

8547

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-1-10-59 Office No. H-8547

LOCALITY

State Maryland

General locality Potomac River

Locality Smith Creek and Vicinity

19 59-60

CHIEF OF PARTY

C. A. Schoene and E. H. Sheridan

LIBRARY & ARCHIVES

DATE July 7, 1961

USCOMM-DC 5087

8547

124B

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-8547

Field No. Co-1-10-59

State MARYLAND

General locality CHESAPEAKE BAY - POTOMAC RIVER

Locality SMITH CREEK AND APPROACHES
vicinity

Scale 1:10,000 Date of survey 8 to 18 Oct 1959
8 Apr. to 18 May 1960

Instructions dated 23 Apr. 1959 and 23 Feb. 1960

Vessel SHIP COWIE - USING LAUNCH 178 and SKIFF 749

Chief of party C.A. SCHOENE, 1959 - E.H. SHERIDAN, 1960

Surveyed by D.G. RUSHFORD, O.G. SWINDELL, R.L. NEWSOM, C.W. RANDALL
J.D. BOSSLER, R.I. GREEN

Soundings taken by ~~XXXXXX~~, graphic recorder, ~~XXXXXXXXXX~~ 16' pole

Fathograms scaled by W.M. SMITH

Fathograms checked by C.A. SCHOENE

Protracted by W.L. JONNS (NORFOLK PROCESSING OFFICE)

Soundings penciled by W.L. JONNS " " "

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXX~~ *and are true depths*

REMARKS:

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.....
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.....
.....

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

PROJECT CS - 409

POTOMAC RIVER, MD.

PROJECT:

The work was executed under ORIGINAL INSTRUCTIONS for PROJECT CS-409, dated 23 April 1959 and SUPPLEMENTAL INSTRUCTIONS dated 23 February 1960.

SURVEY DATES AND LIMITS:

The area of this survey is on the north side of the Potomac River. The survey extends from a junction with H-8279 (CO-1455) ⁽¹⁹⁵⁶⁻⁵⁹⁾ at Longitude $76^{\circ} 22.0'W$ on the east and extends to Longitude $76^{\circ} 26.0'W$ on the west and from a junction with Sheet CO-20-1-60 on the south to Latitude $38^{\circ} 08.5'N$ to the north. This survey also makes junctions with prior surveys Nos. H-2739, 1:20,000 - 1904, H-2754, 1:20,000 - 1905 and H-2923, 1:10,000 - 1908. *This survey also junctions with H-8548 (1960) on the west and H-8496 (59) on the south.*

The field work on this survey was accomplished during the 1959-60 field seasons between the following dates: 8 October 1959 through 18 October 1959 and from 8 April 1960 through 18 May 1960.

VESSELS AND EQUIPMENT:

Launch 178, equipped with 808 fathometers, calibrated at 820 fms/sec. (acoustic units mounted inside the hull) and Skiff 749, powered with outboard motors, were used for this survey, basing from the Ship COWIE.

Skiff 749 was used for sounding in the creeks and in the river from the shoreline out to a depth of about 6 feet. Launch 178 was used to sound from a junction with the skiff work and carried offshore to a depth of about 20 feet and with a junction with Sheet CO-20-1-60. All sounding executed by skiff was done using a 16 foot sounding pole. *H-8553 (1960)*

Launch 178 was operated at speeds varying from 4 to 6 knots and Skiff 749 from 3 to 6 knots. The turning radius of the two boats was not determined.

TIDE AND CURRENT STATIONS:

Pt. Lookout used for 1959 work
Portable tide gages were maintained at Point Lookout, Md. and Travis Point, Va. during the portion of the survey accomplished in the 1959 field season. Tides for the reduction of soundings on this portion of the survey were taken from Point Lookout tide station.

A standard tide gage at Piney Point, Md. and a portable tide gage at Kinsale, Va. were maintained during this survey in the 1960 field season. Tides for the reduction of soundings were taken from the Kinsale, Va. tide station with the exception of b-day, 8 April 1960, c-day, 9 April for both Launch (blue days) & Skiff (violet days), which used Piney Pt.

TIDE AND CURRENT STATIONS (CONTINUED):

1960, Launch 178 and e-day, 8 April 1960, f-day, 9 April 1960, Skiff 749. On these days, tides were taken from the standard tide gage at Piney Point, Md. ✓

All tides were scaled directly from tide marigrams with the exception of days that Piney Point station was used, therefore no smooth tide curves were drawn.

No current stations were observed within the limits of this survey. ✓

SMOOTH SHEET:

The smooth sheet ^{was} ~~will~~ be plotted by the Norfolk Processing Office. ✓

CONTROL STATIONS:

The majority of the signals used on the portion of the survey accomplished during the 1959 field season were located by photogrammetric methods on Shoreline Manuscripts Nos. T-11289 and T-11290.

Signals for the 1960 field season of this survey were located mainly by photogrammetric methods on Shoreline Manuscripts Nos. T-10673, T-11289, T-11290 and T-10667, with the exception of a few that were located by the hydrographic party by sextant cuts. *In Tam* ✓

The basic triangulation in this area was done by the Maryland Fishery Commission. Control stations in this ^{area} are few, having been destroyed by erosion. ✓

The following triangulation stations and intersection stations were used:

- FLAGPOLE - 1908, St Mary's County, Md. C.C.Y., M.E.C., 1933
- RANGE - 12,000 yd. front range, 1919, P.M.T., St. Mary's County, Md.
- REAR - 8,000 yd. rear range, 1919, P.M.T., St. Mary's County, Md.
- STRIPE - (1942), 1954 Signal SIR, St. Mary's County, Md. - ? ✓
- STUNG - (MSFC) 1908, CCY, St. Mary's County, Md.
- OAK - (MSFC), 1908, O.W.F. Signal HEM, St. Mary's County, Md.
- DAGO - RM(MSFC), 1908, O.W.F. Recovered but not used.

A list of control stations and signals used on this survey is appended to this report and a copy has been placed in the front of Volume I of the hydrographic records. ✓

SHORELINE AND TOPOGRAPHY:

The shoreline was transferred from Manuscripts T-10673, T-11289,*
T-11290* and T-10667.
(1955-58) (1955-58) * (1953-54-55)

JP2
Review

In all areas, sounding lines were run as close to the shoreline as practicable. However, due to the small tide range it was impossible to completely define the mean low water line by sounding. ✓

SOUNDINGS:

Soundings were taken with 808 fathometer and 16 foot sounding pole. ✓
Fathometer sndgs. blue "days" vol. 1-4 pole sndgs. "purple" days vol. 5-9

CONTROL OF HYDROGRAPHY:

The hydrography on this survey was controlled by three-point sextant fixes, taken on objects located by photogrammetric methods or standard hydrographic methods. In small and narrow tributaries where signals were not available, hydrography was controlled by referencing positions to identifiable topographic features. ✓

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, no holidays exist and depth curves can be adequately drawn at the junctions. ✓

JP6
Review

CROSSLINES:

Approximately 8% crosslines were run. Depths at crossings on the boat sheet are in satisfactory agreement and no significant discrepancies were found. The soundings on the boat sheet were based on predicted tides and the small fathometer corrections were not applied. Consequently there are some instances of apparent boat sheet discrepancies of 1 or 2 feet. It is believed that most of these discrepancies will be resolved when the soundings are smooth plotted. ✓

JP3
Review

COMPARISON WITH PRIOR SURVEYS:

A comparison of the boat sheet with Chart No. 557, Potomac River, scale 1:40,000, revised 10/19/59 and surveys H-2739(1:20,000 - 1904), H-2754(1:20,000 - 1905) and H-2923(1:10,000 - 1908) indicates good general agreement. *see verifiers notes*

see
JP687
Review

DANGERS AND SHOALS:

The charted 1 foot sounding at Latitude $38^{\circ} 06' 42''$, Longitude $76^{\circ} 24' 27''$ was investigated and found to be a rock pile, believed to be discarded ballast. *this is pos. 208 vol. 8.*

06.76'

An uncharted 9 foot shoal was found to exist at Latitude $38^{\circ} 03.80'$, Longitude $76^{\circ} 22.17'$. *There are shoaler sndgs. of 7 & 8 ft. in vicinity.* ✓

DANGERS AND SHOALS (CONTINUED):

38° An uncharted ¹¹ ~~12~~ foot sounding was found to exist at Latitude ⁹⁰ ~~83~~° 03.91', Longitude 76° 22.54'. *from pos. 80h* ✓

The charted ¹⁷ 17 foot sounding in Latitude 38° 03.42', Longitude 76° 23.85' and the charted 18 foot sounding in Latitude 38° 03' 30" (03.50') Longitude 76° 22' 45" (SEE PRELIMINARY REVIEW) was investigated by running a closely knit system of sounding lines. Soundings were verified. ** 18 ft. on H-8547* ✓

ITEM NO. 3. (PRELIMINARY REVIEW) of Navy markers within the limits of this survey was verified and markers were found to still exist and most of same were used for hydrographic signals. On this survey, signals Big, Hag, Was, Non, Quo, Rev, Eat, Fix, Navy, Ran, Mar, Hat and Bon are all Navy targets. Target in Latitude 38° 06' 17", Longitude 76° 24' 24" was not used as a signal, but still exists. *this is pos. 3m*
See verifiers notes *at 38° 06.28' x 76° 24.40'* ✓

COAST PILOT INFORMATION:

No changes or additions were noted within the limits of this survey. ✓

AIDS TO NAVIGATION:

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

FIXED AIDS

Kitt's Point Light No. 1, 1958, Latitude 38° 06.83', Longitude 76° 24.33', Manuscript T-10673. ✓
32

Smith Creek Light No. 2, 1958, Latitude 38° 06.14', Longitude 76° 24.48', Manuscript T-10673. ✓

FLOATING AIDS:

Kitts Point Shoal Buoy No. C-1, Latitude 38° 05.93', Longitude 76° 24.32', in ^{10.5 ft.} 11.5 feet of water, located by Skiff 749, position 1-m, 22 April 1960. ✓

Windmill Point Shoal Buoy No. N-2, Latitude 38° 06.11', Longitude 76° 24.42', in 15 feet of water, located by Skiff 749, position 2-m, 22 April 1960. *14 ft.*

Smith Creek ^{SHOAL} Buoy No. N-4, Latitude 38° 06.77', Longitude 76° 24.53', in ^{17 ft.} 18 feet of water, located by Skiff 749, position 4-m, 22 April 1960. ✓

Gray Point Buoy No. 2-GP, Latitude 38° 05.38', Longitude 76° 24.24', in 17.6 feet of water, located by Launch 178, position 1-h, 22 April 1960. *16.2 ft.* ✓

See
P 7B
Review

LANDMARKS FOR CHARTS:

No new landmarks are recommended for charting within the area of this survey. ✓

GEOGRAPHIC NAMES:

Geographic names as shown on Manuscripts T-10673, T-11289*, T-11290* ✓
and T-10667 are adequate and no additional names are recommended.
(1955-58) (1955-58) * (1953-54-55)

MISCELLANEOUS:

Fathometer corrections were determined from bar checks taken during the progress of field work, (See Fathometer Report, Ship COWIE, 1959-1960 Field Seasons). ✓

TABULATION OF APPLICABLE DATA:

Tide marigrams - Point Lookout Md. - Forwarded to Washington Office 1/5/60
Tide marigrams - Travis Point, Va. - Forwarded to Washington Office 1/5/60 ✓
Tide marigrams - Kinsale, Va. - Forwarded to Washington Office 1/5/61

ACCOMPANYING THIS REPORT

Sounding Volumes - 1 through 9
Fathograms - a-day through j-day, Launch 178
Fathometer corrections - 2 sheets
Manuscripts - T-10673, 1959, T-10673, 1960, T-11289, 1959, ✓
T-11290, 1959, and T-10667, 1960.
Tide reducers - 2 sheets
Descriptive Report - 2 copies
Boat Sheets
(CO-1-10-59)
(CO-1-10-59A)

Respectfully submitted,

Oliver C. Swindell
Oliver C. Swindell
CQS., C&GS.

APPROVED AND FORWARDED:

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

APPENDIX:

"A" Tide Note
"B" Statistics
"C" Geographic Names ✓ *pub*
"D" Fathometer Corrections
"E" List of Control Stations

APPENDIX "A"TIDE NOTE

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

A portable automatic tide gage was installed at Point Lookout, Maryland, Latitude $38^{\circ} 02' 23''$ N, Longitude $76^{\circ} 19' 27''$ W and Travis Point, Virginia, Latitude $37^{\circ} 59' 45''$ N, Longitude $76^{\circ} 28' 02''$ W and were operated during the portion of this survey accomplished in the 1959 field season. Tidal data from Point Lookout tide gage with no time or range corrections were used to reduce soundings on this portion of the survey accomplished during the 1959 field season. Mean Low Water corresponded to a staff reading of 2.0 feet. *Travis Pt. not used*

A portable automatic tide gage was installed at Kinsale, Virginia, Latitude $38^{\circ} 01' 52''$, Longitude $76^{\circ} 34' 37''$ and a standard tide gage was maintained at Piney Point, Maryland, Latitude $38^{\circ} 08' 00''$, Longitude $76^{\circ} 32' 00''$ and were in operation throughout the work on this survey in the 1960 field season.

Tidal data from the Kinsale, Virginia tide gage with no time or range corrections were used to reduce soundings on this part of the survey accomplished during the 1960 field season, with the exception of b-day, 8 April 1960, Launch 178., c-day, 9 April 1960, Launch 178, e-day, 8 April 1960, f-day, 9 April 1960, Skiff 749. On these days tidal data was used from Piney Point gage with no time or range corrections.

At Kinsale, Virginia, Mean Low Water corresponded to a staff reading of 1.9 feet. At Piney Point, Maryland, Mean Low Water corresponded to a staff reading of 2.3 feet.

Tidal datum for the Point Lookout, Maryland tide gage, used for the 1959 field season on this survey has been misplaced, but smooth tides were entered and checked in sounding volumes and soundings have been reduced. If these tides are needed, they will have to be obtained from the tide marigrams in the Washington Office.

APPENDIX "B"STATISTICS

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

LAUNCH 178

<u>VOL. NO.</u>	<u>DAY LETTER</u>	<u>DATE</u>	<u>NO. OF POS.</u>	<u>NAUT. MI. SDG.</u>
1	a (blue)	10/8/59	102	16.5
2	b "	4/8/60	35	5.0
2	c "	4/9/60	145	17.0
2 & 3	d "	4/11/60	184	27.1
3	e "	4/13/60	188	26.9
3	f "	4/20/60	70	11.0
4	g "	4/21/60	163	21.0
4	h "	4/22/60	165	22.1
4	j "	4/23/60	20	2.5
		TOTALS	1095	149.1

SKIFF 749

5	a (purple)	10/8/59	91	11.4
5	b "	10/17/59	136	16.0
5 & 6	c "	10/18/59	115	11.8
6	d "	10/19/59	68	6.0
7	e "	4/8/60	79	8.0
7	f "	4/9/60	132	12.0
7	g "	4/11/60	75	7.1
7 & 8	h "	4/12/60	84	7.3
8	j "	4/13/60	112	8.7
8	k "	4/20/60	98	6.9
8	l "	4/21/60	73	6.1
9	m "	4/22/60	62	4.8
9	n "	5/10/60	28	2.4
		TOTALS	1153	108.5

Total area of survey - 8.3 nautical miles.

APPENDIX "D"ABSTRACT OF FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

LAUNCH 178 *blue days*

<u>DAY</u>	<u>FROM</u>	<u>TO</u>	<u>CORR'N</u>
a	0.0	19.1	- 0.6
	19.2	29.0	- 0.8
	29.1	38.8	- 1.0
	38.9	48.6	- 1.2
b	3.0	8.5	0.2
	8.6	13.2	- 0.0
	13.3	17.8	- 0.2
	18.0	22.6	- 0.4
thru	22.8	27.4	- 0.6
	27.6	32.0	- 0.8
	32.2	36.6	- 1.0
	36.8	40.2	- 1.2
	40.4	41.8	- 1.4
j	41.8	60.0	- 1.6

1959
H. Lockout

1960

"B" SCALE - NOT USED

APPENDIX "E"

LIST OF CONTROL STATIONS
1959 Field Season

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Aha	T-10673	Ice	T-11289
Ant	T-11290 ?	Ivy	T-11290 ?
Arm	T-10673	Jaw	T-10673, T-11289
Bak	T-10673	Key	T-11289
Big	T-11290	Kitts Kitts Pt. Light 1, 1958	T-10673
Blue	T-11289	Knat (landmark)	T-11290
Box	T-10673	Log	T-11289
Can	T-11289	Non	T-11290
Cop	T-10673	Oak	T-11290
Dog	T-10673 (hydro)	Pic	T-11290 (hydro)
Eat	T-10673 (hydro)	Point Kitts Pt. Light 2, 1958	T-10673
Ebb	T-11289	Quo	T-11290
Far	T-11289	Rev	T-11289, T-11290
Fix	T-10673 (hydro)	Sir	T-11289
Fox	T-11290 (hydro) ?	Trip	T-11289
Gab	T-11290 ?	Val	T-11289
Gob	T-10673 (hydro)	Was	T-11290
Hag	T-11290 ✓	Wee	T-10673 (hydro)
How	T-11289	Yak	T-11289
Hum	T-11290 ?	Zig	T-11289

APPENDIX "E"

LIST OF CONTROL STATIONS (CONTINUED)

1960 Field Season

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Ace	T-10667(hydro)	Hag	T-11290
Act	T-10673	Hat	T-10673
Ado	T-10673	Hem	T-10673
Aim	T-10667	Hod	T-10667
Alp	T-10667	Hop	T-10667
Amy	T-10667	Hug	T-10667
Ant	T-11290	Hum	T-11290
Ask	T-10667	Ida	T-10673
Axe	T-10673	Irk	T-10673
Bag	T-10673	Jar	T-10673, T-10667
Big	T-11290	Jay	T-10673
Bon	T-10673	Jib	T-10673
Bug	T-10667	Jug	T-10673
Bus	T-10667	Jut	T-10673
Coo	T-10667	Ked	T-10667
Cry	T-10673	Kitts	Kitts Pt. Light 1, 1958 T-10673
Cut	T-10673	Knat	T-11290
Deb	T-10673, T-10667	Lad	T-10673
Dif	T-10673	Lay	T-10667
Doc	T-10667	Lip	T-10667
Don	T-10673	Low	T-10667
Dud	T-10667	Man	T-10673
Dun	T-10673	Mar	T-10673
Eat	T-10673(hydro)1959	Max	T-10667
Ego	T-10673	Moo	T-10673
Elm	T-10667	Mug	T-10667
Eon	T-10673	Navy	T-10673
Era	T-10673	Nay	T-10673
Eva	T-10673	New	T-10673
Fez	T-10673(hydro)	Nip	T-10673
Fix	T-10673, 1959(hydro)	Nix	T-10673
Foe	T-10673	Nod	T-10673
Fox	T-11290(hydro)	Nor	T-10667
Fun	T-10673(hydro)	Nut	T-10673(hydro)
Gab	T-11290	Obi	T-10673
Gad	T-10673	Odd	T-10667
Gal	T-10667	Old	T-10667
Gam	T-10673	Ora	T-10667
Gas	T-10673	Owl	T-10673
Gem	T-10673	Pal	T-10673
Get	T-10667	Pep	T-10667
Gin	T-10673(hydro)	Pet	T-10673
Gum	T-10673	Pie	T-10667
Gus	T-10667	Poi	T-10667
Guy	T-10673	Point	Smith Creek Light 2, 1958 T-10673

APPENDIX "E"LIST OF CONTROL STATIONS (CONTINUED)1960 Field Season

HYDROGRAPHIC SURVEY H-8547

(FIELD NO. CO-1-10-59)

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
POL	Triang. FLAGPOLE, 1908 T-10667	STUNG	Triang. (MSFC), 1908 T-10673
Pot	T-10673	Sue	T-10667
Pug	T-10673	Sun	T-10673
Pup	T-10673	Sup	T-10673
Quo	T-11290	Tam	Hydro-sextant, Vo. 7 p. 11
Ram	T-10667	Tap	T-10667
Ran	T-10673	Tom	T-10673 (hydro)
RANGE	Triang. 12,000 yd. FRONT RANGE, 1919 T-10673	Top	T-10673
REAR	Triang. 8,000 yd. REAR RANGE, 1919 T-10673	Tub	T-10667
Rig	T-10673	Van	T-10667
Rim	T-10667	Vex	T-10673
Rio	T-10673	Vim	T-10673 (hydro)
Rip	T-10667 (hydro)	Wad	T-10667
Roy	T-10667	Wag	T-10673
Rub	T-10673 ^k	War	T-10673
Rue	T-10673	Was	T-11290
Sad	T-10673	Wax	T-10673
Sag	T-10667	Wee	T-11289 , T-10673, 1959
Set	T-10673 (hydro)	Who	T-10673
Sin	T-10667	Wig	T-10667
Sip	T-10667	Win	T-10673
Sir	Stripe, 1942-1954 T-11289	Wit	T-10667
Sis	T-10673	Wix	T-10667
Ski	T-10673	Woo	T-10673
Sky	T-10667	Yes	T-10673 (hydro)
Sol	T-10673	Yet	T-10667
Sow	T-10667	Zag	T-10673
Sox	T-10673		

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8547 (Co-1-10-59)

GENERAL

Except for the relatively minor discrepancies listed below this appears to be an excellent basic survey. Soundings are in agreement at crossings, and although the sounding pole was used at seemingly excessive depths as evidenced by scattered no-bottom soundings at 12 to 14 feet, they agree very well with themselves and at junctions with fathometer soundings.

A comparison with chart 557 shows a general shoaling of from 1 to 3 feet with a corresponding offshore shift of the depth curves. This condition is particularly noticeable at the 18 foot curve. (see PL REVIEW)

DISCREPANCIES

It will be noted that the location of station WEE differs slightly on compilations T-11289 and T-10673. The position shown on T-10673 was used on the smooth sheet as it is in agreement with the boat sheet, and it gave no perceptible jumps in the sounding lines with the possible exception of some positions on "e" day (blue) in the vicinity of Lat. 38-05.5' and Long. 76-25.5'. (No significant jumps)
*38°05.23' } not shown on available manuscript
76°22.72' }*

These jumps are not considered large enough to affect the hydrography for charting purposes or to warrant any further review of the control. There is also a possibility some of the jumps may be caused by varying currents or unrecorded speed changes. Line 137 thru 140e, on which soundings were not penciled, shows these time variations while station WEE was being used without a change of fix.

Station RUB was transferred directly from the boat sheet. The position of this station, as shown on T-10673, is undoubtedly incorrect as it caused jumps in the sounding lines. No other source was found for this station. See verifier's notes.
OK Rub revised to location as shown on T-10673. No significant jumps in hydro. noticed.

Norfolk, Va.
29 June 1961

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer

ABSTRACT OF BAR CHECKS

PROJECT NO CS - 409, POTOMAC RIVER

SHEET NO CO - 1-10-59

DATE & DAY LEFT	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
10/18/59 a day	-0.4	-0.4	-0.4	-0.3	-0.6	-0.8				
" " b day	-0.6	-0.3	-0.5	-0.5	-0.6	-0.7				
" " c day	0.5	-0.5	-0.3	-0.6						
" " d day		-0.5		-0.4	-0.6	-0.8				
4/18/60 b day		0.0	-0.1	-0.7	-0.9					
" " c day		0.0	-0.4	-0.8	-1.0					
4/11/60 d day		-0.2	-0.3	-0.8	-0.8	-1.0	-1.1	-1.7		
" " e day		0.0	-0.3	-0.5	-0.5	-1.0	-1.1	-1.8		
4/13/60 e day	4th/woe day	-0.2	0.0	-0.4	-1.2	-1.3				
" " f day	" " "	-0.2	0.0	-0.8	-1.4	-1.8				
4/20/60 f day	4th/wo f day	+0.4	0.0	-0.2	-0.2	-0.8				
" " g day	" " "	+0.2	0.0	-0.2	0.0	-0.6				
4/22/60 h day	4th/wo h day	+0.2	+0.7	-0.7	-0.4	-0.6	-0.8	-1.4	-1.6	
" " i day	" " "	+0.2	+0.4	0.0	0.0	-0.4	-0.6	-0.8	-1.0	
Sum Total	+0.4	+0.6	-1.3	-4.0	-4.4	-4.8	-4.4	-6.1		
No.	2	10	10	9	8	6	4	4		
Mean	+0.2	+0.06	-0.13	-0.40	-0.55	-0.80	-1.10	-1.52		
1959										
Total	1.5	-1.7	-1.4	-1.8	-1.8	-2.8				
No.	3	4	3	4	3	3				
Mean	-0.50	-0.40	-0.47	-0.45	-0.60	-0.77				

CO-1-10-59

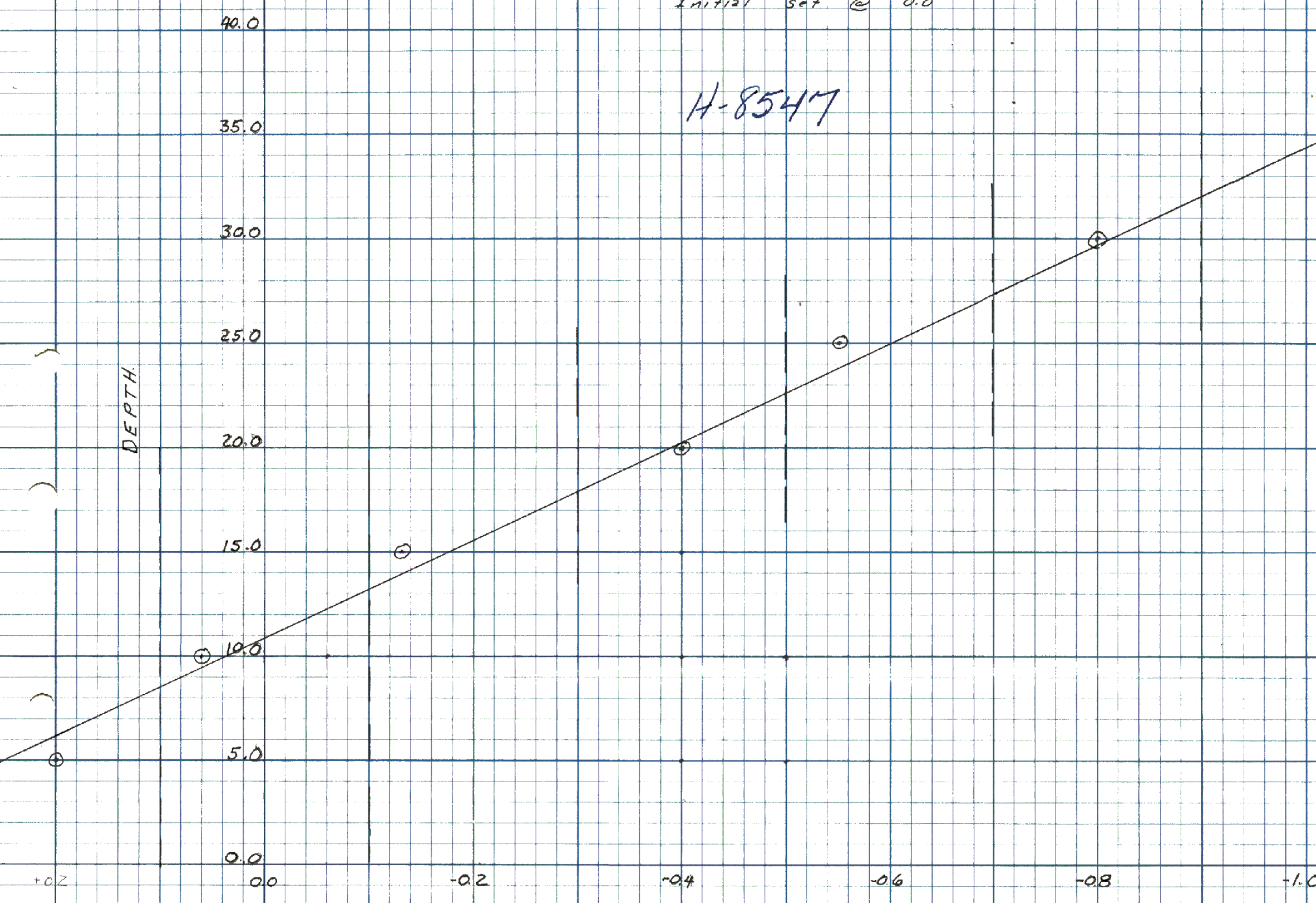
Abstract of BAR CHECKS.

CO-1-10-59 (6-5 days, Lch 178)

Initial set @ 0.0

H-8547

DEPTH



CORRECTIONS:

$\pm 3.0'$ to $8.5'$ = $+0.2'$

$8.6'$ to $13.2'$ = ± 0.0

$13.3'$ to $17.8'$ = $-0.2'$

$18.0'$ to $\frac{22.6}{26}'$ = $-0.4'$

$22.8'$ to $27.4'$ = $-0.6'$

$27.6'$ to $32.0'$ = $-0.8'$

$32.2'$ to $36.6'$ = $-1.0'$

$36.8'$ to $40.2'$ = $-1.2'$

$40.4'$ to $41.8'$ = $-1.4'$

$41.8'$ to $60.0'$ = $-1.6'$

Comp: CWR & RLW
 ✓: RLW & CWR

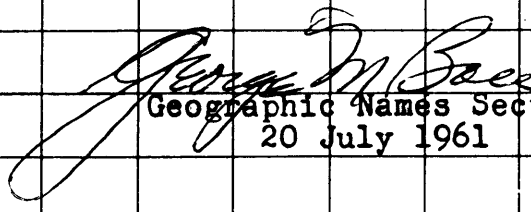
CORRECTIONS

+0.2 0.0 -0.2 -0.4 -0.6 -0.8 -1.0 -1.2 -1.4 -1.6

GEOGRAPHIC NAMES

Survey No. H-8547

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On Chart No. 557</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On previous survey No.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On U. S. quadrangle Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">From local information</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On local Maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">P. O. Guide or Map</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Rand McNally Atlas</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">U. S. Light List</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">B&N</div> </div>										
	A	B	C	D	E	F	G	H	K		
Biscoe Creek	x								x	1	
Calvert Bay	x									2	
Calvert Creek	x									3	
Cornfield Point	x									4	
Deep Cove	x									5	
Fox Harbor	x									6	
Hall Pond	x									7	
Harry James Creek	x									8	
Jutland Creek	x									9	
Jutland Neck	x									10	
Kitts Point	x								x	11	
Lawson Point	x									12	
Potomac River	x									13	
Potter Creek	x									14	
Rowley Bay	x									15	
St. Ingoes Neck	x									16	
Smith Creek	x									17	
Tick Neck	x									18	
										19	
Sage Pond										20	
Gray Pt.										21	
										22	
										23	
										24	
										25	
										26	
										27	


 Geographic Names Section
 20 July 1961

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8547

Records accompanying survey: Smooth sheets ...¹...;
 boat sheets ¹...; sounding vols. ...⁹...; wire drag vols.;
 (2 parts) Descriptive Reports ...¹...; graphic recorder envelopes ...⁵...;
 special reports, etc.

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

Number of positions on sheet		2248
Number of positions checked		178
Number of positions revised		5
Number of soundings revised (refers to depth only)		20
Number of soundings erroneously spaced		10
Number of signals erroneously plotted or transferred		1
Topographic details	Time	10
Junctions	Time	15
Verification of soundings from graphic record	Time	15
Special adjustments	Time	25

Verification by *John T. Sullivan* Total time 376... Date *March 25, 63*
 Reviewed by *Jim Jeske* Time 54 Date *5/7/63*

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8547

FIELD NO. CO-1-10-59

Maryland, Potomac River, Smith Creek and Vicinity

SURVEYED: October 1959-May 1960

SCALE: 1:10,000

PROJECT NO. CS-409

SOUNDINGS: 808 Depth Recorder
Sounding Pole

CONTROL: Sextant Fixes
on shore signals

Chief of Party-----C. A. Schoene and E. H. Sheridan
Surveyed by-----D. G. Rushford, O. C. Swindell,
R. L. Newsom, C. W. Randall,
J. D. Bossler and R. I. Green
Protracted by-----W. L. Jonns
Soundings plotted by-----W. L. Jonns
Verified and inked by-----J. T. Gallahan
Reviewed by-----I. M. Zeskind
Inspected by-----R. H. Carstens

Date: 5/7/63

1. Description of Area

This is an inshore survey of the eastern side of the Potomac River between approximately lat. $38^{\circ}02.4'$ and lat. $38^{\circ}07.8'$. The survey includes several creeks, the largest of which are Smith Creek and Jutland Creek. The bottom is fairly irregular with shoals, spits, channels and flats contributing to the bottom irregularity.

2. Control and Shoreline

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

The shoreline originates with unreviewed photogrammetric surveys T-10673 and T-10667 of 1955-58, and reviewed photogrammetric surveys T-11289 and T-11290 of 1953-56.

3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated, except the zero depth curve, which was not always feasible to delineate because of the small (1.2 - 1.4 ft.) tide range. The 3-ft curve was drawn to better define the bottom configuration. The bottom configuration and least depths are considered to be adequately developed.

4. Condition of Survey

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

5. Junctions

Adequate junctions were effected with H-8279 (1955-59) on the southeast, with H-8496 (1959) and H-8553 (1960) on the south, and with H-8548 (1960) on the west.

6. Comparison with Prior Surveys

- A. H-640 (1857), 1-21,408
 H-695 (1859), 1-20,000
 H-701 (1859-60), 1-20,000

These prior surveys together fall within the area of the present survey. A comparison between the prior and present surveys reveals a general shoaling of depths throughout the common area varying from 1-4 ft. The shoreline has eroded in a number of places with resultant changes in depths. Examples of shoreline erosion occurs at Kitts Point in the vicinity of lat. $38^{\circ}06.23'$, long. $76^{\circ}25.0'$ where the shoreline has eroded about 200 meters and at Gray Point in the vicinity of lat. $38^{\circ}05.3'$, long. $76^{\circ}23.2'$ where the shoreline has eroded about 150 meters. These changes in shoreline and depths of water are attributed to the action of the current, to storms, and to the depositing of sediment.

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

- B. H-2739 (1904-05), 1-20,000

H-2754 (1905), 1-20,000
H-2923 (1908), 1-10,000

These prior surveys together cover the area of the present survey. A comparison between the prior and present surveys reveals changes in the shoreline with resultant changes in depths and a general shoaling of the bottom throughout the common area.

Examples of changes in the shoreline occur at Kitts Point where the shoreline has eroded about 130 meters and at Lawson Point where the shoreline has eroded about 80 meters. The bottom in general has shoaled from 1-2 ft., although in several areas the bottom has shoaled as much as 5 ft., as for example in lat. $38^{\circ}06.6'$, long. $76^{\circ}24.62'$, where a prior depth of 20 ft falls in present depths of 15 ft. These changes in shoreline and depths of water 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)

A. Hydrography

The charted hydrography originates with the prior surveys previously discussed which need no further consideration, supplemented by depths from the boat sheet (Bp 60637) and penciled smooth sheet of the present survey. A comparison between the charted and present survey hydrography reveals only differences of 1-2 ft. in depths. The following charted piers are not located on the present survey:

Number of piers	<u>Latitude</u>	<u>Location</u>	<u>Longitude</u>
1	$38^{\circ}07.48'$		$76^{\circ}25.13'$
1	$38^{\circ}08.21'$		$76^{\circ}23.80'$
1	$38^{\circ}08.12'$		$76^{\circ}23.39'$
2	$38^{\circ}07.30'$		$76^{\circ}23.25'$
2	$38^{\circ}06.78'$		$76^{\circ}23.70'$
1	$38^{\circ}06.40'$		$76^{\circ}24.37'$
1	$38^{\circ}05.53'$		$76^{\circ}22.50'$

The sources of these piers could not be ascertained because the standard of Chart 557 on which their sources should have been indicated has been lost. The standards of Chart 1224 which also covers the area in which these piers fall does not indicate their sources. The history sheets of Charts 557 and 1224 fail to record the sources of these piers. These piers were probably charted by the compiler from photographs flown in 1955-58. The existence of these piers has not been disproved by the present survey and they should, therefore, be retained on the chart.

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

B. Aids to Navigation

The aids to navigation leading into Smith Creek have been revised subsequent to the present survey in accordance with HON to M 43, 1962.

The markers charted in

<u>Latitude</u>	<u>Longitude</u>
38°05.05'	76°23.03'
38°05.20'	76°23.03'
38°05.29'	76°23.29'

originate with the Department of Tidewater Fisheries, State of Maryland map (Bp 61706), which was compiled from the base map of the incomplete photogrammetric survey T-10673 (1955-58), where the markers were erroneously located. The markers will be removed from the completed manuscript of T-10673 at the time it is reviewed. These markers should be removed from the chart. ✓

The charted positions of the aids to navigation 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 considered to be a good basic survey. The 3-ft. pole sounding in lat. $38^{\circ}07.28'$ long. $76^{\circ}23.36'$ may be in error and should be verified at an opportune time.

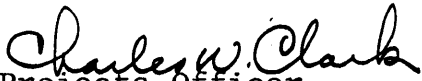
Examined and Approved:



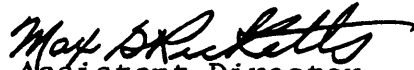
Chief,
Nautical Chart Division



Assistant Director,
Office of Cartography



Projects Officer,
Operations Division



Assistant Director,
Office of Oceanography

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coast and Geodetic Survey~~

August 18, 1961

Division of Charts: R. H. Carstens

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8547

Locality Chesapeake Bay - Potomac Bay, Maryland

Chief of Party: C. A. Schoene (1959)
E. H. Sheridan (1960)
Plane of reference is mean low water reading
2.0 ft. on tide staff at Point Lookout, Maryland
4.2 ft. below B. M. 4 (1928)
2.3 ft. on tide staff at Piney Point, Maryland
4.2 ft. below B. M. NO. 2 (1958)
1.9 ft. on tide staff at Kinsale, Virginia
5.2 ft. below B. M. NO. 1 (1960)

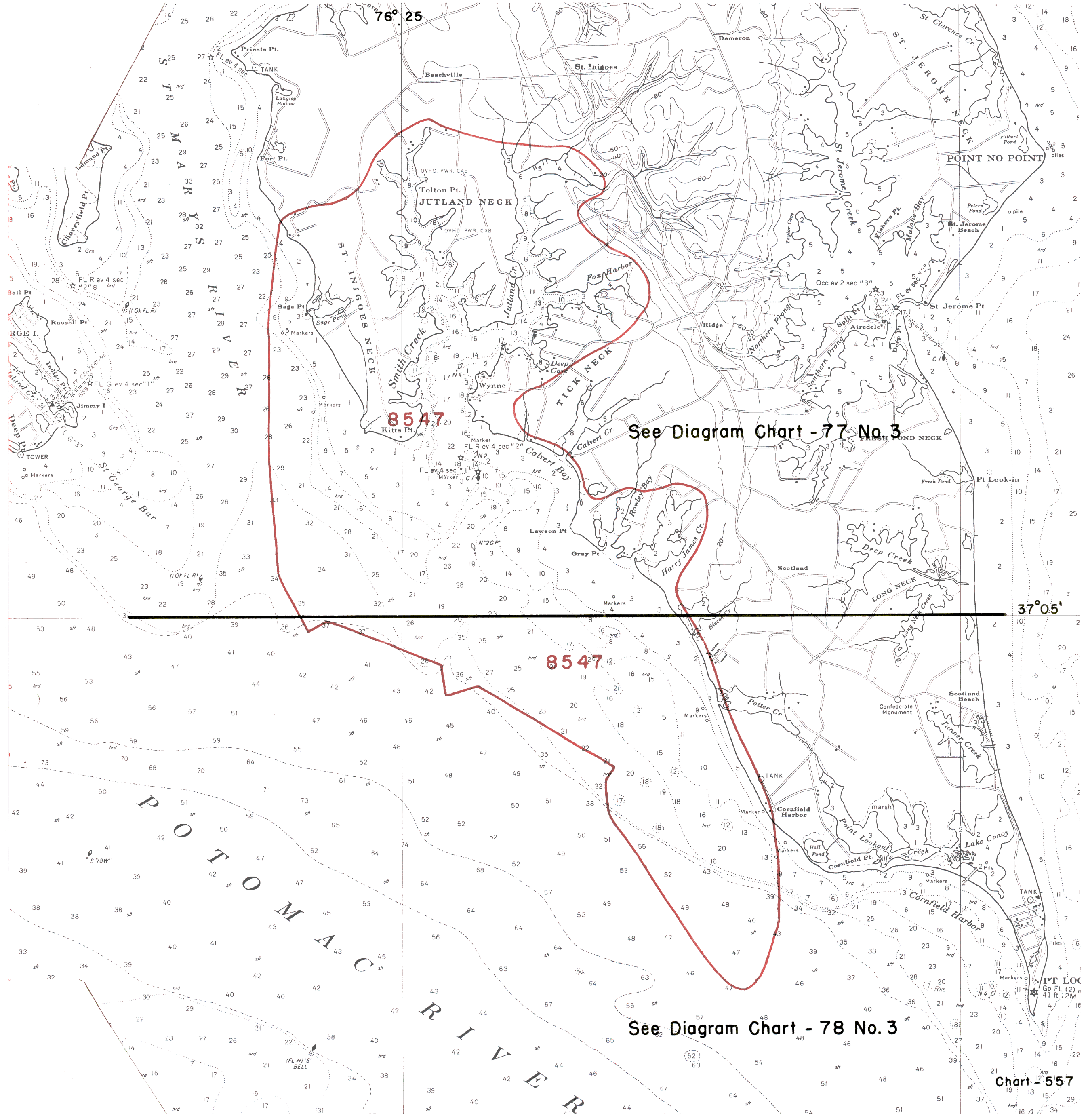
Height of mean high water above plane of reference is:

1.3 Point Lookout, Maryland
1.4 Piney Point, Maryland
1.2 Kinsale, Virginia

Condition of records satisfactory except as noted below:

Burt W. Wilcox
Chief, Tides & Currents Branch

~~Chief, Division of Tides and Currents~~



76° 25'

37° 05'

8547

8547

See Diagram Chart - 77 No. 3

See Diagram Chart - 78 No. 3

Chart - 557

POTOMAC RIVER

Geographical labels: Priest Pt., Beachville, St. Inigoes, Dameron, Fort Pt., Tolton Pt., JUTLAND NECK, Smith Creek, Foz Harbor, Wick Neck, Fresh Pond Neck, St. Jerome Pt., St. George Bar, Harry James Cr., Scotland, Potter Cr., Cornfield Harbor, Lake Conoy, PT LOC, etc.

