

# 8549

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-10-2-60 Office No. H-8549

### LOCALITY

State Maryland - Virginia

General locality Potomac River

Locality Yeocomico River & Approaches

19 60

CHIEF OF PARTY

E. H. Sheridan

LIBRARY & ARCHIVES

DATE August 25, 1961

USCOMM-DC 5087

# 8549

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-8549

Field No. CO-10-2-60

State MARYLAND - Virginia

General locality Potomac River  
~~CHESAPEAKE BAY~~

Locality Yeocomico River and Approaches  
~~POPMAC RIVER~~

Scale 1:10,000 Date of survey 24 MAY - 22 JUNE 1960

Instructions dated 23 APRIL 1959 and 23 FEBRUARY 1960

Vessel SHIP COWIE - USING LAUNCH 178 and SKIFF 749

Chief of party E.H. SHERIDAN

Surveyed by R. L. NEWSOM, C. W. RANDALL, R. M. HAGAN, J. D. BOSSLER,  
O. C. SWINDELL

Soundings taken by fathometer, ~~graphic recorder, hand lead, or wire~~ and 16' SDG. POLE

Fathograms scaled by W. R. WILSON

Fathograms checked by C. W. RANDALL

Protracted by D.C. CALLAND (NORFOLK PROCESSING OFFICE)

Soundings penciled by D.C. CALLAND " " "

Soundings in ~~xxxxxx~~ feet at MLW ~~xxxxxx~~ and are true depths.

REMARKS:

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.....  
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.....

*WRS*

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

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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 is on the southwest side of the Potomac River in the vicinity of, and including the Yeocomico River. The survey extends northward from the southwest shore of the river to Latitude 38° 06.0' on the western end and to Latitude 38° 05.4' on the eastern end. The survey extends from Longitude 76° 30.5' at a junction with hydrographic surveys CO-1959 and CO-2159 westward to Longitude 76° 36.0'. The work on this sheet began on 24 May and ended on 22 June 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 65 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, Va. during the entire period of this survey. The portable station at Kinsale was used for the reduction of all soundings on this survey. No currents were observed.

E. SMOOTH SHEET:

This survey <sup>was</sup> ~~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, USOD 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-10670, T-10671, T-10674, T-10675 and T-10759. 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 Mny, Bag, Ewe, Fuz, Mag, Nis, Per and Zus were located or relocated by personnel aboard Ship COWIE. The photogrammetric signal location was executed by Photo Party No. 723 under Ensign George Wirth. ✓

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. It is nevertheless, adequate, presently. ✓

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topographic details were obtained from Blue Line Manuscripts T-10670, T-10671, T-10674, T-10675 and T-10759 at a scale of 1:10,000. The manuscripts were ruled in November 1958, however the photographs were taken in 1955 and 1958. *1960 photography was used to check shoreline details.* See TP2 Review ✓

The shoreline in this area has changed considerably and the party in charge of the inshore hydrography took detached positions in the most critical areas and they are shown and noted on both boat sheets and sounding volumes. One that may be noted is Lynch Point; the high water line has moved offshore 100 meters as shown on the boat sheet. See TP2 Review ✓

*Excepting new piers, seawalls, etc., the only shoreline change was at Lynch Pt.*

A large amount of sea weed was encountered in the small creeks and tributaries of the Yeocomico River. This growth of grass made surveying difficult but it did not effect the accuracy in any manner. ✓

H. SOUNDINGS:

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

Launch 178 or offshore hydrography was sounded using 808 Fathometer No. 160-SPX. 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. The depth curves can be drawn with a high degree of accuracy. ✓

P6  
ReviewK. 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 surveys of this area are No. H-968, scale 1:20,000 surveyed in 1868 and No. 2754, scale 1:20,000 in 1905. ✓

P6  
Review

The prior surveys compare very favorably. At a cursory glance the depth curves are almost exactly the same. The recent survey, in general, shows a slight shoaling. There are considerable shoreline changes. ✓

M. COMPARISON WITH CHART:

The present survey has been compared with C&GS Chart No. 557, scale 1:40,000, revised through 21 March 1959. In general the recent survey shows a slight shoaling. There are a few severe changes but these occur where it would not endanger navigation. ✓

P7  
Re-  
view

The mouth of the Yeocomico River has shoaled 1 to 2 feet. Most boats entering the Yeocomico do not draw over 12 feet so the shoaling is not critical. There were no review items on this sheet. ✓

N. DANGER AND SHOALS:

There were no new shoals found that would endanger navigation. There were several wrecks found in the head of some of the small creeks. They can be found in Volume 6, page 15 and 39. A submerged rock jetty, not dangerous to navigation, can be found in Volume 6, pages 69 and 70. 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. ✓

Azimuths of jetties not furnished ✓  
DJK

(On photo 22 Jul 60 5842 there appears to be a mine or rock at this location. N. 35° 02.55' Long pier does not show on blue line print or boat sheet, it is not mentioned in Volume 6. Verifier unable to determine this situation. DJK)

P. AIDS TO NAVIGATION:

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

FIXED AID

BARN POINT LIGHT, flashing white every 4 seconds, Latitude 38° 01.86<sup>5</sup>, Longitude 76° 32.21, in 9 feet of water, located on Shoreline Manuscript T-10674. ✓

FLOATING AIDS

Black and White Spar Buoy No. 18<sup>53</sup>"AW", Latitude 38° 05.68<sup>5</sup>, Longitude 76° 31.29, in 55 feet of water, located by Launch 178 on 15 June 1960, position 42-j. ✓

Red Nun Buoy No. 4., Latitude 38° 00.29, Longitude 76° 32.46, in 7 feet of water, located by Skiff 749 on 16 June 1960, position 46-k. This is a uncharted homemade buoy placed by natives of the vicinity. ✓

*HORN PT. BUOY 2*  
Red Nun Buoy No. 2., Latitude 38° 01.62, Longitude 76° 32.40, in 12 feet of water, located by Skiff 749 on 18 June 1960, position 1-m. ✓

P7B  
Review

Q. LANDMARKS FOR CHARTS:

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

R. GEOGRAPHIC NAMES:

A discrepancy was found in the charted geographic names. Great House Point is misplaced on the chart. It should be on the point whose Latitude is 38° 01.65, Longitude 76° 34.55. A report was submitted concerning this error. ✓

This was the only significant investigation on Geographic Names. ✓

U. FATHOMETER CORRECTIONS:

A bar check was taken on the average of one every two days at depths ranging from 5 to 50 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: See page 5 of this report for tabulation. ✓

FATHOMETER CORRECTIONS

FATHOMETER 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	14.3	/ 0.4	35.0	41.6	/ 1.4
14.4	21.2	/ 0.2	41.7	51.6	/ 1.2
21.3	29.7	0.0	51.7	61.3	/ 1.0
29.8	50.2	- 0.2	61.4	70.0	/ 0.8
50.3	57.0	- 0.4			

Z. TABULATION OF APPLICABLE DATA:

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

ACCOMPANYING THIS REPORT:

Twelve each - Fathograms, "a" thru "m" day ✓  
 Three sheets - Tide reducers ✓  
 Two sheets - Fathometer corrections ✓  
 Two copies - Descriptive Report ✓  
 Ten volumes - Soundings, Vol. 1 thru Vol. 10 ✓  
 Two each - Boat Sheets CO-10-2-60, 1 Launch 178 and 1 Skiff 749. ✓  
 Five each - Blueline Manuscripts, Nos. T-10670, 671, 674, 675 and 759. ✓  
 Five each - Signal Manuscripts, Nos. T-10670, 671, 674, 675 and 759. ✓  
 A list of signals is attached to the inside cover of Vol. 1. ✓

Respectfully submitted,

*John D. Bossler*

John D. Bossler  
 ENS., C&GS.  
 Ship COWIE

APPROVED AND FORWARDED:

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

APPENDIX:

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

APPENDIX "A"T I D E   N O T E

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

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

LOCATION OF KINSALE, VIRGINIA TIDE STATION

Latitude  $38^{\circ} 01.8^{\prime}$ <sup>3</sup> Longitude  $76^{\circ} 34.6^{\prime}$ <sup>1</sup>

*position revised to conform with  
boat sheet location - D & K*

MLW on tide staff:        -        1.9'

APPENDIX "B"STATISTICS

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

LAUNCH 178

<u>DATE</u>	<u>DAY LETTER</u>	<u>VOL. NO.</u>	<u>NO. OF POS.</u>	<u>NAUT. MI. SDG.</u>
5/24/60	a (blue)	1	139	22.2
5/25/60	b "	1	139	20.8
6/2/60	c "	1 & 2	205	32.3
6/3/60	d "	2	171	27.0
6/4/60	e "	3	36	5.4
6/5/60	f "	3	226	38.0
6/6/60	g "	3 & 4	159	17.8
6/8/60	h "	4	234	38.6
6/15/60	j "	5	167	23.8
6/17/60	k "	5	26	3.0
6/18/60	l "	5	31	0.0
6/22/60	m "	5	35	4.6
		<u>TOTALS</u>	1568	233.5

SKIFF 749

5/25/60	a (purple)	6	97	8.0
6/2/60	b "	6	63	5.6
6/3/60	c "	6	117	8.4
6/4/60	d "	6	94	8.3
6/5/60	e "	6 & 7	125	10.4
6/6/60	f "	7	110	9.1
6/7/60	g "	7	108	9.7
6/8/60	h "	7	111	7.9
6/15/60	j "	8	133	10.6
6/16/60	k "	8	122	9.7
6/17/60	l "	8 & 9	158	17.7
6/18/60	m "	9	133	16.5
6/19/60	n "	9	154	14.3
6/20/60	p "	9 & 10	140	16.7
6/21/60	q "	10	144	11.0
		<u>TOTALS</u>	1809	153.9
		<u>GRAND TOTALS</u>	3377	387.4

Total square nautical miles of sounding - 15.0

Launch 178 - blue positions      Skiff 749 - purple positions

APPENDIX "C"LIST OF SIGNALS

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

PROJECT CS - 409

POTOMAC RIVER, MD.

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Abe	T-10759	Bop	T-10670
Ace	T-10759	Box	T-10674
ACK	Triang. STACK 1958, T-10674	Bro	T-10675
Act	Photo sextant T-10759	Bum	T-10674
Ada	T-10670	Bur	T-10674
ADO Add	T-10759	Bus	T-10674
Ado	T-10759	But	T-10674
Ago	T-10674	Cab	T-10674
Aha	Photo sextant T-10674	Cam	T-10759
Aim	T-10759	Car	T-10674
Aka	Photo sextant T-10671	Cat	T-10674
Aky	T-10670	Caw	T-10674
Ala	T-10670	Ced	Photo sextant T-10759
All	T-10674	CHIM	<del>CHIMNEY</del> CHIMNEY 1957 T-10674
Alp	T-10674	Clu	T-10670
Alt	T-10675	Cod	T-10759
Amo	T-10674	Cop	T-10674
Amp	T-10674	Cow	T-10674
(H) Amy	Sextant fix, Vol. 9 pg. 46	Cry	T-10674
Apt	T-10674	Cue	T-10759
Arm	T-10759	Cup	T-10674
Art	Photo sextant T-10674	Cur	T-10759
Ask	T-10674	Gus	Photo sextant T-10670
Ave	T-10674	Cut	T-10674
Axe	T-10674	Daw	T-10674
Azo	T-10675	Day	T-10675
(H) Bag	Sextant fix, Vol 6 pg. 72	Deb	T-10759
Bah	T-10759	Dif	T-10759
Bal	T-10670	Dim	Photo sextant T-10759
Ban	T-10670	Dip	T-10674
BAR	BARN POINT LIGHT, 1957 T-10674	Doc	T-10674
Bat	T-10759	Dol	T-10759
Bee	T-10674	Dor	T-10674
Beg	T-10670	Dot	T-10674
Bel	Photo sextant T-10670	Dud	T-10674
Bes	T-10671	Dul	T-10670
Bib	T-10759	Dun	T-10674
Big	T-10759	Duo	T-10759
Biz	T-10670	Ear	T-10674
Bla	T-10675	Eat	T-10759
Blu	T-10674	Ebb	T-10675
Boa	T-10674	Eel	T-10759
Bob	T-10674	Egg	T-10675
BOL Bal	Photo sextant T-10674	Ego	T-10674
Bon	T-10674	Elf	T-10674

## APPENDIX "C"

## LIST OF SIGNALS (CONTINUED)

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Ell	T-10675	Hay	T-10675
Emo	T-10674	Hem	T-10674
Ems	T-10670	Her	T-10759
End	T-10671	Hew	T-10674
Eon	Photo sextant T-10674	Him	T-10674
Erg	T-10674	Hip	T-10759
Erl	Photo sextant T-10670	Hod	T-10674
Eso	T-10674	Hol	T-10670
Est	T-10759	Hon	T-10759
Eta	T-10675	Hop	T-10674
Ett	T-10670	Hot	T-10674
Eve	T-10759	How	T-10759
(H) Ewe	Sextant fix, Vol. 7, pg. 57	Hub	T-10674
Far	T-10679	Hug	Photo sextant T-10671 T-10674
Fed	Photo sextant T-10674	Hum	T-10671
Fez	T-10674	Hus	T-10674
Fig	T-10759	Hut	T-10674
Fin	T-10674	Ich	Photo sextant T-10670
Fit	T-10674	Ida	T-10759
Fix	T-10759	Ill	T-10670
Fly	T-10759	Ilo	Photo sextant T-10670
Fog	Photo sextant T-10674	Ima	T-10675
Fox	T-10674	Ink	T-10675
Fro	T-10671	Ion	T-10674
Fry	Photo sextant T-10674	Irk	T-10671
Fun	T-10674	Its	T-10759
(H) Fuz	Sextant fix, Vol. 7, pg. 42	Ivy	T-10674
Gab	T-10674	Jan	T-10759
Gad	T-10675	Jap	T-10759
Gag	T-10674	Jar	Photo sextant T-10674
Gal	T-10759	Jaw	T-10759
Gam	T-10674	Jay	T-10674
Gas	T-10759	Jet	T-10674
Gem	T-10674	Jib	T-10674
Geo	T-10671	Jip	T-10670
Get	T-10674	Job	T-10759
Gig	T-10674	Joe	T-10674
Gin	T-10759	Jok	T-10674
Got	T-10674	Jon	T-10675
Gul	T-10674	Jow	T-10670
Gum	Photo sextant T-10674	Joy	T-10674
Gus	T-10759	Jug	T-10674
Gut	T-10670	Jut	T-10674
Guy	T-10759	Ked	T-10759
Hag	T-10674	Ken	T-10674
Hal	T-10670	Key	T-10674
Hat	T-10674	Kim	Photo sextant T-10759

## APPENDIX "C"

## LIST OF SIGNALS (CONTINUED)

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Lad	T-10674	Nit	T-10759
Lag	Photo sextant T-10674	Nix	T-10674
Lax	T-10759	Nca	T-10670
Lay	T-10674	Nod	T-10674
Leo	T-10759	Non	T-10675
Let	T-10674	Nor	T-10674
Lev	T-10670	Nos	T-10670
Lip	T-10674	Now	T-10759
Lit	T-10670	Nub	T-10674
Liz	T-10674	Nul	T-10759
Log	T-10674	Nup	T-10675
Lop	T-10759	Not Nat	T-10674
Los	T-10674	Nux	T-10674
Lot	Photo sextant T-10674	Oak	T-10759
Low	T-10674	Obi	Photo sextant T-10759
Lox	T-10675	Odd	T-10674
Lug	T-10759	Off	T-10674
Lux	Photo sextant T-10759	Ohm	T-10674
(H) Mag	Sextant fix, Vil. 1, pg. 42	Oil	T-10674
Mal	T-10759	Old	T-10759
Man	T-10674	Old	T-10759
Maw	T-10674	Olk	T-10670
Max	T-10759	Opp	T-10670
May	T-10674	Ora	T-10674
Med	T-10674	Owl	T-10670
Met	T-10671	Ozo	Photo sextant T-10675
Mid	T-10674	Pad	Photo sextant T-10674
Mit	Photo sextant T-10674	Pal	T-10674
Moe	T-10675	Par	T-10674
Mom	T-10675	Paw	T-10674
Mop	T-10674	Pea	T-10674
Moz	T-10670	Pee	T-10670
Mug	T-10674	Peg	T-10674
Mum	T-10674	Pep	T-10674
Mur	Photo sextant T-10675	(H) Per	Sextant cuts, Vol. 7, pg. 42
Nat	T-10675	Pet	T-10759
Nay	T-10674	Phi	T-10675
Ned	T-10674	Pie	T-10674
Neo	T-10759	Pil	T-10675
New	T-10674	Pin	T-10674
Nic	T-10674	Pit	T-10674
Nig	T-10674	Pix	T-10759
Nil	T-10674	Pot	T-10674
Nip	Photo sextant T-10674	Poy	T-10674
(H) Nis	Sextant cut, Vol. 7, pg. 42	Pug	T-10674
		Pup	T-10674

APPENDIX "C"LIST OF SIGNALS (CONTINUED)

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Put	T-10674	Sty	T-10759
Puz	T-10670	Sue	T-10674
Qua	T-10670	Sum	T-10670
Quo	Photo sextant T-10674	Tan	Photo sextant T-10675
Rag	T-10674	Tap	T-10759
Rak	T-10675	Tax	T-10674
Ram	T-10674	Ted	T-10671
Ran	Photo sextant T-10671	Thy	T-10674
Rat	T-10670	Tik	T-10675
Raz	T-10670	Tim	T-10674
Rev	T-10759	Tip	T-10670
Rex	T-10674	Tok	Photo sextant T-10670
Rig	T-10759	Tol	T-10674
Rim	Photo sextant T-10759	Top	T-10674
Rio	T-10674	Tow	T-10674
Rip	T-10674	Toy	T-10674
Ron	T-10670	Try	T-10759
<i>ROT</i> Rat	T-10674	Tub	T-10674
Roy	T-10759	Tuk	T-10670
Rub	T-10674	Ugg	T-10670
Rue	T-10674	Unk	T-10670
Rug	T-10670	Ura	T-10675
Rum	Photo sextant T-10674	Use	T-10674
Sad	T-10759	Val	T-10759
Sag	T-10674	Van	T-10674
Sam	T-10674	Vee	T-10674
SAN	1959, Theodolite cuts Lat. $38^{\circ} 04' \neq 750.6$ Long. $76^{\circ} 32' \neq 224.5$	Veg	T-10675
Sax	T-10674	Vet	T-10759
Sex	T-10674	Via	T-10674
She	T-10674	Vim	T-10674
Sic	T-10674	Vor	T-10670
Sil	T-10674	Vus	Photo sextant T-10670
Sin	T-10674	Wad	Photo sextant T-10674
Sip	T-10759	Wag	T-10759
Sir	T-10759	Wan	T-10759
Sis	T-10674	War	T-10759
Sky	T-10759	Was	T-10671
Sly	T-10674	Wax	T-10759
Snu	T-10675	Wee	T-10674
Son	T-10670	Wen	T-10674
Sop	T-10759	Wes	T-10759
Sow	T-10674	Who	T-10759
Sox	Photo sextant T-10671	Wig	T-10674
Sta	T-10674	Win	T-10674
Stu	Photo sextant T-10670	Wit	T-10674
		Woe	Photo sextant T-10674
		Wok	T-10670

APPENDIX "C"LIST OF SIGNALS (CONTINUED)

HYDROGRAPHIC SURVEY H-8549

(FIELD NO. CO-10-2-60)

<u>NAME</u>	<u>ORIGIN</u>
Wud	T-10670
Yam	T-10674
Yea	T-10759
Yet	T-10674
Zag	Photo sextant T-10670
Zan	T-10670
Zax	T-10671
Zig	T-10674
Zip	T-10675
Zoo	T-10759
(H) Zus	Sextant fix, Vol. 7, pg. 37.

NORFOLK PROCESSING OFFICE  
ADDENDUM  
To Accompany

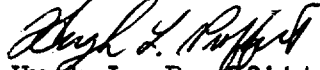
HYDROGRAPHIC SURVEY H-8549 (Co-10-2-60)

GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Soundings are in good agreement at crossings.

Norfolk, Va.  
22 August 1961

Respectfully submitted,

  
Hugh L. Proffitt  
Cartographer







ABSTRACT OF BAR CHECKS

PROJECT NO CS - 409, POTOMAC RIVER

SHEET NO CO - 1260 (LAUNCH 178 )

DATE & DAY LETT.	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	50B
25 MAY	+0.2'	+0.5'	+0.4'	+0.3'							
b. DAY	+0.4'	+0.3'	+0.4'	+0.3'							
2 JUNE	+0.4'	+0.4'	0.0'	0.0'	-0.2'	-0.6'	-0.6'				
c. DAY	+0.4'	+0.4'	+0.2'	0.0'	-0.2'	-0.3'	-0.2'				
3 JUNE	+0.6'	+0.6'	+0.4'	+0.2'	0.0'	0.0'					
d. DAY	+0.5'	+0.6'	+0.4'	0.0'	+0.2'	0.0'					
5 JUNE	+0.4'	+0.6'	+0.4'	+0.4'	+0.3'	0.0'	0.0'	-0.2'	+1.4'	-0.3'	+1.2'
f. DAY	+0.45'	+0.6'	+0.6'	+0.2'	0.0'	0.0'	0.0'	-0.2'	+1.4'		
15 JUNE	+0.4'	+0.5'	+0.4'	+0.3'	+0.1'	0.0'	-0.1'	-0.3'	+1.2'		+1.0'
DAY	+0.3'	+0.3'	+0.2'	0.0'	+0.1'	0.0'	0.0'	-0.2'	+1.3'		+1.2'
17 JUNE	+0.2'	+0.2'	-0.2'	-0.2'	-0.4'	-0.2'					
k. DAY	+0.2'	0.0'	0.0'	0.0'	-0.2'	-0.4'					
22 JUNE	+0.1'	+0.4'	+0.3'	+0.1'	+0.1'	0.0'					
m. DAY	+0.5'	+0.5'	+0.4'	+0.2'	0.0'	+0.1'					
SUM. TOTAL	+5.1'	+5.9'	+3.9'	+1.8'	-0.2'	-1.4'	-0.9'	-0.9'	+5.3'	-0.3'	+3.4'
No.	14'	14'	14'	14'	12'	12'	6'	4'	4'	1'	3'
MEAN	+0.364'	+0.421'	+0.279'	+0.129'	-0.017'	-0.117'	-0.15'	-0.225'	+1.325'	-0.3'	+1.133'

COMP: CWR  
 ✓ EHS

RHC

# TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COASTAL SURVEYS~~

December 27 1961

Division of Charts: R.H. Carstens

Plane of reference approved in  
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8549

Locality Potomac River and Yeocomico River, Maryland and Virginia

Chief of Party: E.H. Sheridan (1961)  
Plane of reference is mean low water reading  
1.9 ft. on tide staff at Kinsale, Virginia  
5.2 ft. below B. M. NO 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. Simmons  
Chief, Tides and Currents Branch

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

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8549.....

Records accompanying survey: Smooth sheets ..1...;  
 boat sheets ..1...; sounding vols. .10...; wire drag vols. ....;  
 (2parts) Descriptive Reports .....; graphic recorder envelopes ..6...;  
 special reports, etc. 1 Cahier (2-Sheets, Bar check corr. and  
 3-Sheet, Tide Corr.), 1-Overlay tracing and 4-Film Pos.....

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

Number of positions on sheet	three p-day	1665	Kennon 145	
Number of positions checked	three p-day	280		
Number of positions revised	three p-day	0		
Number of soundings revised (refers to depth only)	three p-day	188		
Number of soundings erroneously spaced	three p-day	25		
Number of signals erroneously plotted or transferred		0		
Topographic details	Time	100.0 hrs		3hrs
Junctions	Time			10hrs
Verification of soundings from graphic record	Time	240.0 hrs		
Special adjustments	Time			

Verification by *Helen M. Quimby* ..... Total time 340 hrs Date 8/20/62  
*D.J. Kennon* ..... Total time 160 ..... Date 10-1-62  
 Reviewed by *J. J. ...* ..... Time 63 ..... Date 4-19-63

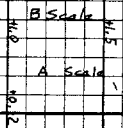
FATHOMETER CORRECTIONS

CO-10-2-60

Lch 178

CO-10-2-60-1-CH178

CORRECTIONS



A' SCALE  
CORRECTIONS

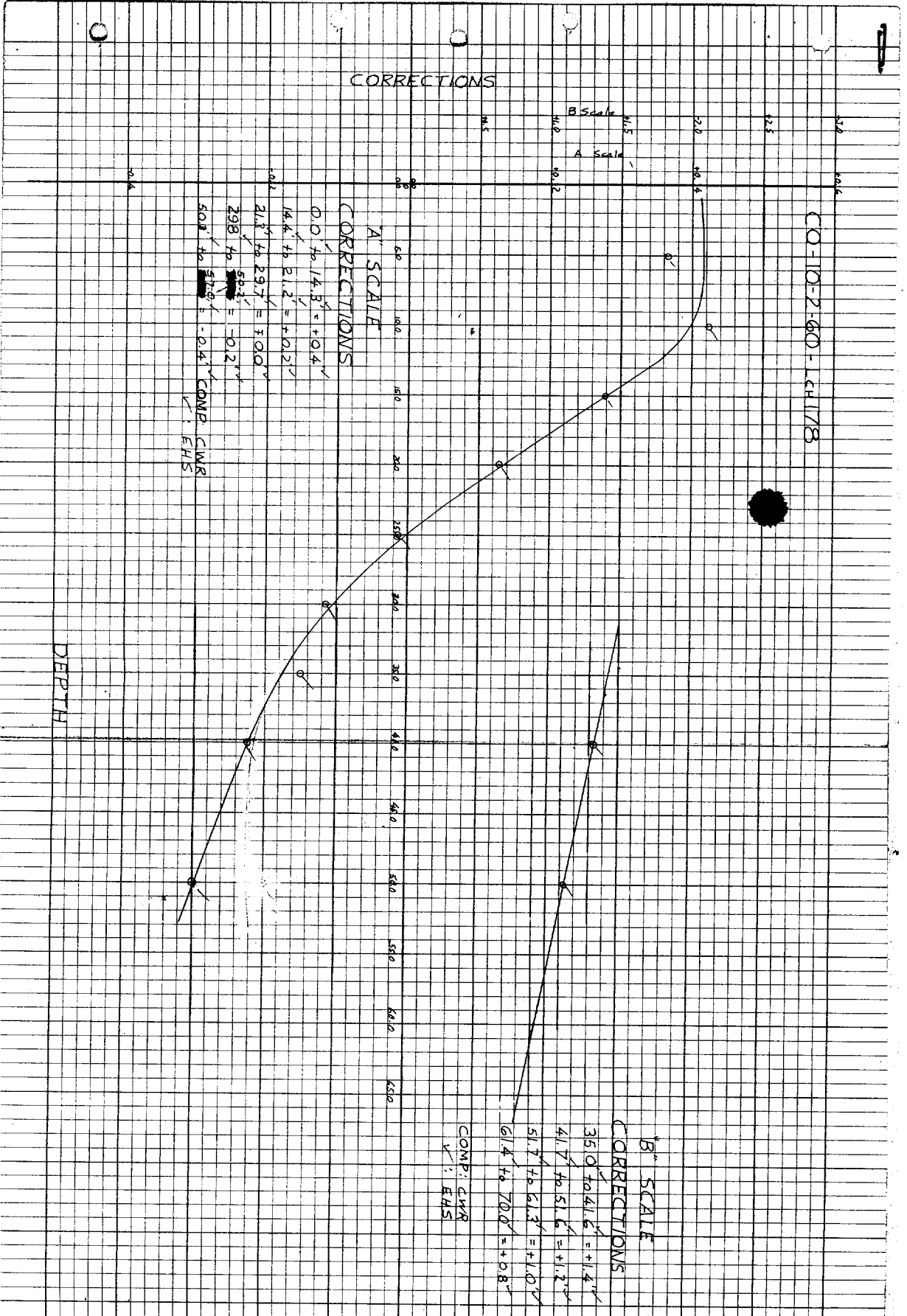
0.0' to 14.3' = +0.4'  
 14.4' to 21.2' = +0.2'  
 21.3' to 29.7' = 100.0'  
 29.8' to 50.8' = -0.2'  
 50.9' to 57.0' = -0.4' COMP. CMBR  
 ✓ EHS

B' SCALE  
CORRECTIONS

35.0' to 41.6' = +1.4'  
 41.7' to 51.6' = +1.2'  
 51.7' to 61.3' = +1.0'  
 61.4' to 70.0' = +0.8'

COMP. CMBR  
 ✓ EHS

DEPTH



GEOGRAPHIC NAMES

Survey No. H-8549

Name on Survey	557										BGN
	A	B	C	D	E	F	G	H	K		
	On Chart No.	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			
Bonum Creek	x									x	
Sandy Point	x										1
Sandy Point Neck	x										
Lynch Point	x										2
Parkers Creek	x										
Shannon Branch	x										
Crow Bar	x									x	3
White Point Creek	x										
White Point	x									x	4
Horn Point	x										
Seldom Point	x										5
Long Cove	xx										6
Sloop Point	x										
Kinsale	x										
Great House Point	x									x	7
West Yeocomico R.	x										
Yeocomico River	x										8
Hampton Hall Branch	x										
Long Point	x										9
Wilkins Creek	x										
Mundy Point	x										10
South Yeocomico R.	x									x	
Walker Point	xx										11
Mill Creek	x										
Pea Neck	x										12
Harryhogan Point	x										
Lodge Creek	x										13
Dungan Cove	x									x	
<del>Dungan Cove</del>	x										14
Dungan Point	x										
Palmer Point	x										15
Palmer Cove	xx										
Cornish Creek	x										16
Barn Point	x									x	
Thicket Point	x										17
											18
											19
PARKERS I.											
DRUM COVE											20
TOM JONES PT.											
THICKET PT. BAY											21
CEDAR PT.											22
KINSALE											23
											24
											25
											26
											27

*George M. Ball*  
 Geographic Names Section  
 11 September 1961

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8549

FIELD NO. CO-10-2-60

Maryland-Virginia, Potomac River, Yeocomico River and Approaches

SURVEYED: May-June 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, C. W. Randall, R. M.  
Hagan, J. D. Bossler and O. C.  
Swindell  
Protracted by-----D. C. Calland (NPO)  
Soundings plotted by-----D. C. Calland  
Verified and inked by-----H. M. Quimby and D. J. Kennon  
Reviewed by-----I. M. Zeskind  
Inspected by-----R. H. Carstens

Date: 4/19/63

1. Description of the Area

This is an inshore survey of the west side of the Potomac River in the vicinity of Sandy Point Neck and Yeocomico River and its tributaries. The bottom in Potomac River is slightly irregular in depths less than 18 ft. and fairly smooth in greater depths. The bottom in Yeocomico River and its tributaries is indented with natural channels and shoals extend off many of the points.

2. Control and Shoreline

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

The shoreline originates with the unreviewed photogrammetric surveys T-10670, T-10671, T-10674, and T-10675 of 1955-58, T-10759 (1955-60) and T-8357 (1942-44), except for a portion of the shoreline at

Lynch Point in the vicinity of lat.  $38^{\circ}02.6'$ , long.  $76^{\circ}31.3'$  and a few piers which were obtained by sextant fixes and are shown in red on the smooth sheet.

### 3. Hydrography

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

### 4. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. The locations of a number of piers on the present survey were revised to agree with the locations as shown on the 1960 photographs. Hydrographic data on the present survey indicated that the correct locations of these piers coincided with the locations shown on the 1960 photographs.

### 5. Junctions

Adequate junctions were effected with H-8550 (1960) on the northwest, with H-8553 (1960) on the north and east, and with H-8496 (1953) and H-8495 (1959) on the east.

### 6. Comparison with Prior Surveys

- A. H-701 (1859-60), 1-20,000  
     H-794 (1868),     1-20,000  
     H-968 (1868),     1-20,000

The present survey falls within the area covered by these prior surveys. A comparison between the prior and present surveys shows changes in the shoreline and depths. These changes are attributed to the action of the current, to storms, to the depositing of sediment. Some differences are attributed to the different methods of surveying. Depths were obtained on the present survey by a 16-ft. sounding pole and a depth recorder, whereas the leadline was used on the prior surveys for all depths. The greatest shoreline changes occur at the entrances

to Yeocomico River and its tributaries. Examples of these shorelines changes occur at Lynch Point, Barn Pt., and Parkers Creek. At Lynch Point, the shoreline has shifted southwestward and accreted about 280 meters; at Barns Pt, the shoreline has eroded in a southwestward direction about 100 meters; and at Parkers Creek the south end of the eastern shore has eroded about 250 meters. As a result of changes in the shoreline, depth changes in the affected areas are noted. An example of these depth changes occurs off Lynch Pt where a comparison with the prior surveys, reveals differences in depths of as much as 10 ft. Except where shoreline changes have occurred, the present depths are from 1-3 ft. shoaler.

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 prior surveys cover the entrance to Yeocomico River and that portion of the present survey which falls in the Potomac River. A comparison between the prior and present surveys reveals changes in the shoreline and depths. The shoreline at Lynch Point has accreted southward about 200 meters. At Thicket Point, the shoreline has eroded southward about 100 meters, while at Barn Point the shoreline has eroded southeastward about 80 meters. Both accretion and erosion has occurred on the west shore of Potomac River north of Lynch Point. Examples of these changes in shoreline with the resultant changes in depths occurs in the vicinity of lat.  $38^{\circ}04.0'$ , long.  $76^{\circ}32.15'$ , where the shoreline has accreted about 80 meters and in the vicinity of lat.  $38^{\circ}05.2'$ , long.  $76^{\circ}33.5'$ , where erosion of about 50 meters is noted. The present depths are generally 1-2 ft shoaler than the prior depths, except in several areas where the bottom has shoaled as much as 4 ft. These changes in shoreline and bottom are attributed to causes similar to those mentioned in paragraph A above.

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

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

A. Hydrography

The charted hydrography originates principally with the prior surveys previously discussed which need no further consideration, supplemented by the present survey after verification and before review. A comparison between the charted and present hydrography reveals only minor differences of 1-2 ft. in depths-the present depths generally being shoaler than the charted depths. The pier in ruins charted in lat.  $38^{\circ}02.57'$ , long.  $76^{\circ}31.95'$ , was originally charted as a pier from chart letter 246 (1953). The pier is not shown on the present survey or photogrammetric survey T-10674 (1955-58) which covers the area in which this pier falls. However, an examination of air photographs of 1960 shows evidence of a pier in ruins at the above mentioned location. It is, therefore, recommended that the pier in ruins be retained on the chart.

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

B. Aids to Navigation

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

8. Compliance with Project Instructions


The survey adequately complies with the Project Instructions.

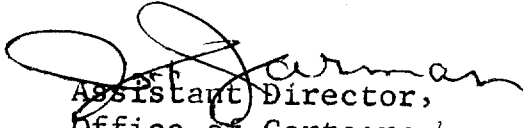
9. Additional Field Work Recommended


This is a very good basic survey and no additional field work is recommended. It is noted that no recoverable triangulation stations are available in this area.

Examined and Approved:

  
Chief,  
Nautical Chart Division

  
Projects Officer,  
Operations Division

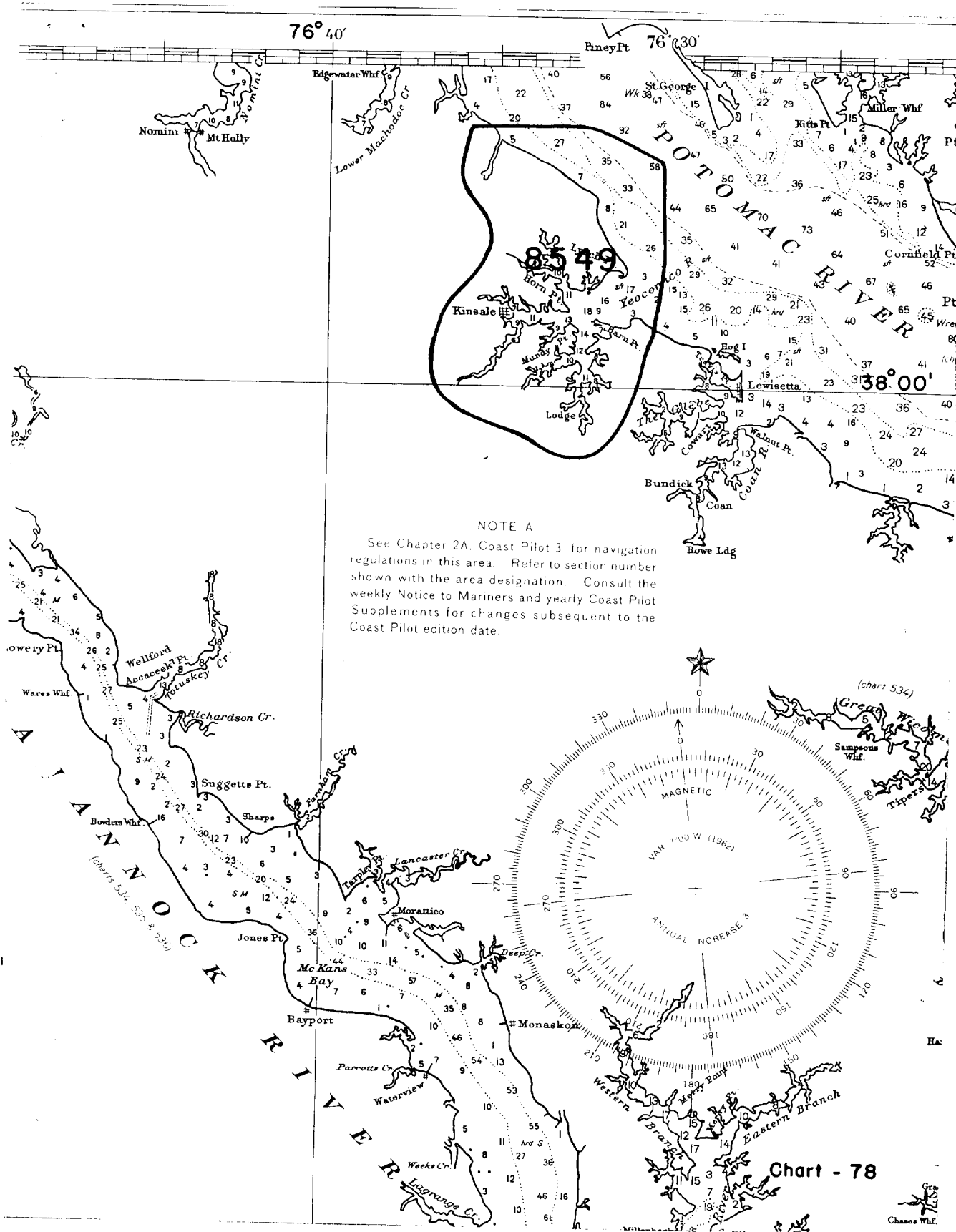
  
Assistant Director,  
Office of Cartography

  
Assistant Director,  
Office of Oceanography

76° 40'

76° 30'

38° 00'



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.

Chart - 78

