

9479

Diag. Cht. No. 77-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey **HYDROGRAPHIC**
Field No. **AHP-10-6-74**
Office No. **H-9479**

LOCALITY

State **Virginia - Maryland**
General Locality **Potomac River**
Locality **Ferry Point to Jones Point**

1974

CHIEF OF PARTY
Fidel T. Smith

LIBRARY & ARCHIVES

DATE **February 10, 1978**

62479
6

Handwritten:
122-89

HYDROGRAPHIC TITLE SHEET

H-9479

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

AHP-10-6-74

State Virginia - Maryland

General locality Potomac River

Locality Ferry Point
~~Dogue Creek to Jones Point~~

Scale 1:10,000

Date of survey Oct 1 - 19 Nov
~~Sept. to Nov. 1974~~

Instructions dated 2 August 1974

Project No. OPR-409-AHP-74

Vessel AHP-Launch 1260; SKIFF 570

Chief of party Lt. Cdr. F. T. Smith, NOAA

Surveyed by Lt. (ig) W. E. George, NOAA, and personnel of AHP-Launch 1260

Soundings taken by echo sounder, hand lead, pole echo sounder and sounding pole

Graphic record scaled by R. Snow, G. Weisner

Graphic record checked by L. Gilden, H. Piner, W. E. George

Protracted by W. E. George, L. Gilden

Automated plot by Calcomp plotter 618
Processing Division, AMC

Verification by

JS Bradford

Soundings in ~~feet~~ feet at MLW ~~LOW~~ All soundings reduced by using predicted tides.

REMARKS: All times of this survey are in GMT

Miscellaneous data filed with field records.

Applied to plots 4/18/79

CGS

1.

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9479
AHP-10-6-74

A. Project

This survey is part of Project OPR-409-AHP-74 with project instructions dated 2 August 1974. Change No. 1 to project instructions, OPR-409-AHP-74, were issued on 5 September 1974.

B. Area Surveyed

This survey covers the waters and tributaries of the Potomac River from the Woodrow Wilson Bridge at Jones Pt. south to a line drawn between Ferry Pt. on the Virginia side and Marshall Hall on the Maryland side of the river. The work began on 1 October 1974, and terminated on 19 November 1974.

The limits of the survey are shown on the chartlet.

This survey junctions with the following contemporary surveys:

H-9349 (1:10,000) 1973-4
H-9477 (1:5,000) 1974

Prior surveys covering the area are:

Registry No. 2692 (1:10,000) 1904
Registry No. 2688 (1:10,000) 1904

C. Sounding Vessels

Launch 1260, a 28 foot Mon-Ark, was used to survey the main body of the river. Its color position number was blue.

Skiff 570, a 16 foot fiberglass skiff, was used to survey the shallow creeks and tributaries of the survey area. Its color position number was red.

D. Sounding Equipment

Raytheon Fathometers, type DE 723, serial numbers 1888 and 535 were used to obtain all echo soundings on Launch 1260. Raytheon Fathometers, type DE 723, serial number 1885 was used on Skiff 570 to obtain all echo soundings. Fathometers were changed on both survey vessels during the survey due to problems with the recording paper not advancing properly. At no time during the survey were the echo soundings obtained from each fathometer ~~in~~ questionable.

A sounding pole was used for all soundings under 3 feet.

Corrections to soundings obtained for the BE 723 fathometers were as follows:

1. Velocity corrections were obtained by bar checks. An abstract of reduced bar checks, graphs of reduced bar checks, and the velocity tables are included in the appendix of this report.
2. Settlement and Squat corrections for the survey vessels were determined by previous tests. The test data and graphs are in the appendix to this report. The settlement and squat corrections will be applied to all soundings in the TRA abstract which is in the appendix to this report.
3. Frequent A-F scale checks were made.
4. Frequent phase checks were made by use of the Digital Phase Checker.
5. The initial was set to zero (0.0). All fathograms were scanned for index (initial) error by party personnel. The index error is marked in the sounding volumes and on the TRA correction abstract in the appendix of this report.

E. Smooth Sheet

The smooth sheet for this survey will be plotted at the Atlantic Marine Center, Norfolk, Virginia.

Data tapes of this survey will be compiled at the Atlantic Marine Center also.

F. Control

Horizontal control was from existing triangulation, from traverse, or from photo points established by Photo Party 61. A signal list has been compiled and is in the appendix of this report.

Launch positions were determined by either range-range or range-visual method. Ranging was by Del Norte (SHF) equipment. Calibration and calibration checks were by the following procedures:

1. Del Norte was calibrated against a base line established by Photo Party 61 and the error was zeroed out.
2. The calibration was checked twice daily at known positions such as day beacons. These known positions were established by Photo Party 61.
3. The launch was maneuvered alongside these points and the Del Norte readings were noted and recorded in the sounding volume and compared to the inverse distance computed by Photo Party 61.

The Del Norte note lists equipment used and is in the appendix. The abstract of daily calibrations, the daily corrections were determined and are also listed in the appendix.

The Control Report prepared by Photo Party 61 will be included in the appendix to this report. Filed with Field records

G. Shoreline See ^{Q.C.} ~~Verifier's~~ Report

Shoreline manuscripts for this boatsheet are TP-00319, ~~TP-00320~~, TP-00321, and TP-00322. All field edit for these manuscripts was accomplished by Photo Party 61. Where the shoreline was found to be different from that indicated by the manuscripts, the change was indicated in red. ← ?

Due to the small tidal range and the steep banks of the river, the launch party was not able to determine the MLW line. ✓

H. Crosslines

Crosslines were run at approximately 10% of the regular miles of sounding lines.

The agreement between the crosslines and the regular sounding lines are within one foot (for most of the survey).

Crosslines have been found to be in disagreement of as much as 3 feet on days of wind-driven tides. After a close inspection of tidal records it appears that these differences should be eliminated by smooth tides.

I. Junctions See Verifier's Report

Junctions made with H-9349 (1:10,000) 1974⁷³ is in good agreement.

Junctions with H-9477 (1:5,000) 1974 will be made as soon as the survey is available for comparison.

J. Comparison with Prior Surveys

This survey contains 23 PSI investigations. The results of these investigations follows:

✓ PSI #42

Described as: 3 piles one charted in Lat. $38^{\circ} 41' 18''$, Long. $77^{\circ} 07' 19''$, the second in Lat. $38^{\circ} 41' 12''$, Long. $77^{\circ} 05' 53''$, and the third in Lat. $38^{\circ} 42' 00''$, Long. $77^{\circ} 05' 46''$ all originated with chart letter No. 80 of 1929, a C&GS landmark report. All three piles were described as concrete posts.

Instructions: the present existence of these concrete posts should be verified or disproved.

Results of Investigation:

Lat. $38^{\circ} 41' 18''$
Long. $77^{\circ} 07' 17''$

Verified
Retain on Chart appear on H-9349

Lat. $38^{\circ} 41' 12''$
Long. $77^{\circ} 05' 46''$
 $53''$

Disproved
Delete from Chart *✓concur*

Lat. $38^{\circ} 42' 00''$
Long. $77^{\circ} 05' 46''$

Verified
Retain on Chart *✓concur* } Position 139 D.P.
 } $\phi 38^{\circ} 41' 59.11''$, $\lambda 77^{\circ} 05' 45.43''$
 } on present survey

All concrete piles were verified or disproved by investigation with party's skiff at low water.

✓ PSI #43

Described as: Pile charted in Lat. $38^{\circ} 41' 17''$, Long. $77^{\circ} 05' 39''$ ⁸, originated with a 1935 C&GS Coast Pilot report (BP-29692) which approximately positioned the pile on a section of chart.

Instructions: the present existence should be verified or disproved.

Results of Investigation: No remains were found. Recommend deleting item from chart. *✓concur* A stump awash at MLW was found approximately 50 m. west of the charted pile.

✓ PSI #46

Described as : row of dots charted Lat. $38^{\circ} 42' 07''$, Long. $77^{\circ} 05' 34''$ originate with H-2692 (1904) where they appear to be a row of pilings

Instructions: present existence of these piles should be verified or disproved.

Results of investigation: No pilings were found in the given position but at Lat. $38^{\circ} 42.18'$, Long. $77^{\circ} 05.51'$ a detached position was obtained on the end pilings of a row of pilings.

It is recommended that the row of dots on the chart be ^{revised} moved to correspond with ~~this new position~~. *✓concur* carried forward from T-5758 as *subm. pikes*.
survey delineation

✓ PSI #47

Described as: snag charted Lat. $38^{\circ} 41' 56''$, Long. $77^{\circ} 05' 11''$ originates with 1948 Corps of Engineers Survey (BP-43535)

Instructions: present existence of this snag should be verified or disproved. In addition, the controlling depth of the adjacent channel leading to the pier at Mt. Vernon should be examined.

Results of the investigation: A report was made to the party that recent dredging had been accomplished and the snag was no longer present. A development was run and nothing was found. The snag has been disproved and should be deleted from the chart.

CONCUR
Although investigation was centered 50 meters north, it was adequate to discredit snag.

The dredged channel to Mt. Vernon pier was surveyed. The controlling depth of the channel was found to be 5 ft. at MLW with predicted tides applied.

*13 ft on center
line*

See Q.C. Report, para 20.b.

PSI #48

Described as: western most of three pile symbols in the vicinity of Lat. 38° 41' 46" Long. 77° 04' 03" originates with chart Letter No. 80 of 1929, a C&GS land mark report. The pile was described as concrete post. The other two pile symbols nearby depict the remains of a ruined pier.

*Origin of pier N-2692 (1904).
Carried pier ruin forward from T-5758 (1937-38) to present survey.*
Instructions: presence of the existence of the pile and ruins should be verified or disproved.

Results of Investigation: These piles were verified as the remains of a wooden pier. The concrete post was not found but may still prove to be a hazard to navigation.

It is recommended that these items remain on the chart. *concur*

Area has been delineated as foul per shoreline manuscript.

The chart should be revised accordingly to the present survey.

PSI #49

Described as: shoaling reported charted in Lat. 38° 42' 23", Long. 77° 04' 33" originated with Chart Letter No. 215 of 1967 in which someone at the Washington Boatshow reported that the entire Little Hunting Creek north of the main Potomac River channel has shoaled to 2-ft. or less.

Instructions: the present condition of the area should be adequately portrayed on the new survey.

Results of the investigation: The new survey verifies the shoaling. The soundings when reduced to MLW using *smooth* predicted tides only show a depth ~~across~~ *into* Little Hunting Creek of 2 ft. *concur*

Chart survey depths, delete note.

PSI #50

Described as: two piles at Mockley Point in about Lat. 38° 42' 05" and 77° 02' 50", the SW pile originates with a 1951 C&GS general corrections report. ** Originates with T-5758 (1937-38), not seen on 1951 correction report, BP49169.*

Instructions: present existence of the SW pile should be proved or disproved. Note: the other pile has been reported as removed.

Results of investigation: The existence of this pile has been disproved by an investigation with the party's skiff. This item should be deleted from the chart. *concur*

Survey located numerous temporary stakes in the vicinity - Recommend chart be revised accordingly.

PSI #51

Described as: piles charted in Lat. $38^{\circ} 41' 47''$, Long. $77^{\circ} 01' 48''$ originate with T-5758(1937-38)

Instructions: present existence of these piles should be verified or disproved.

Results of investigation: These piles were verified. The piles should be charted in a line determined by the following positions

Lat. $38^{\circ} 41.781'$
Long. $77^{\circ} 01.791'$

Lat. $38^{\circ} 41.776'$
Long. $77^{\circ} 01.781'$

Also another lone piling was found at the following position.

Lat. $38^{\circ} 41.751'$
Long. $77^{\circ} 01.801'$
and several stakes in the area

It is recommended that these piles be charted as located. *✓concur*

PSI #52

Described as: Channel 6 ft. Rep. in Swan Creek, Lat. $38^{\circ} 43' 09''$, Long. $77^{\circ} 01' 43''$, reported to have been dredged by Tantallon Corp. in Chart Letter No. 242 of 1970.

Instructions: Controlling depth of this channel should be verified. Also, the remainder of Swan Creek should be adequately surveyed. In addition, the existence of the markers at the channel entrance should be verified and their positions determined.

Results of the investigation: Photo Party 61 located the markers at the channel entrance. A 1:10,000 survey of the channel and the entire navigable waters of Swan Creek was performed. The method of control was *see the boat sheet*. The controlling depth of the channel was found to be 7 feet at MLW reducing all soundings with *predicted tides. only.* *4*

See Q.C. Report, page 2.

PSI #53

Described as: Sunken wreck in Lat. $38^{\circ} 43' 23''$, Long. $77^{\circ} 02' 10''$ originates with N.M. #48, 1935. It is wreckage of burnt launch. It was reported that about 2 ft. of water covers the wreck at MLW.

Instructions: A careful investigation of this area should be made to prove or disprove the existence of the wreck. If found a least depth should be obtained. An intensive investigation is believed to be justified.

Results of Investigation: On three separate occasions, a development was run in the area where the wreck was indicated as well as 200 meters up and down stream from it. The line spacing of the development was 10 meters. The developments were run at low water. At no time was the existence of a wreck indicated. Approximately 2½ hours were spent searching for the wreck. It is recommended that this item be ~~deleted from the chart.~~ *concur*

charted as Existence Doubtful (ED)

PSI #54

Described as: rock awash in Lat. 38° 44' 02" and Long. 77° 01' 50". Pile of rocks submerged at HW, 1958.

Instructions: locate and determine least depth and elevation.

Results of investigation: the position given has been verified as correct. The least depth determined by pole sounding when reduced to MLW is 2.1 ft. using ~~predicted~~ tides. This item should be retained on the chart. *+5*

set out smooth

Origin C/L 1153 (1958)

** (2)*

-0.5

PSI #55

Described as: piles in Lat. 38° 44' 57" and Long. 77° 00' 53", 1937-38. *T-5757*

Instructions: present existence of these piles should be verified or disproved.

Results of investigation: The party's skiff was used to search for the charted piles. The investigation was performed at low water. No piles were found. This item should be deleted from the chart. *✓concur*

PSI #56

Described as: visible wreck in Lat. 38° 44' 56" , Long. 77° 02' 46" , 1954. Steel hulled vessel 140' in length anchored bow and stern in six feet of water. It was partially sunk but visible at high water.

Origin C/L 241 (1954)

Instructions: Condition of wreck should be ascertained.

Results of Investigation: A thorough investigation of this area at low water has disproved the existence of this wreck. There are no visible remains. This item should be deleted from the chart. *✓concur*

Described as: visible wreck 38° 45' 00" and 77° 02' 36" in 1959. Hull used as hydro signal. *C/GS Ship Cowie (BP 58105)*

Instructions: condition of wreck should be ascertained.

Results of Investigation: a thorough investigation of this area at low water has disproved the existence of this wreck. There are no visible remains. This item ~~should be deleted from the chart.~~ *✓concur*

charted as a sunken wreck, existence doubtful (ED)
is considered non-existent by present survey, delete from chart. (ED)

PSI #57

Described as: Dashed line in Lat. $38^{\circ} 45' 35''$ and Long. $77^{\circ} 01' 49''$ appears to be pier ruins or a row of pilings, 1961-62.

Instructions: area should be carefully investigated to verify or disprove the present existence of these pier ruins or piling.

Results of Investigation: The area was thoroughly covered by the party's skiff and survey launch at low water. No pier ruins or row of pilings was found by the investigation. The investigation was performed adequately enough to warrant that this item be removed from the charts entirely. ~~concur~~

Not considered disproved, Fathograms indicate possible remains being silted over.

PSI #58

Described as: Sunken wreck PA in Lat. $38^{\circ} 45' 52''$ and Long. $77^{\circ} 02' 30''$ described as scow not visible at MHW.

Instructions: Wreck should be searched for in an attempt to find it and its least depth.

Results of investigation: A least depth at MLW of 3.0' was determined by a pole sounding after applying a ~~predicted tide~~ ^{measured} corrector. The position of the sunken wreck is Lat. $38^{\circ} 45.88'$, Long. $77^{\circ} 02.48'$. It is recommended that the wreck remain as charted but the PA be deleted from the chart.

concur

PSI #59

Described as: Piles awash charted in Lat. $38^{\circ} 46' 14''$ and Long. $77^{\circ} 01' 51''$ and subm. piles charted in Lat. $38^{\circ} 46' 30''$, Long. $77^{\circ} 01' 47''$.

*Origin
BP 29692 (1935)
Coast Pilot Report*

Instructions: Present existence of these piles should be verified or disproved.

Results of investigation: Piles awash were found to be in ^{vicinity} the following position Lat. $38^{\circ} 46.55'$, Long. $77^{\circ} 01.88'$. The offshore ends of the pilings were located by detached positions. The area between the offshore pilings and the shoreline inshore of them is fouled with pilings awash. This item should be changed to show its actual position as displayed on the boatsheet. These piles could cover at high water. Most of these piles are submerged.

A second group of piles that are awash were located at position Lat. $38^{\circ} 46.23'$, Long. $77^{\circ} 01.88'$. These pilings do not cover at HW.

Both items should be retained on the chart, ^{and revised in position as} ~~shown~~ ^{concur} shown in accordance with the present survey.

PSI #60

Described as: Sunken wreck charted in Lat. $38^{\circ} 46' 53''$ and Long. $77^{\circ} 03' 10''$, (1937-40). Second sunken wreck in Lat. $38^{\circ} 46' 39''$ and Long. $77^{\circ} 02' 54''$, (1937-40).

Instructions: the presence of these two wrecks should be verified or disproved.

Results of the investigation: A ^{charted} sunken wreck which is awash ^{4 feet} at ^L MLW was located at Lat. $38^{\circ} 46.67'$, Long. $77^{\circ} 02.90'$ this wreck is marked by yellow painted pipes, yellow polypropylene rope and white and yellow jugs. The marks for the wreck are maintained by a marina which is adjacent to it. This wreck should remain charted and it is recommended that the marina which is south of it be charted. *concur Chart visible wreck in agreement with the present survey.*

The wreck at Lat. $38^{\circ} 46' 53''$ and Long. $77^{\circ} 03' 10''$ should be deleted from the chart. A thorough investigation of the area was made and no detectable remains of it were found. *Recommended that the sunken wreck be deleted from chart. This wreck was charted before man made changes in shoreline occurred.*

PSI #61

Described as: Obstr. rep. and a dashed line charted in Lat. $38^{\circ} 46' 51''$ and Long. $77^{\circ} 02' 31''$, (1960). It apparently represents spoil from dredging which was not adequately delineated for charting in any other manner. *Origin C/L 632 (1960)*

Instructions: This area should be carefully surveyed to adequately portray the conditions that presently exist.

Results of Investigation: A development of 50 meter spaced lines was run over the area in question. No obstructions were found. The least depths observed was 2 ft. when reduced to MLW using ^{snoot} predicted tides only. It is recommended that the obstruction indicated on the chart be deleted.

This area is shoal but not foul. *concur*

PSI #62

Described as: Two sunken wrecks charted in Lat. $38^{\circ} 47' 19''$, Long. $77^{\circ} 01' 07''$ both originated in 1970. *C/L 228 (1970)*

Instructions: A careful investigation of this area should be made in an attempt to locate and obtain the least depth on these wrecks.

Results of Investigations: A development was run over the area indicated on the chart to attempt to locate the two wrecks. The result of this investigation revealed that there were no wrecks in the charted location. Later when running shorelines with the party's skiff two wrecks were found on the beach near the charted positions.

Both wrecks are stranded and visible at high water. All that remains are ruins. The positions of the two wrecks are as follows:

Lat. $38^{\circ} 47.24'$
Long. $77^{\circ} 00.94'$

Lat. $38^{\circ} 47.28'$
Long. $77^{\circ} 00.90'$

These wrecks should be shown on the chart as stranded wrecks. *concur*

*See Verifier's Report,
para 7.a.1.*

PSI #63 *See Verifier's Report, and O.C. Report 18.b.
para 7.a.2.*

Described as: Piling charted in the vicinity of Lat. $38^{\circ} 47' 17''$, Long. $77^{\circ} 02' 39''$. These piles apparently mark the edge of a previously dredged channel. *Origin possibly C/L 772 (1951)*

Instructions: This area should be carefully investigated to verify or disprove the present existence of the piling.

Results of Investigation: Hydrography was performed in this area. This area has had some dredging and it is foul with stumps. A large portion of it bares at MLW as indicated by the zero foot curve on the Boatsheet. At this time there is no dredged channel. The piling that are on the offshore end were located by detached positions, but they serve little value. It is strongly recommended that this area be marked fouled on the chart. Numerous detached positions were taken at high water only, later to find that at low water the items were on bare ground. *concur*

PSI #87

Described as: Shoaling reported Upper Potomac River

Origin L.N.M 31 (1972)

19 ft. Lat. $38^{\circ} 46' 35''$

Long. $77^{\circ} 02' 04''$ *21-22 ft on present survey*

17 ft. Lat. $38^{\circ} 46' 43''$

Long. $77^{\circ} 02' 06''$ *20 ft " " "*

17 ft. Lat. $38^{\circ} 46' 46''$

Long. $77^{\circ} 02' 04''$ *18 ft " " "*

Instructions: Carefully develop to determine least depth.

Results of Investigation: A development was run over the area indicated on the chart.

At position Lat. $38^{\circ} 46.75'$
Long. $77^{\circ} 02.10'$

a least depth of ²⁰ ~~18~~ ft. was determined at MLW reducing all sounding with ~~predicted~~ ^{smooth} tides ~~only~~.

At position Lat. $38^{\circ} 46.60'$
Long. $77^{\circ} 02.10'$

a least depth of 21 ft. was determined at MLW reducing all soundings with ~~predicted~~ ^{smooth} tides. ~~only~~. *12. chart present survey depths.*

PSI #98 B

Described as: Markers charted in the following positions:

	Origin LNM 50 (1971)	Latitude	Longitude	
✓ PRM 26	using pos. 8035	38° 41' 24"	77° 05' 19"	- See Q.C. Report para. 18.2
✓ PRM 27		38° 41' 44"	77° 04' 07"	
✓ PRM 29		38° 43' 12"	77° 01' 54"	
✓ PRM 33		38° 47' 36"	77° 01' 40"	
✓ PRM 37		38° 40' 20"	77° 08' 17"	off limits of survey (on H-9349, 1973)
✓ PRV 38		38° 41' 11"	77° 07' 19"	" " " " " " " "
PRV 16A		38° 35' 36"	77° 14' 48"	" " " " " " " "
PRV 16B		38° 37' 02"	77° 12' 21"	" " " " " " " "

Instructions: Above positions should be verified and shown on the present survey.

Results of Investigation:

PRV 38 - used as a del norte calibration site. Pile was located by Photo Party 61, Lat. 38° 41' 10.234", Long. 77° 07' 20.013" On survey H-9349 (1973)

This item should remain as charted. ✓

PRV 37 - used as a del norte calibration site. Pile was located by Photo Party 61, Lat. 38° 40' 21.859", Long. 77° 08' 12.902". On survey H-9349 (1973)

This item has been verified, but its charted position should be changed to that given it by Photo Party 61.

Markers PRM 26, PRM 27, PRM 29, PRM 33 were verified.

Markers PRV 16A and PRV 16B were not located because these items were not in the vicinity of the project area. *Chart present survey positions, see Q.C. Report para.*

PSI #95

Described as: Sand bar and obstructions reported to exist between the following points.

Origin L.N.M. 26 (1974)

Lat. 38° 46.56'
Long. 77° 02.91'

Lat. 38° 46.56'
Long. 77° 02.56'

Instructions: Obstructions should be verified or disproved, and if found their positions and least depths determined.

Results of Investigation: Hydrography was performed in this area. Reports and the bottom profile indicates extensive dredging ^{has} have taken place, ^{from long. 77° 02.75'} ^{No} bar or obstructions ^{was} were found in this area. It is recommended that the area be charted as this survey indicates. ^{concur} A subm log was located in lat. 38° 46.57', long 77° 02.64', and pilang in lat 38° 46.56', long 77° 02.91'.

PSI #96

Described as: Three visible wrecks located in the vicinity of Lat. $38^{\circ} 46.9'$, Long. $77^{\circ} 01.3'$, (1974). *Origin TP-00319*

Instructions: Their condition and present position located on the survey.

✓ Results of Investigation: Hydrography was performed around the three wrecks.

Their present description and location is adequately and accurately displayed on the boatsheet and on the shoreline manuscript. These wrecks should remain as charted. ✓ *concur*

Unnumbered PSI

No description given: Charted 1 ft. Sounding. Lat. $38^{\circ} 47.4'$, Long. $77^{\circ} 01.7'$, *Origin Bp 46887 Co. E (RSO)*

Results: A development was run over this area and a least depth was determined as 2 foot at MLW in position indicated above. *vicinity of Chart present depths.*

A comparison of this survey with that of prior survey H-2692, (1:10,000), 1904, shows considerable shoreline changes on the Virginia shoreline between Lat. $38^{\circ} 46.8$ and Lat. $38^{\circ} 45.0$. There is now navigable water where land used to be. This is a result of extensive dredging and some erosion.

The natural channel has also shoaled by as much as 10 to 15 feet in some places. This change corresponds in the same area as the drastic shoreline changes.

It appears that the Virginia banks outside the limit of the natural channel has gained depth while the Maryland side has remained almost the same.

Shoaling has occurred in what was once a channel the center of which was located at: Lat. $38^{\circ} 42.3'$, Long. $77^{\circ} 04.4'$ *Little Hunting Creek*

Dredging has also drastically changed the bottom profile in the area connected by the following points:

- | | |
|-----------------------------|--------------------------|
| 1. Lat. $38^{\circ} 42.4'$ | Long. $77^{\circ} 03.4'$ |
| 2. Lat. $38^{\circ} 42.2'$ | Long. $77^{\circ} 04.0'$ |
| 3. Lat. $38^{\circ} 42.25'$ | Long. $77^{\circ} 04.3'$ |
| 4. Lat. $38^{\circ} 42.4'$ | Long. $77^{\circ} 03.8'$ |
| 5. Lat. $38^{\circ} 42.4'$ | Long. $77^{\circ} 03.4'$ |

General depths of 7 to 9 feet exist where prior depths of 4 foot existed.

A comparison of this survey with that of prior survey H-2688, (1:10,000), 1904, shows in the Hunting Creek area that drastic shoreline change and bottom profile changes have occurred. This change is probably due to land fill projects.

A large bridge has been constructed across the Potomac River at Jones Pt. on the Virginia side.

Drastic shoreline changes have occurred south of the bridge on the Maryland side to Rosier Bluff. This area at one time was land and is now covered by 6 to 10 feet of water. This change must have occurred due to dredging for sand and gravel. Numerous spoil areas are located outside the natural channel south of the bridge.

K. Comparison with the Chart

A comparison was made with chart 560, 34th Edition dated 2 March 1974. The most significant changes in shoreline and depths have been updated to accurately portray the changes since the 1904 surveys of this area.

The only newly found danger to navigation was located at: Lat. $38^{\circ} 47.4'$
Long. $77^{\circ} 02.38'$. * (2)

The danger is a pile of rocks which are awash at MLW. These rocks are a potential hazard to boats keeping to the edge of the channel. This item was reported to the U.S.C.G. on 11 November 1974. The rocks are awash at MLW.

Another item should be deleted from the charts is located at Lat. $38^{\circ} 47.1'$, Long. $77^{\circ} 01.4'$. *Present depths of 8-7 feet exist, delete islet and low water line. See Verifier's Report, para 7.3.*

The item is a charted island which is no longer visible at MLW.

Little Hunting Creek has silted in, and the chart should be changed to reflect its present condition as per the *boatsheet*.
present smooth

L. Adequacy of the Survey

This survey is complete and adequate to supersede prior surveys for charting.

M. Aids to Navigation

All charted aids to navigation on this survey were checked and found to be in position and adequately serve the purpose for which they were established.

Piscataway Creek has four pilings used as unlighted day beacons to mark a safe approach to Fort Washington Marina. All piles have reflectors. All piles used for day beacons are maintained by Fort Washington Marina. The positions of the following are the location of these piles. All pilings should be considered Mid-channel Markers.

Day Beacon #1	Lat. 38° 42' 26.052"	Long. 77° 02' 19.666"
Day Beacon #2	Lat. 38° 42.33'	Long. 77° 02.19'
Day Beacon #3	Lat. 38° 42.23'	Long. 77° 02.20'
Day Beacon #4	Lat. 38° 42.09'	Long. 77° 01.82'

These day markers adequately serve their purpose.

It was also noticed during the survey that channel buoy "R2" as shown on the chart and listed in the Light List was numbered "90".

N. Statistics

Launch 1260

Total Number of Positions	2031
Total Number of Miles of Sounding Lines	207.4

Skiff 570

Total Number of Positions	1035
Total Number of Miles of Sounding Lines	79.4

Project

Total Number of Square Nautical Miles	8.8
Total Number of Bottom Samples	31

O. Miscellaneous

It should be noted that the range of tides in the survey area were greatly affected by the wind. The wind driven tides could cause extreme low tides or delay high water considerably.

In the area of Fort Washington Light whirl pools observed during ebb tide daily; Location: Lat. 38° 42' 51", Long. 77° 02' 15".

Two special investigations were performed.

1. Fort Washington Marina, Lat. 38° 42' 10", Long. 77° 01' 36"
2. Colonial Farm Pier, Lat. 38° 41' 42", Long. 77° 04' 10"

Both investigations were on a larger scale than the survey. Both are inked on separate mylar sheets.

The investigation at Ft. Washington Marina was performed by pole soundings and all data was recorded on its sheet. All soundings were reduced to MLW and inked on the sheet.

Both investigations will be forwarded with the boatsheet.

P. Recommendations

The boatsheet should be examined by C3 and the existing chart should be updated. Enough changes have occurred in the area that the survey should be smooth plotted and the existing chart updated.

Q. Reference to Report

The following records are necessary for a complete record of the survey records:

- *Report on Horizontal Control by Photo Party 61
- Report on Field Edit by Photo Party 61
- *Electronic Control Report, by AHP Launch 1260

*Reports can be found in the appendix to this report.

Respectfully Submitted

Robert A. Lewis
For / Lt.(jg) William E. George
OIC, Launch 1260

APPROVAL SHEET

This Boatsheet and records were inspected for completeness and no additional work is considered necessary.



F. T. Smith

Lt. Cdr., NOAA

Chief, AHP

OPR-409

Potomac River

H-9479 (AMP-10-6-74)

Signal Tape

Secs in meters

	<i>meters</i>			<i>meters</i>		
500	38	42	0698	77	01	1320
501	38	42	0165	77	01	0716
502	38	42	0258	77	01	0534
503	38	42	0322	77	01	0068
504	38	41	1664	77	00	0693
505	38	41	1082	77	00	0502
506	38	41	1163	77	00	0668
507	38	41	0896	77	00	0938
508	38	40	0647	77	08	0615
509	38	40	0971	77	08	1024
510	38	40	1380	77	09	0370
511	38	41	0033	77	09	0734
512	38	41	0484	77	09	0420
513	38	41	0966	77	09	0676
514	38	41	0004	77	09	1392
515	38	41	0065	77	10	0910
516	38	40	1517	77	10	1366
517	38	40	1541	77	10	1119
518	38	40	1289	77	10	0511
519	38	40	0983	77	10	0051
520	38	40	0863	77	09	1352
521	38	44	1097	77	01	0613
522	38	44	1217	77	00	1372
523	38	44	1052	77	00	1138
524	38	44	1341	77	00	0630
525	38	44	1781	77	00	1237
526	38	45	0050	77	01	0107
527	38	45	0261	77	01	0323
528	38	45	0289	77	01	0713
529	38	41	0925	76	59	0725
530	38	41	0000	76	59	0725
531	38	44	0000	77	00	0000

(67.)

OPR-409
Potomac River
H-9479 (AHP-10-6-74)

Signal Tape

Tape in secs.

002	38	38	0516	77	07	5059
004	38	40	2186	77	08	1290
005	38	38	0339	77	06	3978
006	38	40	0714	77	06	5447
007	38	40	1718	77	06	5322
008	38	41	1193	77	06	0158 ✓
009	38	41	1023	77	07	2001
013	38	42	2353	77	02	5576 ✓
014	38	43	1920	77	01	5475
016	38	43	1161	77	02	3604
017	38	44	2354	77	02	3417
018	38	45	5644	77	02	4114
019	38	45	1384	77	01	3654
020	38	46	4990	77	01	3060
022	38	42	2605	77	02	1967
024	38	47	3407	77	02	1816
025	38	44	5452	77	02	4975
001	38	37	1776	77	10	5865
003	38	36	3920	77	08	1958
010	38	41	4970	77	06	1845 ✓
011	38	41	4311	77	04	0696 ✓
012	38	42	2518	77	05	0104 ✓
015	38	42	4378	77	02	1404
021	38	46	0963	77	01	5201
023	38	42	4376	77	02	1390

Traverse Stations

	Signal	Lat.		Secds.	Long.		Secds.	
		0	1		0	1		
161	- 002	38	38	05.164	77	07	50.595	Hallowing R.M. 4, 1973
	004	38	40	21.859	77	08	12.902	PRV 37, 1973
160	- 005	38	38	03.391	77	06	39.775	MONK, 1973
167	- 006	38	40	07.137	77	06	54.473	GRASS, 1973
	007	38	40	17.184	77	06	53.223	BOLT, 1974
	X 008 (200)	38	41	11.933	77	06	01.585	Marshall Hall Dock Light, 1974
173	- 009	38	41	10.234	77	07	20.013	PRV 38, 1973
	X 013	38	42	23.527	77	02	55.763	Upper Potomac River Light No. 77, 1974
	X 014 (300)	38	43	19.201	77	01	54.750	Upper Potomac River River View Wharf Light No. 82, 1974
	X 016 (240)	38	43	11.607	77	02	36.037	NANCY, 1974
	X 017 (280)	38	44	23.539	77	02	34.170	PIER, 1974
	X 018	38	45	56.438	77	02	41.140	LIMIT, 1974
	X 019 (290)	38	45	13.836	77	01	36.535	BOATHOUSE, 1974
	X 020 (250)	38	46	49.902	77	01	30.602	POINT WRECK, 1974
	022	38	42	26.052	77	02	19.666	DAY #1, 1974
	X 024 (260)	38	47	34.0673	77	02	18.158	WOODROW, 1974
	X 025 (310)	38	44	54.524	77	02	49.7463	HERMIT, 1974

Recovered Triangulation Stations

163	- 001	38	37	17.758	77	10	58.651	SHEP, 1928
164	- 003	38	36	39.20	77	08	19.576	GLYMONT LIGHT, 1958
	X 010 (210)	38	41	49.703 675	77	06	18.454 436	Boundary Monument 54, 1929, 1959-72
	X 011 (230)	38	41	43.106	77	04	06.958	BRYAN 2, 1928-29
	X 012 (220)	38	42	25.183	77	05	01.037	VERNON, 1928
	X 015	38	42	43.781	77	02	14.043	FORT, 1928
	X 021 (270)	38	46	09.632	77	01	52.010	Upper Potomac River Light No. 88, 1959
	023	38	42	43.758	77	02	13.904	Fort Washington (Visual Control) Light, 1959

Signal numbers in red taken from smooth position printout.

SIGNAL LIST

Boat Sheet AHP-10-6-74

Photo-Hydro Signals

<u>Signal</u>	<u>Lat.</u>			<u>Long.</u>		
	o	'	M	o	'	M
500 ✓	38 ✓	42 ✓	698.5 ✓	77 ✓	01 ✓	1319.8 ✓
501 ✓	38 ✓	42 ✓	165.2 ✓	77 ✓	01 ✓	715.6 ✓
502 ✓	38 ✓	42 ✓	257.5 ✓	77 ✓	01 ✓	534.4 ✓
503 ✓	38 ✓	42 ✓	321.9 ✓	77 ✓	01 ✓	68.5 ✓
504 ✓	38 ✓	41 ✓	1664.1 ✓	77 ✓	00 ✓	693.1 ✓
505 ✓	38 ✓	41 ✓	1081.7 ✓	77 ✓	00 ✓	501.8 ✓
506 ✓	38 ✓	41 ✓	1162.6 ✓	77 ✓	00 ✓	668.1 ✓
507 ✓	38 ✓	41 ✓	895.9 ✓	77 ✓	00 ✓	938.5 ✓
508 ✓	38 ✓	40 ✓	647.3 ✓	77 ✓	08 ✓	615.3 ✓
509 ✓	38 ✓	40 ✓	971.1 ✓	77 ✓	08 ✓	1024.1 ✓
510 ✓	38 ✓	40 ✓	1380.2 ✓	77 ✓	09 ✓	370.2 ✓
511 ✓	38 ✓	41 ✓	33.2 ✓	77 ✓	09 ✓	733.7 ✓
512 ✓	38 ✓	41 ✓	483.5 ✓	77 ✓	09 ✓	420.5 ✓
513 ✓	38 ✓	41 ✓	966.5 ✓	77 ✓	09 ✓	675.5 ✓
514 ✓	38 ✓	41 ✓	04.3 ✓	77 ✓	09 ✓	1391.5 ✓
515 ✓	38 ✓	41 ✓	64.8 ✓	77 ✓	10 ✓	909.5 ✓
516 ✓	38 ✓	40 ✓	1517.4 ✓	77 ✓	10 ✓	1366.2 ✓
517 ✓	38 ✓	40 ✓	1510.8 ✓	77 ✓	10 ✓	1119.2 ✓
518 ✓	38 ✓	40 ✓	1288.7 ✓	77 ✓	10 ✓	510.6 ✓
519 ✓	38 ✓	40 ✓	982.7 ✓	77 ✓	10 ✓	50.8 ✓
520 ✓	38 ✓	40 ✓	862.8 ✓	77 ✓	09 ✓	1352.5 ✓
521 ✓	38 ✓	44 ✓	1097.3 ✓	77 ✓	01 ✓	612.7 ✓
522 ✓	38 ✓	44 ✓	1217.2 ✓	77 ✓	00 ✓	1372.2 ✓
523 ✓	38 ✓	44 ✓	1051.9 ✓	77 ✓	00 ✓	1138.1 ✓
524 ✓	38 ✓	44 ✓	1341.2 ✓	77 ✓	00 ✓	630.1 ✓
525 ✓	38 ✓	44 ✓	1780.8 ✓	77 ✓	00 ✓	1237.2 ✓
526 ✓	38 ✓	45 ✓	49.6 ✓	77 ✓	01 ✓	107.2 ✓
527 ✓	38 ✓	45 ✓	261.2 ✓	77 ✓	01 ✓	323.3 ✓
528 ✓	38 ✓	45 ✓	288.8 ✓	77 ✓	01 ✓	713.2 ✓

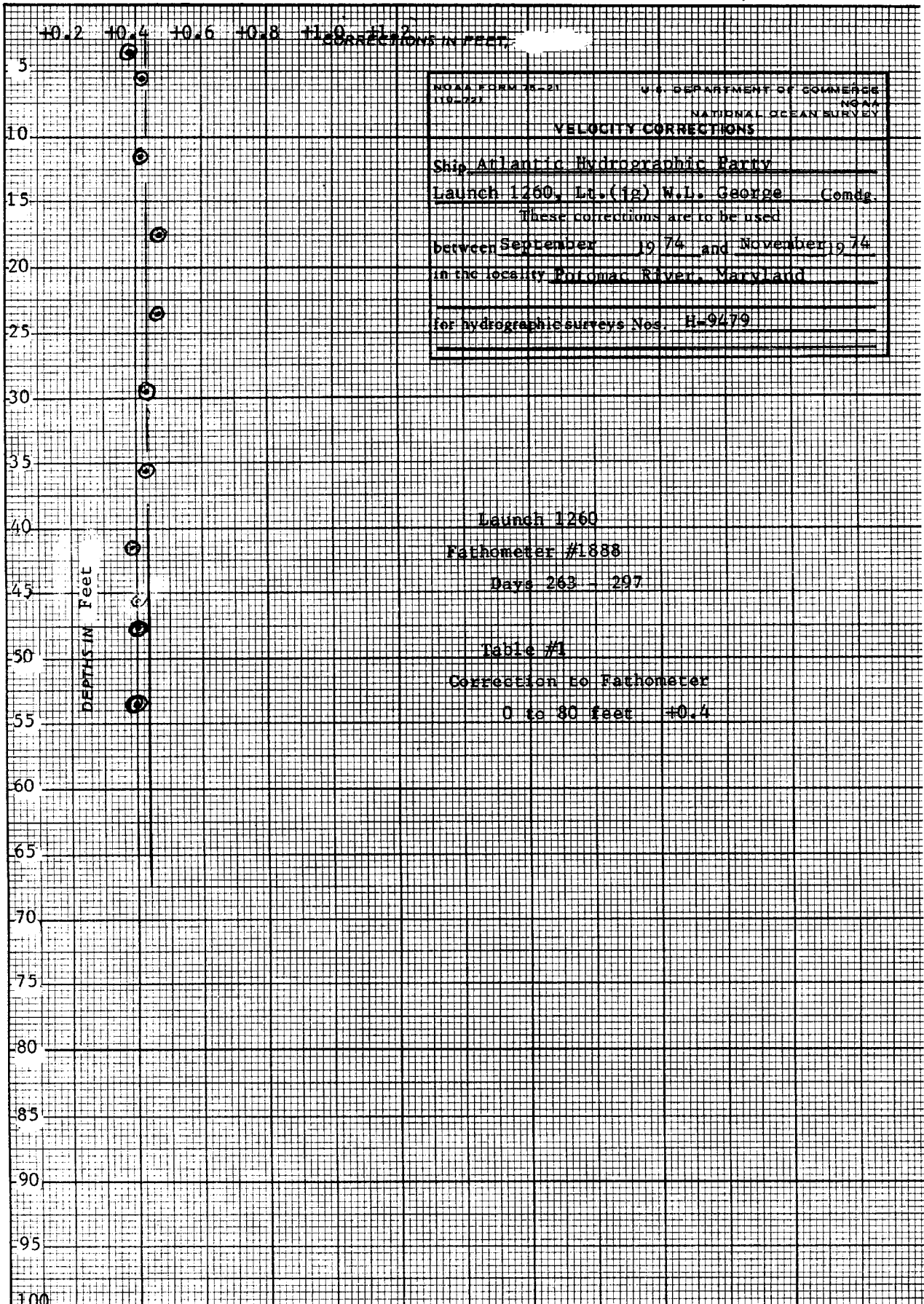
OPR-409
Potomac River
H-9479 (AHP-10-6-74)

Leh. 1260
SKIPP 570

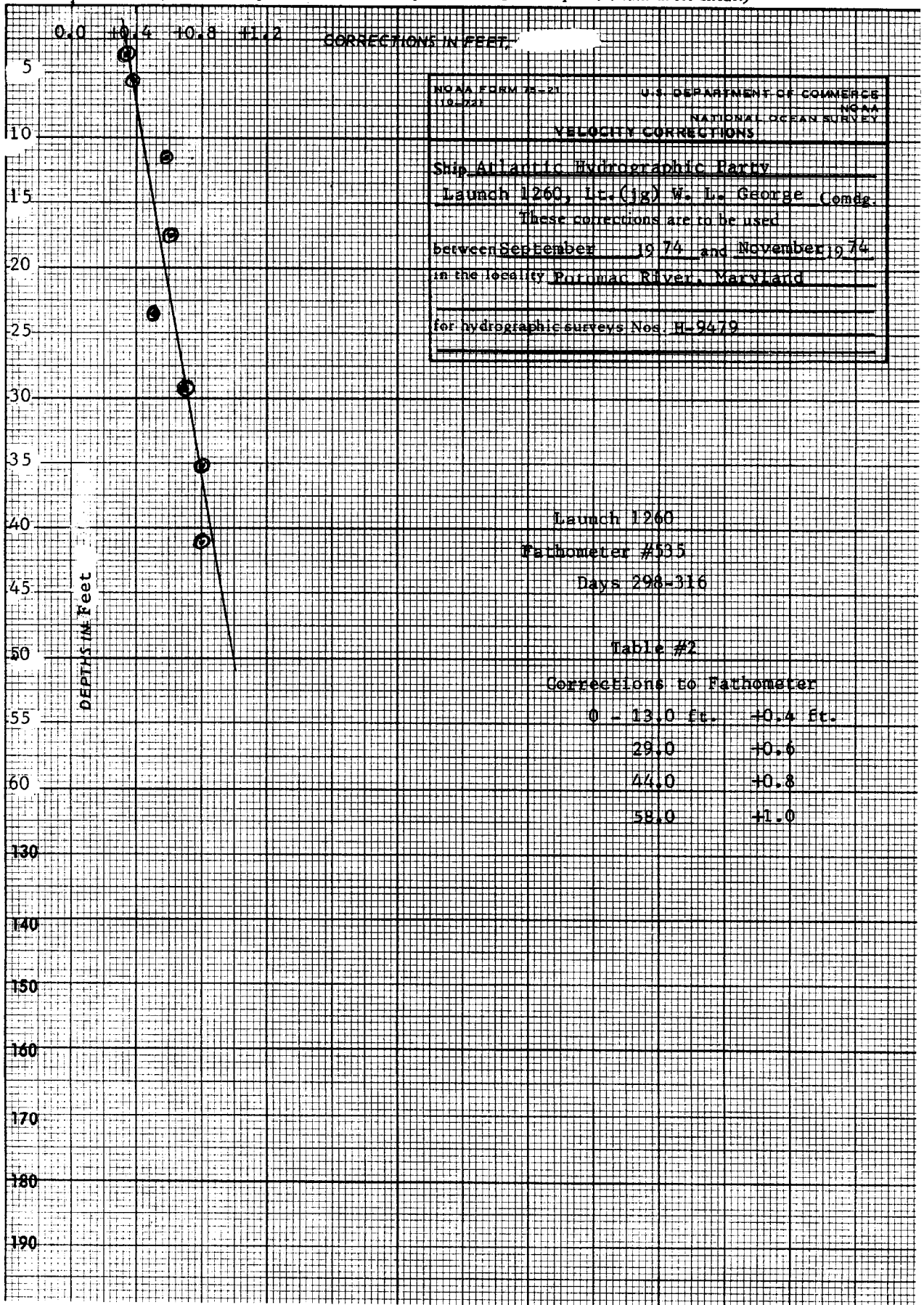
Vel. Tables

000800	0	0004	0001	000	126000	009479
999999	0	0004				
000130	0	0004	0002	000	126000	009479
000290	0	0006				
000440	0	0008				
000580	0	0010				
001000	0	0010				
999999	0	0010				
001000	0	0000	0003	000	570000	009479
999999	0	0000				

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



NOAA FORM 21-21
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS
 Ship Atlantic Hydrographic Party
 Launch 1260, Lt. (jg) W. L. George Comd.
 These corrections are to be used
 between September 19 74 and November 19 74
 in the locality Potomac River, Maryland
 for hydrographic surveys Nos. H-9479

Launch 1260
 Fathometer #535
 Days 298-316

Table #2
 Corrections to Fathometer

0 - 13.0 ft.	+0.4 ft.
29.0	+0.6
44.0	+0.8
58.0	+1.0

(For deep water add a 0 to these figures)

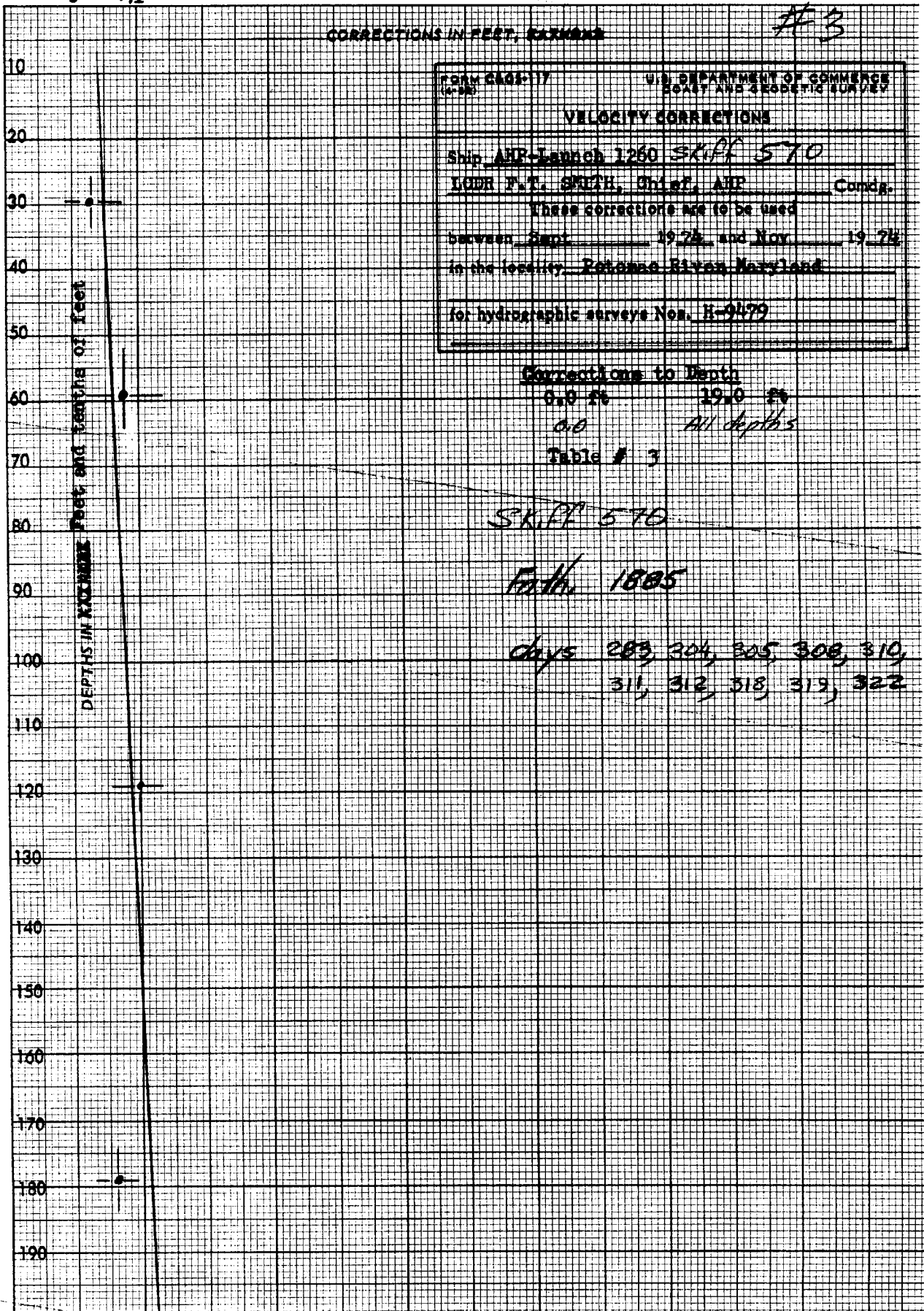
0 +.1

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

#3

(For deep water add a 0 to these figures)



FORM 2405-17 (2-28)	U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY
VELOCITY CORRECTIONS	
Ship <u>ANR-Launch 1260</u> <u>SKIPP 570</u>	
LCDR <u>P.T. SMITH</u> , Chief, ANP Comdg.	
These corrections are to be used	
between <u>Sept</u> <u>1928</u> and <u>Nov</u> <u>1928</u>	
in the locality <u>Potomac River, Maryland</u>	
for hydrographic surveys Nos. <u>H-9479</u>	

Corrections to Depth
 0.0 ft 19.0 ft
 0.0 All depths
 Table # 3

SKIPP 570
 Fath. 1805
 days 283, 304, 305, 308, 310,
 311, 312, 318, 319, 322

DESCRIPTIVE TIDE NOTE

All soundings were reduced in the field using predicted tides computed from the reference tide station at Washington, D. C. From the Washington, D.C. reference station predicted tide correctors were generated for the following areas:

Gunston Cove, Virginia
Lat. $38^{\circ} 40'$
Long. $77^{\circ} 08'$

Fort Washington, Maryland
Lat. $38^{\circ} 43'$
Long. $77^{\circ} 02'$

Alexandria, Virginia
Lat. $38^{\circ} 48'$
Long. $77^{\circ} 02'$

The application of the predicted tides is shown on the following chartlet.*

* Filed with field records.

As work progressed, secondary tide gauges, to control hydrography and update predictions were installed as per project instructions at:

Dogue Creek
Lat. $38^{\circ} 42' 17''$
Long. $77^{\circ} 07' 25'$

Gunston Cove, (Whitestone)
Lat. $38^{\circ} 40.37'$
Long. $77^{\circ} 08.08'$

Mt. Vernon
Lat. $38^{\circ} 42' 16''$
Long. $77^{\circ} 05' 17''$

Fort Washington
Lat. $38^{\circ} 42' 43''$
Long. $77^{\circ} 02' 15''$

All gauges were in service for not less than 30 days. All gauges were leveled in and out as per AMC Manual Instructions.

4/30/75

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Mt. Vernon
Alexandria, Fort Washington,

Period: September 30 - November 18, 1974

HYDROGRAPHIC SHEET: ~~H-9497~~
H-9479

OPR: 409

Locality: Potomac River

3.3 ft.-Alexandria

2.4 ft.-Ft. Washington

Plane of reference (mean lower low water) 1.8 ft.-Mt. Vernon

Height of Mean High Water above Plane of Reference is

2.6 ft.-north of $38^{\circ}44'.4$

2.4 ft.-south of $38^{\circ}44'.4$

Remarks: Recommended zoning:

III North of $38^{\circ}44'.4$: zone direct on Alexandria.

II East of $77^{\circ}03'$ - south of $38^{\circ}44'.4$: zone direct on
Ft. Washington

I West of $77^{\circ}03'$: zone direct on Mt. Vernon.

James R. Hubbard
for Chief, Tides Branch

GEOGRAPHIC NAMES

9479

Name on Survey	Source of Name											
	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	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
ARCTURUS												1
BELLE VIEW ✓	✓											2
BROAD CREEK ✓	✓											3
BROADWATER ESTATES ✓	✓											4
BRYAN POINT ✓	✓											5
CALVERT MANOR ✓	✓											6
COLLINGWOOD ✓	✓											7
FERRY POINT ✓	✓											8
FORT WASHINGTON ✓	✓											9
HARMONY HALL ✓	✓											10
HATTON POINT ✓	✓											11
HEDGE NECK ✓	✓											12
HOG ISLAND ✓	✓											13
HUNTING CREEK ✓	✓											14
INDIAN QUEEN BLUFF ✓	✓											15
JONES POINT ✓	✓											16
LITTLE HUNTING CREEK ✓	✓											17
MARLIN FOREST ✓	✓											18
MARSHALL HALL ✓	✓											19
MOCKLEY POINT ✓	✓											20
MOUNT VERNON ✓	✓											21
NEW ALEXANDRIA ✓	✓											22
PISCATAWAY CREEK ✓	✓											23
POTOMAC RIVER ✓	✓											24
RIVERVIEW ✓	✓											25
ROSIER BLUFF ✓	✓											25

APPROVED

Chas. E. Harrington
CHIEF GEOGRAPHER-C3X8

18 OCT. 1978

GEOGRAPHIC NAMES

H-9479

Name on Survey										
	A	B	C	D	E	F	G	H	I	K
	ON CHART NO.	ON PREVIOUS SURVEY NO.	CON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST		
SHERIDAN POINT ✓	✓									1
SWAN CREEK ✓	✓									2
TANTALLAN ✓	✓									3
VILLAMAY ✓	✓									4
WELLINGTON ✓	✓									5
WELLINGTON HEIGHTS ✓	✓									6
WOODLAWN ✓	✓									7
WALDON WOODS ✓	✓									8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25

APPROVED

Chas. E. Harrington

GEOGRAPHER-C3x8

18 OCT. 1978

APPROVAL SHEET
FOR
SURVEY H- 9479

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Provisional Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 1/26/78

Signed: *R. D. Swack*

Title: Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9479

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		10-work sheets 2	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ARC, EXCESS		24	
DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	1					2
CAHIERS	1		1 -file			
VOLUMES	14					
BOXES			1-Smooth P/O			

T-SHEET PRINTS (List) 1-Chart mark-up (560)

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			3066
POSITIONS CHECKED		315	
POSITIONS REVISED		35	
SOUNDINGS REVISED		65	
SOUNDINGS ERRONEOUSLY SPACED		15	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL	3		
VERIFICATION OF POSITIONS	3	218	
VERIFICATION OF SOUNDINGS	8	101	
COMPILATION OF SMOOTH SHEET		62	
APPLICATION OF TOPOGRAPHY		0	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		21	
COMPARISON WITH PRIOR SURVEYS & CHARTS		20	
VERIFIER'S REPORT		10	
OTHER		10	
TOTALS	14	442	456

Pre-Verification by P. Saunders	Beginning Date 03/20/75	Ending Date 03/21/75
Verification by W. Tyndall, P. Saunders, J. Bradford	Beginning Date 05/15/75	Ending Date 10/13/77
Verification Check by R. D. Sanocki	Time (Hours) 15	Date 12/2-3/77
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 25	Date 01/15/78
Quality Control Inspection by R. W. Derkavian	Time (Hours) 172	Date 10/17/78
Requirements Evaluation by J. J. Hill	Time (Hours) 5	Date 11/29/78

Cons. B. Taylor 11/13/78 19 hrs.

RETURN TO NAUTICAL
DATA BRANCH



1374
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

(1980) RT
OA/C324:SB

October 22, 1980

TO: OA/C3212 - Howard Danley

FROM: OA/C324 - S. Bente *S. Bente*

SUBJECT: Potomac River, Bight across from Hunting Creek

REF: Your memo of 5/27/80; Descriptive report for H-9479; H-9479

An investigation was made by Lt. Scott Varney of the area in the unnamed bight of the Potomac River in about 38°47.0'N., 77°01.0'W. The southernmost wreck (38°46'49"N., 77°01'21"W.) is a steel hulk with a large portion bare. The hulk is beached and apparently has not moved for at least some months, as evidenced by the marine growth below the high-water mark. Neither of the two wrecks in the vicinity of 38°46'54"N., 77°01'19"W. were visible at low water on 23 June 1980. The two wrecks in the vicinity of 38°47'15"N., 77°00'55"W. are the remains of two wooden vessels, with only the ribs of the vessels remaining. It would be impossible to refloat these wooden remains. No one with knowledge of the bight could be found; the bight is not easily accessible from the nearby housing development.

Ref for 7 a (1)

charts 12289
12285 "E"

c. The development of the bottom configuration and least depths are considered adequate.

4. Condition of Survey

The sounding records, smooth sheet and accompanying overlays, hydrographic records, and the Descriptive Report are adequate and conform to the requirements of the Provisional Hydrographic Manual, with the following exceptions:

The perimeter of areas described as foul by the hydrographer was not always delineated on the field sheet by the hydrographer, for example the hydrographer's description of Hunting Creek in the Descriptive Report. Also, hydrographer's notes on the field work sheet were not transferred to the final field sheet.

5. Junctions

Adequate junctions have been effected with the following surveys:

H-9477 (1974) to the north
H-9349 (1974) to the south

6. Comparison With Prior Surveys

H-2692 (1904) 1:10,000
H-2688 (1904) 1:10,000

Comparison with prior surveys is adequately described in Section J of the Descriptive Report. See Q.C. Report, para 19.

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

7. Comparison With Chart 560 (34th Edition, March 2, 1974)

a. Hydrography

The majority of the charted hydrography originates from the previously discussed prior surveys. The source of numerous charted soundings were not available at the time of verification:

(1) Presurvey Review Item 62, submerged wrecks, PA, charted in latitude 38° 47' 19", longitude 77° 01' 07", originates with Chart Letter No. 228 of 1970. Two wrecks of the same description were located 300 meters west of this position. These wrecks are visible at MHW and should be charted as stranded wrecks. Independent information indicates that these vessels are sunk and refloated during naval training ^{ex} periodically in the immediate area of the charted wrecks.

Ref. L-1374/80 (see attached copy) ^{Cartographer} JWC, 3 Dec 1980

(2) Presurvey Review Item 63, piling, charted in latitude 38° 47' 17", longitude 77° 02' 39", originates with an unknown source dated about 1953. The piling, as charted, has not been adequately disposed of by the hydrographer or shoreline manuscript TP-00319 in that it cannot be ascertained from the survey records where all the piles are located. The pilings located by the hydrographer are shown on the present survey. However, the area charted as Hunting Creek is described by the hydrographer as foul with numerous obstructions such as piles, stumps, and trees. It is recommended that a note be added to the chart regarding the foul condition of Hunting Creek.
Possibly ~~CL~~ 772 (1951)

(3) The island charted in latitude 38° 47.1', longitude 77° 01.4' no longer bares at MHW and should not be shown on chart as an island. *Depths of 8-9 feet presently exist.*

4. There are numerous differences between Chart 560 (34th Edition) and the contemporary survey, H-9479, as to charted pier ruins, piers, and piles. An examination of survey records and the field edit cannot disprove or verify the existence of these items. It is recommended that the following items be retained until additional information is made available:

<u>pier ruins</u>	charted in latitude 38° 45' 25"	See Q.C. Report para 20.9.9.
	longitude 77° 01' 35"	
<u>pile</u>	charted in latitude 38° 41' 13/4"	See Des. Report PSI #43
	longitude 77° 05' 31/8"	Disproved
<u>pier</u>	charted in latitude 38° 45' 03"	Discredited by present survey
	longitude 77° 01' 01/2"	
<u>pier ruins</u>	charted in latitude 38° 45' 45"	
	longitude 77° 02' 43"	
<u>pier ruins</u>	charted in latitude 38° 45' 42"	Discredited by present survey
	longitude 77° 01' 41"	
<u>pier ^{Catwalks} ruins</u>	charted in latitude 38° 44' 16"	Considered non-existent
<i>Origin T-5757(1937-38)</i>	longitude 77° 02' 34"	

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

b. Controlling Depths

(1) The 24-foot controlling depth, dated January 1967, of the charted channel falling in the southwestern area of this survey is in agreement with present survey depths.

(2) The channel charted in the vicinity of latitude $38^{\circ} 42.0'$, longitude $77^{\circ} 05.3'$, with a controlling depth of 9 feet, dated 1964, is recommended to be retained, although the present survey provides indication of controlling depths one to two feet deeper. Ambiguity of positioning for those depths precludes revision. This recommendation is based on a position error detected during verification of a sounding line run in the channel. See Q.C. Report para 20. b.

(3) After a comparison with the present survey, the channel charted in the vicinity of Swan Creek, with a controlling depth of 6 feet, REP, is recommended to be charted with a four foot controlling depth.

c. Aids to Navigation

The fixed and floating aids to navigation on the present survey are in substantial agreement with their charted positions and adequately serve their intended purposes.

See Q.C. Report para. 20.c.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

This is ^{an adequate} ~~a good~~ basic survey. Additional field work is not recommended.

Inspection Report
H-9479

Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.

Examined and Approved:
Hydrographic Inspection Team
Date: January 27, 1978

R. D. Sanocki, Acting Chief
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Chief, Processing Division

Charles H. Nixon
Charles H. Nixon, CAPT, NOAA
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

C352/RWD

October 17, 1978

A. J. Patrick
TO: A. J. Patrick
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: R. W. DerKazarian *R.W. DerKazarian*
Quality Evaluator

SUBJECT: Quality Control Report for H-9479 (1974), Ferry Point to Jones Point, Potomac River, Maryland and Virginia

A quality control inspection of H-9479 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data.

In general, the survey was found to conform to the National Ocean Survey's standards and requirements except as stated in the report by the Verifier and the Hydrographic Inspection Team and as follows:

1. The shoreline originates with reviewed topographic manuscripts TP-00319 and TP-00321 of 1972-74 and TP-00322 of 1972-75.
2. Hydrography in Little Hunting Creek and Swan Creek was controlled by "See Boat Sheet" remarks in the survey records. Pseudofixes were given these positions during verification to facilitate processing. In Little Hunting Creek in the vicinity of latitude $38^{\circ}43.00'$, longitude $77^{\circ}04.5'$, several positions were revised during quality evaluation to bring present soundings into agreement with channel limits delineated on T-5757 and T-5758 of 1937-38.

In Swan Creek conflicts between soundings and a marked channel were reconciled during quality evaluation. Three lines of channel hydrography positioned from the aforementioned pseudofixes were not in agreement with the marked channel. One sounding line fell completely outside the channel markers. It was necessary to reject two lines of hydrography in this area. Three crosslines had deeper depths falling outside the markers;



these lines were adjusted by dead reckoning in order to position the deeper depths along the center of the channel. The markers as shown on the topographic manuscript were located by planetable methods, but a visual field inspection by quality control indicates that some errors exist in the topographic positions. Hydrography in the channel and the position of markers should be considered questionable.

3. The charted 24-foot supplemental curve has been added to the smooth sheet during the quality evaluation.

4. In several instances changes were made to the smooth sheet and not entered into the final sounding printout during verification. In one case a 1-foot sounding was changed to a 4-foot sounding in order to resolve a crossing discrepancy. The 1-foot sounding fell within the reported 6-foot channel charted in Swan Creek. During quality evaluation the crossline containing the 1-foot sounding was adjusted by dead reckoning and a deeper depth positioned within the channel limits.

5. Three topographic signals located below the high water line and several others falling above this datum had their descriptions added to the smooth sheet during the quality evaluation.

6. Private markers were not properly identified on the smooth sheet, including their number designations. These were corrected during the quality evaluation.

7. Elevations for detached features located north of latitude $38^{\circ}44.4'$ were usually incorrect. The survey is divided into three tide zones which apparently were not considered when determining the heights of these features during verification. The elevations were corrected during quality evaluation.

8. Symbols for nine electronic control stations were added to the smooth sheet during quality evaluation.

9. Electronic control station number 13 was not shown on the smooth sheet; likewise, the station was shown incorrectly as number 21 on the arc overlay. This station was properly identified during quality evaluation. Electronic control station 015 Fort, 1928 was also added to the smooth sheet.

10. In several instances velocity and TRA correctors were mistakenly applied to pole soundings; however, only a few depths were affected.

11. Two landmarks falling within the limits of the present survey have been added during the quality evaluation.

12. A pile mistakenly plotted at position 1571 in latitude $38^{\circ}46.29'$, longitude $77^{\circ}01.9'$ on the smooth boat sheet of the present survey was

transferred in error to the smooth sheet during verification. This feature was deleted during quality control.

13. A snag at latitude $38^{\circ}41.76'$, longitude $77^{\circ}03.93'$ improperly described as an obstruction on the smooth sheet was correctly revised by the appropriate symbol and labeled "snag" by the evaluator.

14. The reference station noted in Stamp 42 is not located within the limits of the smooth sheet; therefore, a station falling in the area of the present survey was indicated as reference during quality evaluation.

15. The graphic record indicates a pinnacle in latitude $38^{\circ}45.55'$, longitude $77^{\circ}02.06'$. This feature falls in the same position as a prior established triangulation station (Hog, 1928) and is probably its remains. A submerged obstruction was noted at this feature during the quality evaluation.

16. In the smooth position printout the station numbers used are not those that are indicated on the smooth sheet, station list, or in the sounding volumes. Their origin cannot be determined. These station numbers have been cross-referenced with the actual station numbers and noted in the station list of the Descriptive Report.

17. The Descriptive Reports of prior topographic surveys T-5757 and T-5758 of 1937-38 indicate that items from prior topographic surveys have not been disproved by those surveys and that the items should be carried forward until disproved by a hydrographic survey. The present topographic Descriptive Report's "Comparison with Registered Topographic Surveys" paragraph makes no mention of the unverified items of the prior surveys, yet supersedes the prior work. In some cases items from the surveys of 1937-38 were charted or, if charted, removed during subsequent air photo and Coast Pilot revisions. The contemporary topographic and hydrographic surveys did not indicate investigations of numerous piles, piers, and ruins from the prior work to determine their present condition. The present field work should be considered deficient in this category. (See Hydrographic Manual, section 1.6.2.)

18. In some instances detached positions and field edit determination of the same foreshore features addressed by the hydrographer and the topographer are in conflict.

a. Private Marker 26 (PSR Item B), latitude $35^{\circ}41.75'$, longitude $77^{\circ}05.3'$ was located by the topographic party's field edit by a sextant fix and a check angle. The reviewed topographic manuscript's Descriptive Report indicates that problems were encountered while plotting this marker in the office from field information. The topographic position is not shown on the smooth sheet. Hydrographic records indicate that two detached positions were taken at this marker. The position plotted during verification fell approximately 140 meters west of the topographic position and has been

rejected during the quality evaluation. The other position found in the records during quality evaluation was not logged; this position located by a strong sextant fix with a check angle is considered the most logical as it falls in close proximity to the charted position. It is approximately 70 meters offshore of the topographic position and has been logged in the final printout and plotted on the smooth sheet.

The topographic field edit party subsequently used their field location of this marker as a signal to locate several other items; a series of cuts to this marker to establish an accurate position for control purposes was not evident on the field edit ozalid. A row of steel piles in the vicinity of Ferry Point in latitude $38^{\circ}41.85'$, longitude $77^{\circ}06.20'$ was determined on the topographic manuscript by using the marker as a signal. A conflict exists with a detached pile on the present hydrographic survey and with the topographic location, but a possibility of error in the electronic control caused by attenuation could exist. A psuedofix for the detached pile was given to bring them into agreement.

The private marker "26" and the row of steel piles as shown on the present survey are for the most part accurate, and are shown using a conservative delineation.

b. Several piles from the topographic manuscript in the vicinity of Hunting Creek appear to be in conflict with the present survey positions. Positions of both the topographic (believed to be planetable location) and hydrographic determined piles have been shown on the present survey (portion of Presurvey Review Item 63).

19. The following information is in addition to and supplements the "Comparison with Prior Surveys" of the Verifier's Report:

a. H-2692 (1904) 1:10,000

A pier located in latitude $38^{\circ}42.87'$, longitude $77^{\circ}02.1'$ was not investigated by the present survey but is to be considered nonexistent.

b. T-2638 (1903) 1:10,000
T-2639 (1903) 1:10,000

A ruin in latitude $38^{\circ}41.75'$, longitude $77^{\circ}03.68'$ has not been investigated by the present survey, but is to be considered nonexistent.

Piers located in latitude $38^{\circ}45.01'$, longitude $77^{\circ}00.96'$ and latitude $38^{\circ}43.1'$, longitude $77^{\circ}01.66'$ have not been investigated by the present survey, but are to be considered nonexistent.

c.	T-5757	(1937-38)	1:10,000
	T-5758	(1937-38)	1:10,000
	<u>T-8606</u>	<u>(1946)</u>	<u>1:10,000</u>

These prior topographic surveys have been considered for comparison by the quality evaluator.

Submerged dolphins, piles, and pier ruins have been carried forward to supplement the present survey in latitude 38°42.70', longitude 77°02.25'.

The following items have not been investigated by the present survey but are considered no longer existent.

<u>Item</u>	<u>Latitude</u>	<u>Longitude</u>
Wrecked barge	38°41.74'	77°01.58'
Piling	38°42.95'	77°04.43'
Pier	38°44.73'	77°02.70'
2 Catwalks	38°44.71'	77°02.70'
Catwalk	38°44.53'	77°01.48'
Pier	38°45.02'	77°01.04'
Piling	38°42.07'	77°02.85'

A spoil area in latitude 38°44.63', longitude 77°00.7' is considered disproved by the present survey.

The high water line from latitude 38°45.0' to 38°46.7' on the Virginia side of the river has changed considerably. These changes are attributed to cultural improvements.

With the addition of the items carried forward, the present survey is adequate to supersede the above surveys in the common area.

20. The following information is in addition to and supplements the "Comparison with Chart" of the Verifier's Report:

a. Hydrography

The charted information originating with the previously discussed prior surveys in the Verifier's Report and discussed above in paragraph 19, supplemented by numerous chart letters, blueprints, and Coast Pilot investigations, requires no further consideration.

Attention should be directed to the Presurvey Review items not verified or disproved in the Descriptive Report, paragraph J, recommendations in paragraph K, and the following items:

(1) The piers and ruins charted in the following positions are charted from an unascertainable source. These items have not been verified or disproved by the present survey but are considered nonexistent.

<u>Item</u>	<u>Latitude</u>	<u>Longitude</u>
Pier	38°44.01'	77°01.8'
Pier	38°44.29'	77°02.58'
Ruin	38°44.25'	77°02.55'
Pier	38°44.14'	77°02.51'
Pier Ruin	38°45.35'	77°01.64'

(2) A 13-foot sounding from H-2692 (1904) charted in latitude 38°44.46', longitude 77°01.89' originates as a 3 1/2-foot sounding. Chart present survey depths.

(3) The discontinued spoil areas charted in latitude 38°47.05', longitude 77°01.75' and latitude 38°47.35', longitude 77°01.8' have not been developed by the present survey but are to be considered discredited by present survey depths.

(4) Two piles (Presurvey Review Item 63) charted in the vicinity of latitude 38°47.25', longitude 77°02.37' were not located by the present survey; it is recommended that they be charted as submerged piles.

(5) The islet charted in latitude 38°46.07', longitude 77°02.57' should be deleted from the chart; 22-foot depths presently exist.

(6) The spoil area as shown on TP-00319 in latitude 38°46.06', longitude 77°02.65' has been revised in position on the present smooth sheet to coincide with the present soundings. A 1-foot detached sounding was located in the records and added during the quality evaluation.

(7) Two piles located on TP-00319 (through a field edit) in latitude 38°47.28', longitude 77°02.57' and latitude 38°47.05', longitude 77°02.66' fall within 50 meters of piles located by the present survey. The photogrammetric positions are questionable and have not been shown on the present survey.

(8) A log located on TP-00319 (through a field edit) in latitude 38°46.36', longitude 77°02.52' is approximately 30 meters north of a log subsequently located by the present survey. It is recommended the present survey location be charted.

(9) The pier ruins charted in latitude 38°45.40', longitude 77°01.65' were inadvertently deleted from the Class III map of TP-00319 during the application of the field edit. These piers shall be considered

verified and have been transferred to the present survey from the Class III map. Chart the piers in accordance with the present survey. ✓

(10) The sewer charted in latitude $38^{\circ}46.78'$, longitude $77^{\circ}03.0'$ was investigated by the photo field edit and its existence was discredited. It is recommended that it be removed from the chart. ✓

(11) The piling charted in the vicinity of latitude $38^{\circ}43.73'$, longitude $77^{\circ}02.50'$ from T-5757 (1937-38) should be revised in position to agree with the present survey. ✓

Except as noted in the Descriptive Report, paragraphs J and K; the Verifier's Report, paragraph 7, and above, the present survey is adequate to supersede the charted information in the common area.

b. Controlling Depths

The present survey is in disagreement with the channel charted in latitude $38^{\circ}42.0'$, longitude $77^{\circ}05.3'$ leading to the Mt. Vernon dock. Channel marker N"8" is apparently not in its proper position; it is located in 5-foot depths. The ^{charted} controlling depth of 9 feet should be revised in accordance with the present survey.

c. Aids to Navigation

Daybeacons in Piscataway Creek have been superseded by L.N.M. 20/76.

cc:
C35
C351

