116) and the unverified smooth sheet.

A sunken wreck at lat. $38^{\circ}01.82'$ long. $76^{\circ}22.40'$ was determined by development and so symbolized on the boat sheet. The least depth carried on the unverified smooth sheet and charted at this position was 52-ft. Additional lines, previously rejected during smooth plot were re-established during review and reveal a least depth of 45 ft.

This is probably the wreck charted from Chart Letter 100 (1952). This wreck charted at lat. $38^{\circ}02.49'$ long. $76^{\circ}23.41'$, is in an approximate position. Notation on the junction survey H-8553 (1960) boat sheet (Bp 60632) reveals that no wreck was found by specific development of the area of the charted position. However, final disposition of the charted wreck should be held pending review of the adjoining survey.

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.

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 field work is necessary.

Examined and Approved:

Jewlaugh
Chief,
Nautical Chart Division
10/18/62

J. T. German 2/12/62
Assistant Director,
Office of Cartography

W. Richards
Projects Officer,
Operations Division

Max Skelton 3/3/62
Assistant Director,
Office of Oceanography

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

6 May 1960

Division of Charts: R. H. Carstens:

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 8496

Locality Potomac River, Maryland - Virginia

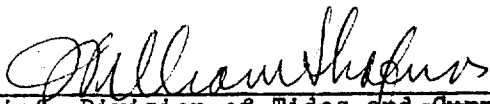
Chief of Party: C. A. Schoene in 1959
Plane of reference is mean low water, reading
2.5 ft. on tide staff at Travis Point
5.2 ft. below B. M. 2 (1959)

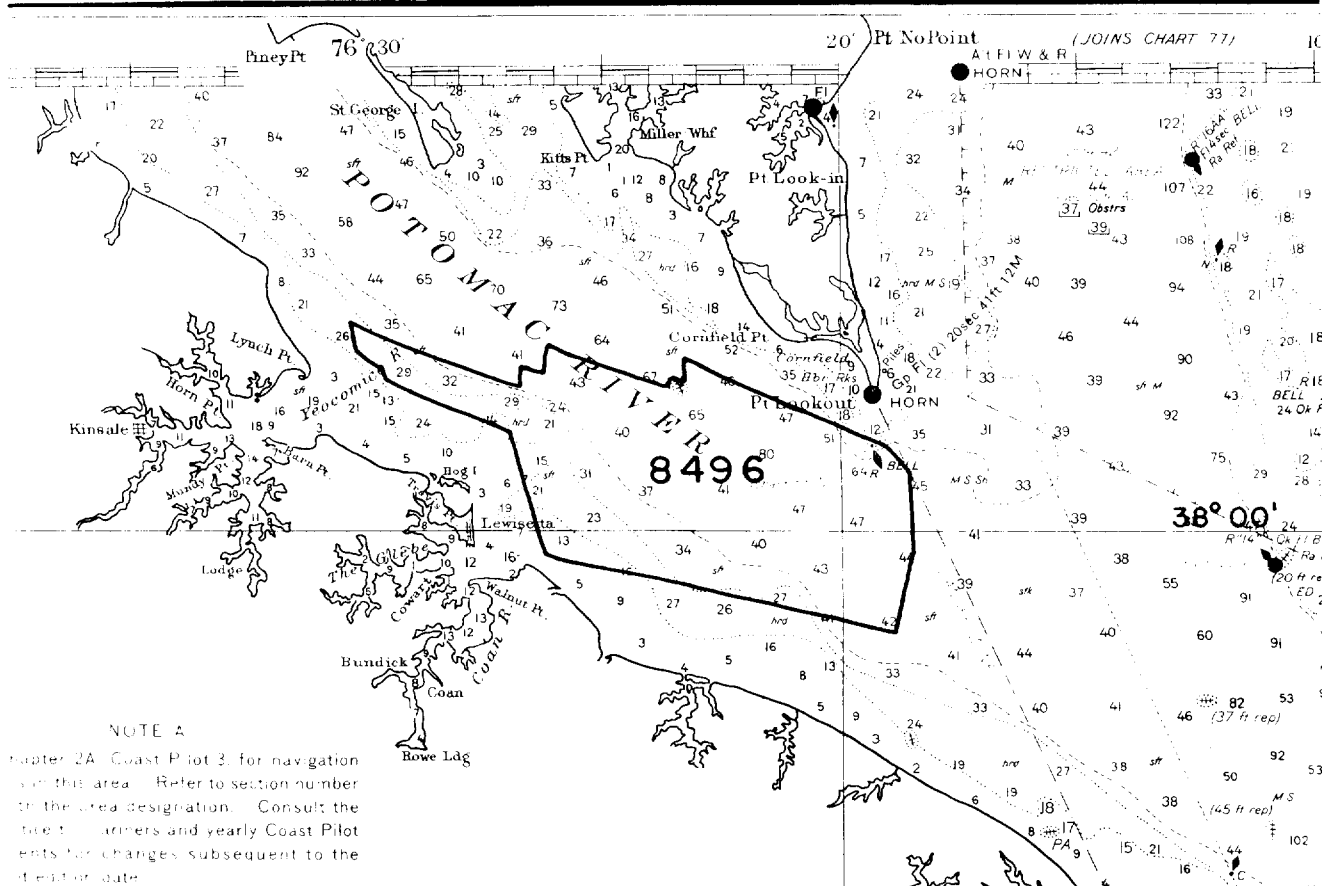
2.0 ft. on tide staff at Lookout Point
3.9 ft. below B.M. 1 (1929)

Height of mean high water above plane of reference is as follows:

Travis Point = 1.1 feet
Point Lookout = 1.3 feet

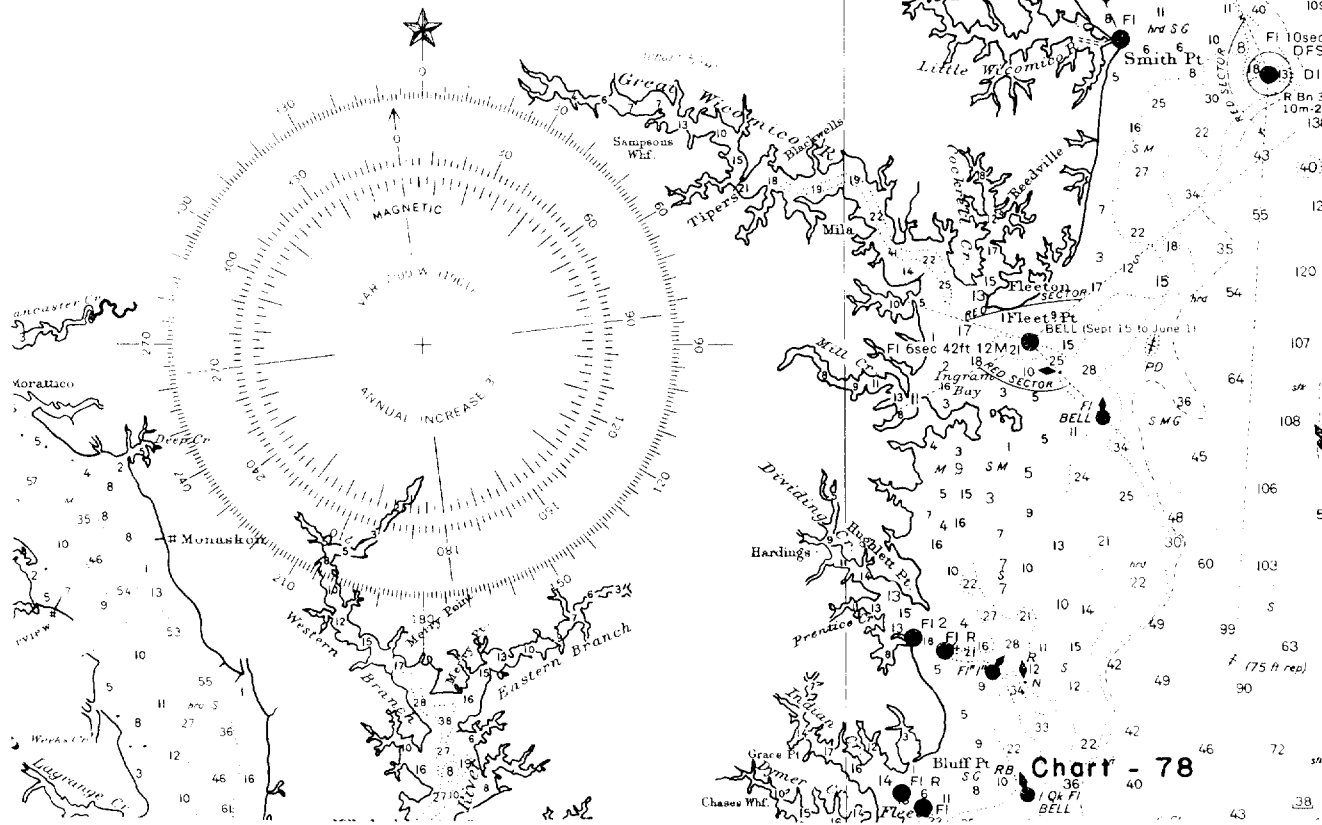
Condition of records satisfactory except as noted below:


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



NOTE A

Chapter 2A, Coast Pilot 3, for navigation in this area. Refer to section number in the area designation. Consult the first Mariners and yearly Coast Pilot Eds for changes subsequent to the date of date.



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8496

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4/28/60	1224	J. Walber	Before After Verification and Review <i>Partially</i>
6-1-60	557	C. P. Wittmann	Before After Verification and Review <i>Partially</i> <i>ZMA</i>
7-13-60	28 1220	" "	Before After Verification and Review " <i>ZMA</i>
5/31/61	557	J. H. Eaton	<i>Comp app'd.</i> Before After Verification and Review <i>Before Insp.</i>
8-28-61	1224	R. E. Elkins	Before After Verification and Review <i>Partly official</i> <i>Examined review - no revisions</i>
1/12/62	1224	J. H. Eaton	<i>Comp app'd. thru chg 557</i> Before After Verification and Review <i>JRD</i>
3-27-61	12285	Ed Martin	Before After Verification and Review <i>chg 30</i> <i>thru 12233 (557) chg 45</i>
			Before After Verification and Review
			Before After Verification and Review
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			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.