

9322

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. 742-10-4-72
Office No. H-9322

LOCALITY

State VIRGINIA - MARYLAND
General Locality .. POTOMAC RIVER
Locality VICINITY OF QUANTICO

19 72

CHIEF OF PARTY
G.R. Schaefer, N.C. Austin

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DATE June 21, 1978

☆ U.S. GOV. PRINTING OFFICE: 1976-009-441

9322

122 87 (101)
122 88 (559)

HYDROGRAPHIC TITLE SHEET

H-9322
~~H-9323~~

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.
HSL-10-1-72

State Virginia, Maryland See Other Title Sheet
~~County of~~ Potomac River
General locality Quantico, Virginia
Vicinity of Quantico
Locality Potomac River, Maryland

Scale 1:10,000 Date of survey May 4, 1972 - Aug. 31, 1972
Sept. 14 - Oct. 30, 1972

Instructions dated January 31, 1972 Project No. OPR-409-HSL-72

Vessel NOAA Launch 1257

Chief of party Glen R. Schaefer, LCDR, NOA A

Surveyed by LCDR G.R. Schaefer, LTJG A.L. Sikes, LTJG D.W. Yeager,
LTJG W.L. Adams, S.S. D.V. Mason, S.T. F.L. Saunders

Soundings taken by echo sounder, ~~and~~ Raytheon DE 723D1904

Graphic record scaled by Launch personnel

Graphic record checked by Launch personnel

Protracted by _____ Automated plot by Calcomp-618
DDP 8/E

Soundings penciled by _____ Verified by R. Hill

Soundings in ~~feet~~ feet at MLW ~~MLW~~ Real time tides applied

REMARKS: Misc. items were removed from this D.R. and are filed in one of the cahiers
with the field records.

Applied to etds 10/25/78
CAB

Descriptive Report
To Accompany
Hydrographic Survey HSL-10-1-72
Registry Number H-93²²~~23~~

OPR-409-HSL-72
Potomac River, Maryland
1972 Field Season
Scale 1:10,000

HFP-746
NOAA Launch 1257

Glen R. Schaefer
LCDR, NOAA
Officer-in-Charge

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DESCRIPTIVE REPORT
H-93272

A. PROJECT

This survey was conducted as a part of Project OPR-409 in accordance with Project Instructions OPR-409-HSL-72, Potomac River, Maryland, dated January 31, 1972.

B. AREA INCLUDED

The area included in this survey lies between Lat. $38^{\circ}27'32''\text{N}$ and $38^{\circ}33'15''\text{N}$. On the east and west hydrography was run as close to shore as conditions permitted. (HFP 742 is currently surveying between the east and west boundaries of this survey and the Maryland and Virginia shoreline.)

The inclusive dates for this survey are May 4, 1972 through August 31, 1972.

Junction was made with the contemporary survey of HFP 742 to the south. (H-9321)

C. SOUNDING VESSEL

All sounding on this survey was accomplished by HFP 746, Launch 1257.

D. SOUNDING EQUIPMENT

All sounding on this sheet was accomplished using a Raytheon, DE-723D echo sounder Unit Number 723-40, Serial Number 1940.

Corrections to echo soundings were determined only by bar check data. Bar checks were taken from 5 to 30 feet.

A-F scale checks to fathometer were performed on the average of 3 per day and bar checks on the average of less than one per day. Phase comparisons and speed counts were also accomplished on the fathometer daily.

Initial corrections to fathometer depths were accounted for while scanning the fathograms.

No handlead soundings were taken.

E. SMOOTH SHEET

The smooth sheet will be prepared by the Processing Division at the Atlantic Marine Center. The Processing Division will also plot all soundings corrected for velocity.

F. CONTROL

Horizontal control was determined by traverse, intersection, and resection. See also the RAYDIST CALIBRATION REPORT and the DEL NORTE CALIBRATION REPORT written to accompany this survey.

Shore stations used for electronic control systems are as follows:

<u>DAY</u>	<u>CONTROL SYSTEM</u>	<u>STATION LEFT</u>	<u>STATION RIGHT</u>
125	Hastings-Raydist, Range-Range	Hilltop Raydist	Marlboro Raydist
146	"	"	"
228	"	"	"
229	"	"	"
234	"	"	"
242	Del Norte Range-Range	FISHERY RM 3 1901 - 1972	MARINE 2 RM 1 1928 - 1972
243	"	"	"
244	"	"	"

Stations left and right were located by traverse using second order methods.

G. SHORELINE

There is no shoreline within the limits of hydrography on this boatsheet. The junction with this sheet and extending to the shoreline is being accomplished by HFP 742.

H. CROSSLINES

The percentage of crosslines run was 10.3%. Agreement between crossline soundings and regular soundings was very good with differences never exceeding one (1) foot. This one foot discrepancy can be contributed to individual scanning techniques by personnel.

I. JUNCTIONS

This sheet junctions with a survey currently being conducted by HFP 742 to the south.

(H-7321)

J. COMPARISON WITH PRIOR SURVEYS

The only prior survey related to this boatsheet is H-2708 (1:10,000 - year 1904). There are differences in depth of 4 to 5 feet in the deeper water on this sheet with the prior survey. Soundings on the boatsheet are shoaler than those on the prior survey.

Some of this discrepancy is due to the fact that velocity corrections have not been applied to soundings on this boatsheet. There has also probably been some silting.

K. COMPARISON WITH THE CHART

Chart 559, 9th Edition, February 27, 1971 was used as the source for chart comparison. There is generally good comparison between soundings on the chart. There is evidence that soundings on the Maryland side of the river are somewhat shoaler than these indicated on the chart.

L. ADEQUACY OF THE SURVEY

This survey is complete and adequate to supersede all prior surveys of the area actually surveyed.

No developments were done on this sheet and there were no Pre-Survey Review Items.

M. AIDS TO NAVIGATION

All aids to navigation on this boatsheet are to be reported on by HFP-742 and Photo Party 61.

N. STATISTICS

Total number of positions	1180
Total nautical miles of sounding line	172.38
Total area in square nautical miles	5.8
Number of tide stations	1 bubbler
	1 ADR
Number of bottom samples	22

O. MISCELLANEOUS

HFP-742 will run sounding lines in the center of the channel at the time they locate aids to navigation.

P. RECOMMENDATIONS

None.

Q. REFERENCES TO REPORTS

Attention is directed to the following OPR-409-HSL-72 Field Season Reports:

Raydist Calibration Report
Del Norte Calibration Report
Corrections to Echo Soundings Report

Respectfully submitted:


Glen R. Schaefer
LCDR, NOAA

ATLANTIC MARINE CENTER

TIDE NOTE

- H-93232
1. Project No: OPR-409 2. Vessel/Field Unit: LAUNCH 1257-HFP#746
 3. Year: 1972 4. Meridian Time Zone: GMT (75W)
 5. Tide Station Name: Brent Marsh (Wilson's Pier)
 6. Position: Lat. 38 ° 25.8 ' Long. 77 ° 19.3 '
 7. Plane of Reference: MLW, MLLW corresponds to 1.6ft. feet on the tide staff for the period: May 4, 1972
 8. Hourly Heights: Standard Gauge, ~~furnished from Rockville~~ ~~XXXXXX~~ Tide Telemetry system used Real Time Tides obtained ~~on-line by use of this system.~~
 Scaled and logged from field marigrams.
 9. Tidal Zoning: Not applicable.
 By two or more gauges automatically zoned.
 By applying tidal differences and constants for the area(s): a. Positions 1-179

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

b. _____

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

c. Include additional areas on separate sheet(s).

10. Remarks: Tide Gage was moved from Wilson's Pier at Brent Marsh to Quantico, Va. prior to running additional hydrography on H-9323.

ATLANTIC MARINE CENTER

TIDE NOTE

H-93232

1. Project No: OPR-409 2. Vessel/Field Unit: LAUNCH 1257-HFB#746
 3. Year: 1972 4. Meridian Time Zone: 75W GMT
 5. Tide Station Name: Quantico, Virginia
 6. Position: Lat. 38 ° 31.1 ' Long. 77 ° 17.1 '
 7. Plane of Reference: MLW, MLLW corresponds to 2.2ft.
 feet on the tide staff for the period: May 25-Aug. 31, 1972
 8. Hourly Heights: Standard Gauge, ~~from tide gauge~~ Real
 Time Tides obtained with Tide Telemetry System
 attached to bubbler gage and recorded on line.
 Scaled and logged from field marigrams.
 9. Tidal Zoning: Not applicable.
 By two or more gauges automatically zoned.
 Other gage used only for positions 1-179 and
 was located at Brent Marsh.
 By applying tidal differences and constants
 for the area(s): a. Pos. 180-1246

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

b.

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

c. Include additional areas on separate sheet(s).

10. Remarks: This station was used for all data on this sheet except for positions 1-179 as noted before. All tides applied on-line. ADR was set up in same location and observer forwarded punched tape to Tides Division Rockville, Md.

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): Quantico, Virginia

Period: May 4-September 6, 1972

HYDROGRAPHIC SHEET: ~~H-9323~~ ^{H-9322} H-9324

OPR: 409

Locality: Potomac River

Plane of reference (mean ~~lower~~ low water): Quantico, Virginia 1.2 ft.

Height of Mean High Water above Plane of Reference is Quantico, Va.
1.4 ft.

Remarks: Zoning requirements:

1. Recommend use of Quantico gage south of Quantico, Va. to Sandy Pt. (38°29'N) and north to Cockpit Pt. (30° 33.7'N)
2. Use the following time correction and range below Sandy Pt., south to the Project limits.

<u>Quantico</u>	
<u>Time</u>	<u>Range</u>
-0.3 hr.	1.2 Ft. ✓

3. Use the following time correction and range north of Cockpit Pt. to (lat. 38°35.5'N)

<u>Quantico</u>	
<u>Time</u>	<u>Range</u>
0.3 hr	1.6 ft. ✓

Robert D. Cummings

Chief, Tides Branch

HYDROGRAPHIC SIGNAL NUMBERS AND POSITIONS

HYDROGRAPHIC SURVEY FIELD NUMBER HSL-10-1-72
REGISTRY NUMBER H-9323

<u>SIGNAL NO.</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
120	38° 28' 23.64"	77° 19' 08.49"
131	38° 30' 56.14"	77° 17' 29.25"
135	38° 31' 11.22"	77° 17' 10.34"
145	38° 31' 29.42"	77° 18' 41.75"
150	38° 31' 33.16"	77° 18' 26.02"
155	38° 32' 00.05"	77° 18' 00.86"
160	38° 32' 11.01"	77° 16' 48.61"
165	38° 33' 33.05"	77° 15' 18.11"
212	38° 26' 26.33"	77° 15' 28.90"
214	38° 27' 48.60"	77° 16' 15.67"
220	38° 28' 56.25"	77° 16' 27.20"
224	38° 29' 20.91"	77° 16' 20.57"
228	38° 30' 41.46"	77° 15' 49.71"
235	38° 33' 05.86"	77° 14' 14.63"
236	38° 33' 05.87"	77° 14' 14.66"
245	38° 35' 23.43"	77° 11' 16.64"

HYDROGRAPHIC SIGNAL NUMBERS AND NAMES

HYDROGRAPHIC SURVEY FIELD NUMBER HSL-10-1-72
REGISTRY NUMBER H-9328z

120 BOUNDARY MONUMENT NO. 40 1929
131 Boundary Monument No. 43 Signal
135 Marine 2 Pole
145 QUANTICO WEST CHECKERED TANK 1943
150 QUANTICO MARINE RESERVATION CHECKERED TANK 1929
155 QUANTICO JUNIOR SCHOOL DISTRICT WATER TANK 1959
160 Quantico Power Plant, Center of Three Stacks
165 Cockpit Point Pier
212 Tower
214 TWIN 1928
220 MALLOWS BAY LIGHT 1959
224 SANDY 3 1928 CHARLES CO.
228 OAK RM 2 1928
235 STUMP NECK NORTH BASE 1929
236 Stump Neck Signal
245 INDIAN HEAD NEW WATER TANK 1959

S I G N A L N A M E S 6-21-72

103 FAUNCE (USE)
 104 FAUNCE RM 1
 105 BARN
 108 MARLBORO 2
 109 MARLBORO 2 RM2
 110 BULKHEAD SIGNAL
 111 MARLBORO RAYDIST (MARL)
 112 MARLBORO SIGNAL
 5 BRENT TIDE STATION
 120 BDY MON 40
 121 FISHERY
 126 AIRFIELD RAYDIST
 130 BDY MON 43
 131 BDY MON 43 SIGNAL
 134 MARINE 2
 135 MARINE 2 POLE
 140 QUANTICO, MICROWAVE MAST
 145 QUANTICO, WEST CHECKERED TANK
 150 QUANTICO, MARINE RESERVATION, BLACK AND WHITE CHECKERED TANK
 155 QUANTICO, JUNIOR SCHOOL DISTRICT, WATER TANK
 159 QUANTICO POWER PLANT, SOUTHERLY OF FOUR STACKS
 160 QUANTICO POWER PLANT, CENTER OF THREE STACKS
 164 BDY MON 46
 165 COCKPIT POINT PIER
 9 FREESTONE 2
 170 FREESTONE 2 RM
 171 FREESTONE 2 SIGNAL
 180 SIGNAL 130
 185 SYCAMORE SIGNAL
 200 MARYLAND PT LIGHTHOUSE
 201 MARYLAND 2 SIGNAL
 205 MARYLAND PT, USNRL TELEMETRY ANTENNA
 209 CLIFTON BEACH LIGHT
 210 SMITH POINT LIGHT
 212 TOWER
 214 TWIN
 220 MALLOW'S BAY LIGHT
 224 SANDY3
 228 OAK RM 2
 229 LOWER
 235 STUMP NECK N BASE
 236 STUMP NECK SIGNAL
 240 STUMP NECK PIER
 245 INDIAN HEAD NEW WATER TANK

SIGNAL NAMES-CONTINUED

246 INDIAN HEAD TIDE STATION
248 INDIAN HEAD WATERFRONT
260 GLYMONT LIGHT
610 SIGNAL 610
612 SIGNAL 612
614 FAIRVIEW BEACH
615 FAIRVIEW BEACH SIGNAL
616 GAS PUMP
620 FAIRVIEW WEST
625 PASSAPATANZY
630 BULL
635 MARLBORO POINT
637 BT-03
655 BRENT POINT
656 BRENT POINT DEL NORTE
664 CN-04
665 CN-04 SIGNAL

ASCII SIGNAL LOCATIONS

103	38	21	1750	077	17	1784
104	38	21	1668	077	17	1808
105	38	21	1666	077	17	1779
108	38	21	3262	077	17	1794
109	38	21	3297	077	17	1878
110	38	21	3268	077	17	1856
111	38	21	3073	077	17	1991
112	38	21	3334	077	17	1812
115	38	25	4498	077	19	1741
120	38	28	2364	077	19	0849
121	38	28	2371	077	19	0842
	38	33	1309	077	18	0310
130	38	32	5617	077	17	2929
131	38	32	5614	077	17	2925
134	38	31	1185	077	17	1013
135	38	31	1122	077	17	1034
145	38	31	2942	077	18	4175
150	38	31	3316	077	18	2602
155	38	32	0005	077	18	0036
159	38	32	0984	077	16	5195
160	38	32	1101	077	16	4861
164	38	33	3834	077	15	2661
165	38	33	3305	077	15	1811
171	38	35	2536	077	14	5144
180	38	37	1776	077	10	5865
185	38	37	3122	077	10	0883
200	38	20	5842	077	11	5241
201	38	21	3546	077	12	2638
205	38	22	2671	077	13	5746
209	38	24	5637	077	15	5776
210	38	24	5712	077	15	5640
212	38	26	2633	077	15	2890
214	38	27	4860	077	16	1567
220	38	28	5625	077	16	2720
224	38	29	2091	077	16	2057
228	38	30	4146	077	15	4971
229	38	31	2184	077	15	2628
235	38	33	0586	077	14	1463
236	38	33	0587	077	14	1466
240	38	33	1362	077	14	0948
245	38	35	2343	077	11	1664

SIGNAL LOCATIONS-CONTINUED

246	38	36	0487	077	10	5638
248	38	36	2345	077	09	5123
260	38	36	3992	077	08	1958
610	38	20	0378	077	13	3294
612	38	19	5555	077	13	5973
614	38	19	5351	077	14	5008
615	38	19	5351	077	14	5015
616	38	19	5351	077	14	5013
620	38	19	5298	077	15	1086
625	38	20	0156	077	16	0829
637	38	20	1898	077	16	4198
635	38	21	1176	077	17	1555
640	38	22	2963	077	18	1728
655	38	23	5002	077	18	4179
656	38	23	5054	077	18	4108

SPEED	TRANSDUCER DEPTH	SETTLEMENT & SQUAT	TRA
STOP	<u>2.7</u>	0.0	<u>2.7</u>
DEAD SLOW	"	0.2	<u>2.9</u>
1100 RPM	"	0.5	<u>3.2</u>
1850 RPM	"	0.1	<u>2.8</u>

Determined on August 14, 1972 by crew of
NOAA LAUNCH 1257.

Approval Sheet

Field Number HSL-10-1-72

Registry Number H-9323

The field work and processing of data from this hydrographic survey was under my immediate daily supervision. The boat-sheet and all records have been reviewed and are approved by me. This survey is complete and adequate to supercede all prior surveys of the area.



Glen R. Schaefer
LCDR, NOAA
Officer-in-Charge

HYDROGRAPHIC TITLE SHEET

H-9322

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

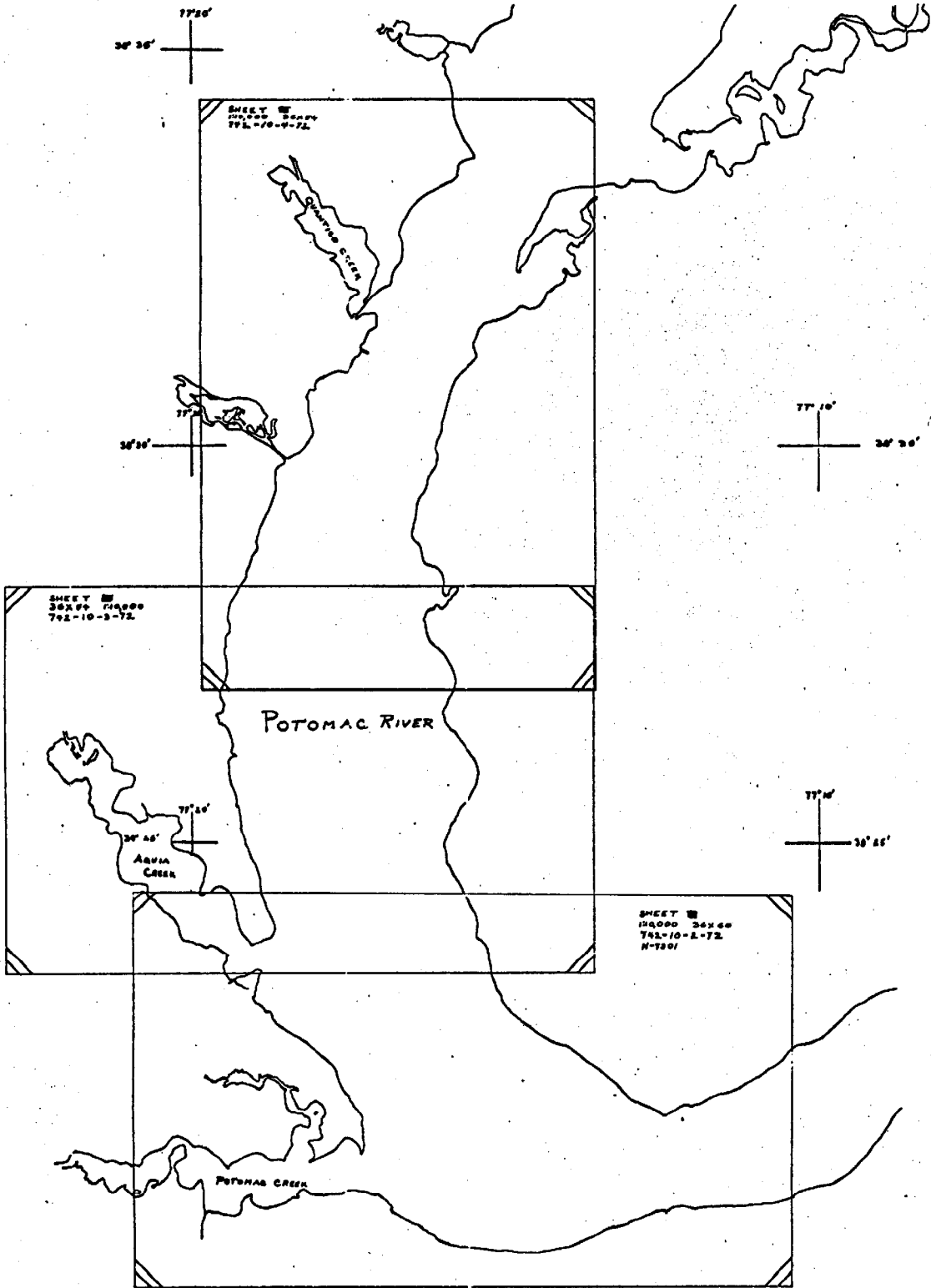
FIELD NO.

742-10-4-72

State Virginia - MarylandGeneral locality Potomac RiverLocality Vicinity of Quantico, Va.Scale 1:10,000 Date of survey Sept. 14-Oct. 30, 1972Instructions dated 3/1/72 & 3/3/72 Project No. OPR-409Vessel Hydrographic Field Party 742Chief of party Cdr. Ned G. AustinSurveyed by J. Scott Bradford & Walter H. PinerSoundings taken by echo sounder, hand lead, pole Echo Sounder and PoleGraphic record scaled by Party PersonnelGraphic record checked by Party PersonnelProtracted by _____ Automated plot by AMC Calcomp-618Soundings penciled by _____ Verified by R. HillSoundings in fathoms feet at MLW MLLW*Misc. items were removed from this D.R. and are filed in one of the cahiers with the field records.*

REMARKS: Survey 742-10-4-72 was done using two boatsheets: 10-4-72A covered the east side (Maryland side) of the Potomac River, while 10-4-72B covered the west side (Virginia side) of the river. This descriptive report is divided into two sections, one for each sheet, except for those sections of the appendix which are common to both. The survey data is also separated so that one sheet can be processed at a time if desired. The main reason for doing the survey this way was to speed up the field processing.

The time meridian for hydrography is Greenwich Mean Time.



SHEET #
10000 36400
79L-10-9-72

SHEET #
36200 79000
79L-10-5-72

SHEET #
10000 36400
79L-10-2-72
N-1001

77° 30'
36° 30'

77° 10'
36° 30'

77° 10'
36° 45'

77° 30'
36° 45'

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9322
FIELD NO. 742-10-4-72

SCALE: 1:10,000
SEASON: 1972

HYDROGRAPHIC FIELD PARTY 742
CDR Ned C. Austin
OFFICER IN CHARGE

DESCRIPTIVE REPORT
742-10-4-72 "A"

A. PROJECT

Sheet 742-10-4-72 A, Project Number OPR-409, was done in accordance with Project Instructions dated March 1, 1972 and Supplement to Instructions, Change No. 1, dated March 3, 1972.

B. AREA SURVEYED

This survey covers the east side of the Potomac River (Maryland side) starting from Lat. $38^{\circ} 27.75'$ north to Lat. $38^{\circ} 33.50'$, including Mallows Bay and Chicamuxen Creek. This survey makes a junction with sheet 742-10-3-72 C to the south. This sheet also junctions with the High Speed Launch 1257 work. Launch 1257 was responsible for the middle of the Potomac River. Hydrography began on September 14, 1972 and ended on October 30, 1972.

C. SOUNDING VESSEL

Launches 1259, 1260, and Skiff 570 were used on this survey. Position color for 1259 was blue, 1260 was red and for Skiff 570 was brown.

D. SOUNDING EQUIPMENT

Raytheon Fathometer No. 1885 DE-723 was used on Launch 1260 for depths greater than 4 feet. A sounding pole was used for soundings less than 4 feet.

Raytheon Fathometer No. 535 DE-723 was used on Launch 1259 for depths greater than 4 feet. A sounding pole was used for soundings less than 4 feet.

Raytheon Fathometer No. 806 DE-723 was used on Skiff 570. A sounding pole was used in depths less than 4 feet.

Echo sounding corrections were determined from bar checks; no trouble was encountered with the sounding equipment.

Fathogram scanning was checked by the hydrographer and found to be adequate.

E. SMOOTH SHEET

The smooth sheet will be prepared by the Atlantic Marine Center, Processing Division, from punched tapes made by this party. Boat-sheets A and B of this survey can be plotted on a single 36x54

inch smooth sheet, provided that, part of Chicamuxen Creek is plotted as an insert

Actual tides will be furnished by Rockville from Fisher-Porter ADR gages in operation for a special project on the Potomac River. See also Tide Note in this report.

F. CONTROL

Electronic control (Del Norte) was used for most of the hydrography. Visual control was used in Mallows Bay and Chicamuxen Creek. Launch 1259 was used in Chicamuxen and, due to the shallow water and dangerous obstructions, Skiff 570 was used in Mallows Bay.

Visual control was used for positions 6000 - 6098 on Launch 1259. Visual control was also used for positions 3000 - 3017 and position 3099 on Skiff 570. All signals for visual control were located by Photo Party 61 and are described in their control report which is attach to this Descriptive Report.

G. SHORELINE

Shoreline detail for this survey was obtained from shoreline Manuscript #TP-00326, #TP-00327 and #TP-00329. Field edit was done by Photo Party 61. Sounding lines close to shore were run on Skiff 570. However, due to shallow water and small tide range, the low water line was not defined.

H. CROSSLINE

Crosslines were run at 10% of regular system of hydrography. There was general agreement at crossings.

I. JUNCTIONS

Junctions with the contemporary High Speed Launch work were in good agreement.

J. COMPARISON WITH PRIOR SURVEY

<u>FEATURE</u>	<u>POSITION</u>	<u>REMARK</u>
8 ft. sounding	38° 31.30' 77° 15.85'	Close spaced hydrography was run and least depth was found to be 8 ft. (Vol. 6, p. 23)
13 ft. sounding	38° 31.45' 77° 15.85'	This sounding was verified. ^{Pos# 3083-3084} (Vol. 2, p. 57) 14 ft ^{Pos# 160-161}

10 & 11 ft. sounding	38° 31.75' 77° 15.65'	These soundings were verified. (Vol. 2, p. 57) 10 & 12 ft <i>Pos# 263-264 & Pos# 4480</i>
11 ft. sounding	38° 31.95' 77° 15.40'	Close spaced hydrography was run and least depth was found to be 13-14 ft. (Vol. 2, p. 16) <i>Pos# 299</i>
11 ft. sounding	38° 32.00' 77° 15.50'	Close spaced hydrography was run and least depth was found to be 14-15 ft. (Vol. 2, p. 17) <i>Pos# 293-294</i>

PSI #8 Wreck, Lat. 38° 28.05', Long. 77° 15.98'. This wreck was found in 4 ft. of water submerged 1.2 ft. Only the iron motor remains and this is very dangerous to small boating. This wreck is not marked. (Vol. 6, p. 27) (See Q.C. Report item 4)
Pos# 3079

PSI #9 Foul Area, Lat. 38° 28' 23", Long. 77° 15' 09". This area is outlined with piles that bare about 6 ft. The inside area contains burned wrecks. This is a foul area and is not navigable. (Vol. 6, p. 9)

PSI #10 Wreck: This wreck is about 75 meters long and is laying parallel to shore. Only lower hull remains and wreck bares ~~6~~ ft. (Vol. 6, p. 10)

PSI #16 Wreck: This wreck is reported to be submerged 3 ft. at the time of this survey. It was found to be moved to the shoreline. The new position, Lat. 38° 32.75' Long. 77° 14.54', shows the wreck now completely visible. This new position should be charted as a visible wreck. The wreck is about 225 ft. long and bares about 25 ft. The bow is pointed to shore. (Vol. 2, p. 42)

K. COMPARISON WITH CHART

A comparison was made with C&GS 559 ED dated, February 27, 1971. Soundings and depth curves were in general agreement and are shown on the boat sheet in yellow ink.

L. ADEQUACY OF SURVEY

This survey is considered to be adequate to supersede prior surveys for charting.

M. AIDS TO NAVIGATION

Within the limits of this survey, there are 4 floating aids to navigation, which are maintained by the Coast Guard. There are also two fixed aids maintained by the Potomac River Fishery COMM. The aids are listed in Light List, Vol. I, 1972, and adequately serve the purpose intended.

The six very small channel markers in Mallows Bay are privately maintained.

N. STATISTICS

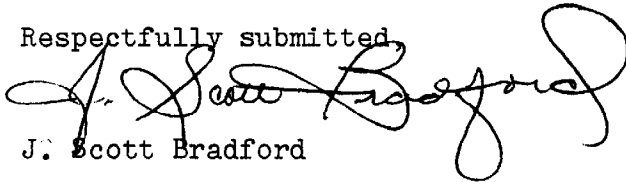
LAUNCH	TOTAL NUMBER OF POSITIONS	MILES OF SOUNDING LINE
CS 1260	476	53.3 NM
CS 1259	98	10.3 NM
Skiff 570	99	6.7 NM
TOTAL	<u>673</u>	<u>70.3 NM</u>

This survey covers three square nautical miles. Six bottom samples were taken.

O. REFERENCES TO REPORTS

1. Control Report by Photo Party 61.
2. HFP-742's Field Season Report 1972 - OPR-409.
3. Electronic Control Calibrations Report for OPR-409, 1972.

Respectfully submitted,



J. Scott Bradford

DESCRIPTIVE REPORT
742-10-4-72 "B"

A. PROJECT

Sheet 742-10-4-72 B, Project Number OPR-409, was done in accordance with Project Instructions dated March 1, 1972 and Supplement to Instructions, Change No. 1, dated March 3, 1972.

B. AREA SURVEYED

This survey covers the west side of the Potomac River, (Virginia side) from Lat. 38° 27.30' to north Lat. 38° 34.00'. This survey also included Quantico Creek. This survey makes junction with sheet 742-10-3-72 B on the south. This sheet also junctions with the High Speed Launch 1257's work to the east. Launch 1257 was responsible for the middle of the Potomac River. Hydrography began on October 4, 1972 and ended on October 30, 1972.

C. SOUNDING VESSEL

Launch 1260 and Skiff 570 and Skiff 1 were used on this survey. Position color for Launch 1260 was red, Skiff 570 was brown, and Skiff 1 was violet.

D. SOUNDING EQUIPMENT

Raytheon Fathometer No. 1885 DE-723 was used on Launch 1260 for depth greater than 4 feet. A sounding pole was used for soundings less than 4 feet.

Raytheon Fathometer No. 806 DE-723 was used on Skiff 570 for soundings greater than 4 feet. A sounding pole was used for soundings less than 4 feet.

Raytheon Fathometer No. 1885 DE-723 was also used on Skiff ⁵~~1~~ for soundings greater than 4 feet. A sounding pole was used for soundings less than 4 feet.

Echo sounding corrections were determined from daily bar checks; no trouble was encountered with the sounding equipment. Fathogram scanning was checked by the hydrographer and found to be adequate.

E. SMOOTH SHEET

The smooth sheet will be prepared by the Atlantic Marine Center, Processing Division, from punched tapes made by this party.

Boatsheets A and B of this survey can be plotted on a single 36x54 inch smooth sheet, provided that part of Chicamuxen Creek is plotted as an insert.

Actual tides will be furnished by Rockville from Fisher-Porter ADR gages in operation for a special project on the Potomac River. See also Tide Note in this report. Supplemental tide staff readings were made in accordance with instructions in Quantico Creek at Lat. 38-33-20 N, and Long. 77-18-00 W. The tide staff readings are included with this report.

F. CONTROL

Control was by Del Norte electronic control except for around Chopawamsic Island and in Quantico Creek. Visual control was used in these areas. Signals for visual control were provided by Photo Party 61 and are listed in their control report included with this Descriptive Report.

G. SHORELINE

Shoreline detail for this survey was obtained from shoreline Manuscript #TP-00329 and #TP-00326. Field edit was done by Photo Party 61 (see Section P. of this report). Sounding lines close to shore were run on Skiff 570. However, due to shallow water and small tide range, the low water line was not defined.

H. CROSSLINE

Crosslines were run at 10% of regular system of hydrography. There was a general agreement at crossings.

I. JUNCTIONS

Junctions with the contemporary High Speed Launch work were in good agreement.

J. COMPARISON WITH PRIOR SURVEY

<u>FEATURE</u>	<u>POSITION</u>	<u>REMARK</u>
18 ft. sounding	38° 29.40' 77° 17.65'	Close spaced hydrography was run ✓ and least depth was found to be 17 ft. <i>pos# 691-692</i>
5 ft. sounding	38° 28.90' 77° 18.50'	This sounding was investigated but was not found. <i>Concur AH</i>

PSI #11: 6 ft. Channel, Lat. 38° 29.39', Long. 77° 16.30'. This item was investigated and found to have a controlling depth of 6 ft. (Vol. VII, page 5) *Curver PU*

PSI #12: Piles ^{were not} ~~was~~ located at Lat. 38° 31.31', Long. 77° 17.20' and is submerged 0.8 ft. (Vol. VI, page 58) *The indicated pile is not re-*

PSI #13: Sunken Wreck. This item ^{was not} ~~was~~ found to be sub-merged piles, Lat. 38° 31.68', Long. 77° 17.28'. (Vol. VI, page 12) *See Verifiers Report - item 7a(1) later to PSR item 12*

PSI #14: Piles, Lat. 38° 32.04', Long. 77° 16.78'. This item was investigated by visual hydrography and found to be a group of piles marked by PRV #14. (Vol. VI, page 61) *See Verifiers Report - item 7a(3)*

PSI #15: Visible Wreck. Lat. 38° 32.10', Long. 77° 17.10'. This item was investigated by Photo Party 61 and also by HFP-742, and found to be a pier in ruins. (Vol. IX, page 69) *See Verifiers Report - item 7a(4)*

K. COMPARISON WITH CHART

A comparison was made with C&GS 559 ED dated, February 27, 1971. Soundings and depth curves are in general agreement and are shown on the boatsheet in yellow ink.

L. ADEQUACY OF SURVEY

This survey is considered to be adequate to supersede prior surveys for charting.

M. AIDS TO NAVIGATION

Within the limits of this survey there are five (5) fixed aids to navigation maintained by the Potomac River Fisheries Commission and two (2) fixed lights on dolphins at Cockpit Point, maintained by the Coast Guard. The aids are listed in Light List, Vol. 1, 1972, and adequately serve the purpose intended.

N. STATISTICS

<u>LAUNCH</u>	<u>TOTAL NUMBER OF POSITIONS</u>	<u>MILES OF SOUNDING LINE</u>
Launch 1260	668	83.3
Skiff 570	173	12.3
Skiff 1	180	15.9
TOTAL	1021	111.4

Total square nautical miles surveyed 4.6 sq. mi.
Number of Bottom Samples 15

O. MISCELLANEOUS

The Quantico Creek area was not accessible to our regular survey launches because of a low clearance railroad trestle. Hydrography was done visually using a 13 ft. Boston Whaler. To use a Raytheon DE-723 Fathometer (S/N 1885), transducers were mounted on 2 x 4's and suspended over the side of the boat. The transducers were placed at the surface and the fathometer set for zero draft. Soundings less than 3 feet were by sounding pole only. Depths between 3 and 5 feet were sounded by pole and fathometer and covered the major part of the survey.

The Hydrography was done on an overlay and was transferred to the boatsheet later.

P. REFERENCES TO REPORT

1. Control Report by Photo Party 61.
2. HFP-742 Field Season Report 1972 - OPR-409.
3. Electronic Control Calibrations Report for OPR-409, 1972.

Respectfully submitted,



Walter H. Piner

APPENDIX "A"

Tide Note

742-10-4-72 (H-9322)

Tide reducers for all boat sheet soundings are from predicted tides at Clifton Beach, Virginia. (Tide Table #2215).

Fisher-Porter ADR Tide Gages, installed for a special study were kept in operation for this project. Smooth sheet tide reducers are to be supplied by Rockville from these gages. Supplemental tide staff readings were made in accordance with instructions for hydrography in Quantico Creek (Lat 38-33-20, Long 77-18-00). A copy of these readings is included with this report. Three Fisher-Porter ADR Tide Gages are near the area of hydrography:

Riverside, Md. Lat 38-23-12, Long 77-08-30

Aquia Creek, Va. Lat 38-25-10, Long 77-21-10

Quantico, Va. Lat 38-31-30, Long 77-17-25

The output of the ADR gages was not available to the party for analysis but from the Tide Tables it appears that tidal zoning will be required.

STAFF

Tides: ~~Hourly~~ Heights

Station: Potomac River

Year 1972

Quantico Creek

Time Meridian: GMT Lat. 38-33'20" Long. 77-18'00"

10/20 10/23 10/24

Hour feet

Hour	10/20	10/23	10/24
Noon			
1230			
1300			3.80
1330			3.70
1400	2.7		3.60
1430	2.4	3.30	3.40
1500	2.35	3.20	3.30
1530	2.10	3.00	3.00
1600	2.02	2.80	2.80
1630	2.10	2.70	2.70
1700	2.20	2.50	2.60
1730	2.50	2.20	2.45
1800	2.70	2.00	2.20
1830	2.90	2.50	2.05
1900	3.00	2.70	2.00
1930	3.20		2.10
2000			
2030			



201 *Ord*
22

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
 NATIONAL OCEAN SURVEY
 NOS HFP-742
 P.O. Box 29526
 New Orleans, La. 70129

Date : January 23, 1973

Reply to Attn. of:

To : Director, Atlantic Marine Center
 Attn : CAM 2 *w*

From : Officer-in-Charge, HFP-742

Subject: Instructions OPR-409, 1973

Reference is made to Project Instructions, OPR-409-742-73, Potomac and Anacosta Rivers, Change No. 1, dated January 12, 1973, in particular concerning Pre-Survey Review items on Chart 559 marked AA, Potomac River Fisheries Commission markers.

Positions of the markers in the 1972 project area were determined however the records have been forwarded and can no longer be verified by this party. Since specific mention of the markers is not generally given in the Descriptive Reports, the following list is prepared to assist whoever does this verification.

Mark. No.	Hydrographic Records	Position Determined By	
		HFP-742	Photo P.61
PRV 10A	742-10-2-72C, Vol 17, p13	Del Nor.	photo-hydro sig. ^{H930}
PRV 10B	" " " " " " "	" "	" " "
PRV 11A	" " " " Vol 22, p8	" "	" " "
PRV 11B	Del. Norte Calib. Pt.	-----	geodetic
PRV 12B	742-10-3-72A _____	Del Nor.	photogramm. H-9521
PRV 12A	" " " " _____	" "	" "
PRV 12C	742-10-4-72B <u>Calib. Pt.</u>	-----	geodetic ^{H-9322}
PRV 13A	742-10-4-72B _____	Del Nor.	photogramm. <u> </u>
PRV 14	" " " " _____	Del Nor.	photogramm.
PRM 10A	742-10-4-72A <u>Calib. Pt.</u>	-----	geodetic
PRM 10B	" " " " _____	Del Nor.	photogramm.

Positions of all markers except calibration points were determined with Del Norte by HFP-742 and photogrammetrically by Photo Party 61. Positions of calibration points were determined geodetically by Photo Party 61.

The Del Norte readings and the geodetic data is at AMC, CAM22. Photogrammetric data has been forwarded to Chief, Coastal Mapping Division, Rockville.

Ned C. Austin

Ned C. Austin
 CDR, NOAA

CAM3-3
3-25-71

ATLANTIC MARINE CENTER

TIDE NOTE
SHEET 742-10-4-72 H 9322

1. Project No: OPR-409 2. Vessel/Field Unit: HFP-742
3. Year: 1972 4. Meridian Time Zone: GMT
5. Tide Station Name: Quantico, Virginia
6. Position: Lat. 38 ° 31.5 ' Long. 77 ° 17.4 '
7. Plane of Reference: MLW, MLLW corresponds to _____
feet on the tide staff for the period _____.
8. Hourly Heights: **ADR and** Standard Gauge, furnished from Rockville.
 Scaled and logged from field marigrams.
9. Tidal Zoning: Not applicable.
 By two or more gauges automatically zoned.
provided Rockville concurs it is necessary
 By applying tidal differences and constants
for the area(s): a. _____

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

b. _____

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

- c. Include additional areas on separate sheet(s).
10. Remarks: Other gages: Tide staff in Quantico Creek

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): Quantico, Virginia

Period: May 4-September 6, 1972

HYDROGRAPHIC SHEET: ~~H-9323~~ ^{H-9322} H-9324

OPR: 409

Locality: Potomac River

Plane of reference (mean ~~lower~~ low water): Quantico, Virginia 1.2 ft.

Height of Mean High Water above Plane of Reference is Quantico, Va. 1.4 ft.

Remarks: Zoning requirements:

1. Recommend use of Quantico gage south of Quantico, Va. to Sandy Pt. (38°29'N) and north to Cockpit Pt. (30° 33.7'N)
2. Use the following time correction and range below Sandy Pt., south to the Project limits.

Quantico	
Time	Range
-0.3 hr.	1.2 ft.

3. Use the following time correction and range north of Cockpit Pt. to (lat. 38°35.5'N)

Quantico	
Time	Range
0.3 hr	1.6 ft.

Robert A. Cummings

Chief, Tides Branch

NOS HFP-742
P.O. Box 29526
New Orleans, Louisiana 70129
Tel (504) 662-5250

January 16, 1973

Chief, Tides Branch

Ned C. Austin, CDR, NOAA
Officer-in-Charge, HFP-742

Request for smooth tides for OPR-409, Potomac River

Tide data from the ADR gages on the Potomac River are requested for processing of surveys completed by HFP-742 on OPR-409 in 1972. The data should be sent directly to the Atlantic Marine Center, Attn: CAM22. Following is a list of the data needed:

For each gage applicable please send

- 1) Verified hourly heights for periods indicated
- 2) Height of MLW on tide staff
- 3) Time and height corrections
- 4) Any recommendations for zoning

Sheet 742-10-2-72 (May 1, JD 122, through August 31, JD 244, 1972)

Gages in vicinity: Riverside, Maryland (Lat. 38-23-12, Long. 77-08-30)
Aquia Creek, Virginia (Lat. 38-25-10, Long. 77-21-10)
Quantico ~~Creek~~, Virginia (Lat. 38-31-30, Long. 77-17-25)
Tide staff, Potomac Creek (Lat. 38-20-33, Long. 77-19-15)

Sheet 742-10-3-72 (Aug. 1, JD 214, through Sept 30, JD 274, 1972)

Gages in vicinity: Riverside, Maryland
Aquia Creek, Virginia
Quantico ~~Creek~~, Virginia

H-9233
Sheet 742-10-4-72 (Sept 1, JD 245, through Oct 31, JD 305, 1972)

Gages in vicinity: Quantico, Virginia
Tide staff, Quantico Creek (Lat 38-33-20, Long. 77-18-00)

Hourly heights from the standard gage at Washington D.C. are also requested for the period May 1, JD 122, through Oct 31, JD 305, 1972.

The Atlantic Marine Center will auto-zone reducers from the above gages if you concur it is necessary. It is questionable to me whether the Aquia Creek gage should be used on sheet 742-10-2-72 and whether we should use it on sheet 742-10-3-72 outside Aquia Creek. It also needs to be determined whether or how staff readings in Potomac Creek and Quantico Creek should be applied.

Here is the staff reading data.

Station: Potomac Creek		Time: GMT, 1972			
hr	6/9	6/13	6/15	6/16	6/19
	staff reading in feet				
1230			3.65	3.50	
1300		4.75	3.70	3.55	3.05
1330		4.55	3.70	3.60	3.15
1400		4.50	3.65	3.65	3.25
1430	2.7	3.50	3.55	3.65	---
1500	2.6	3.30	3.45	3.55	3.40
1530	2.6	3.10	3.30	3.45	---
1600	2.67	3.00	3.15	3.30	3.50
1630	2.81	2.80	3.05	3.15	---
1700	3.05	2.75	2.90	3.05	3.55
1730	3.21	2.60	2.85	3.00	---
1800	3.31	2.45	2.70	2.90	3.50
1830	3.4	2.40	2.55	2.80	3.40
1900		2.40	2.45	2.70	---
1930		2.50	2.40	2.60	3.20
2000		2.70		2.45	

Station: Quantico Creek		Time: GMT, 1972	
hr	10/20	10/23	10/24
	staff reading in feet		
1300			3.80
1330			3.70
1400	2.7		3.60
1430	2.4	3.30	3.40
1500	2.35	3.20	3.30
1530	2.10	3.00	3.00
1600	2.02	2.80	2.80
1630	2.10	2.70	2.70
1700	2.20	2.50	2.60
1730	2.50	2.20	2.45
1800	2.70	2.00	2.20
1830	2.90	2.50	2.05
1900	3.00	2.70	2.00
1930	3.20		2.10

cc: CAM22

APPENDIX B

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Bar checks were taken every day of the survey that conditions were suitable. The results were averaged using the "0.4" foot rule (page 182, Hydrographic Manual). A printout of the velocity table tape is presented on the following page as an abstract of bar check corrections. Also included is a settlement and squat correction table printout indicating the results of tests run in August, 1972.

ABSTRACT OF CORRECTIONS TO DISTANCE MEASUREMENTS

A corrector tape printout follows as an abstract of Del Norte correctors.

TC/TI PRINTOUT

A TC/TI tape is also included in this report.

SIGNAL LIST

A list of Del Norte control stations and calibration stations appears in Photo Party 61's Control Report, which is attached to this report.

VELOCITY TABLE TAPE

DEPTH	IND	VEL CORR	TABLE NO	UNIT	VESSEL	SHEET
000420	1	0002	0001	000	742300	010472
001000	0	0000				
999999	0	0000				
000100	1	0004	0002	000	742200	010472
000120	1	0002				
001000	1	0002				
999999	1	0002				
000120	1	0006	0003	000	742400	010472
000180	1	0004				
001000	1	0004				
999999	1	0004				

Vessel 7423 - Launch 1260 (Monark)

Table #1 - Fathometer #1885

Vessel 7422 - Launch 1259 (Penn Yan)

Table #2 - Fathometer #535

Vessel 7424 - Skiff 570

Table #3 - Fathometer #806

Vessel # 7425 - Skiff # 5

Table # 2 - Fathometer # 1885

SQUAT AND SETTLEMENT CORRECTION TAPE

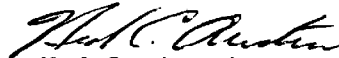
DEPTH	IND	CONR	TAB NO	UNIT	VESSEL ID	SHEET
000055	0	0002	0001	000	742300	010272
001000	0	0000				
999999	0	0000				
000045	0	0006	0002	000	742300	010272
000060	0	0004				
000085	0	0002				
001000	0	0000				
999999	0	0000				
000045	0	0006	0003	000	742300	010272
000100	0	0004				
001000	0	0002				
999999	0	0002				
000045	1	0002	0004	000	742300	010272
000070	0	0000				
000075	0	0002				
000080	0	0004				
000120	0	0006				
001000	0	0004				
999999	0	0004				
001000	0	0002	0005	000	742200	010272
999999	0	0002				
001000	0	0003	0006	000	742400	010272
999999	0	0003				

APPENDIX "E"

APPROVAL SHEET TO ACCOMPANY
HYDROGRAPHIC SURVEY 742-104-72 (H-9322)

The field work, hydrographic records and processing are complete and adequate.

Approved and forwarded,



Ned C. Austin
CDR, NOAA
OIC, HFP 742

CONTROL REPORT
Boat Sheet HFP-742-10-4-72

Prepared by
NATIONAL OCEAN SURVEY
PHOTO PARTY 61

October, 1972
POTOMAC RIVER, MARYLAND

1. Authority

hydro support was performed in accordance with project instructions OPR-409-742-72 Potomac River, Maryland, dated 1 March 1972.

2. Purpose

To provide shore stations and calibration stations for Del Norte control, and to provide photo-hydro signals for visual control on boatsheets HFP-742-10-4-72. Boat sheet preparation, except for transferring of photo-hydro signals, was not performed by this party.

3. Locality of Control

The area covered is the Potomac River from Mallows Bay to Cockpit Point, including Chopawamsic Creek, Chopawamsic Island, Quantico Creek, and Chicamuxen Creek.

4. Control

Hydrographic control consisted of triangulation stations, intersection stations, and photo-hydro stations.

a) Del Norte control requirements

The Del Norte electronic control system required that there be complete visibility between the mobile and the shore stations. It also required calibration stations that could be reached with the launch so the mobile stations could be calibrated directly. Shore stations were placed directly on triangulation stations where possible. Where it was necessary due to visibility limitations, the shore stations were placed on existing or new reference marks of existing triangulation stations. Calibration stations were located by intersections from existing triangulation stations.

b) Photo-hydro Control

Photo-hydro control stations were located in accordance with Photogrammetry Instruction No. 45, using October, 1971, photography.

5. Recommendations

None.

6. Disposition of Data

Original Cronaflex sheets TP00326, 00327, and 00329 contain photo-hydro signals for this boat sheet. Sheet 00329 was transmitted to HFP-742 on 17 October 1972. Sheets 00326 and 00327 will be kept by this party for use in the next Potomac field season. Contrary to statements in Control Reports for Boat Sheets HFP-742-10-2-72 and HFP-742-10-3-72, all data related to intersection and position computations for those two sheets as well as the present sheet will be transmitted with this report for inclusion in survey records. Two volumes of form 251 will be sent to geodesy.

7. Attached

A signal list is attached including positions of all Del Norte stations, calibration stations, and photo-hydro signals.

Respectfully submitted,

CV Olson for

Richard D. Olson
LT., NOAA
Chief, Photo Party 61

TRIANGULATION AND FIELD POSITIONS

Del - Del Norte Shore Station T - Triangulation Station
 Cal - Del Norte Calibration Station F - Field Position

Station No.	Lat seconds	Long seconds	
121	38 28 23.35	77 19 07.79	FISHERY R.M.3 (Del-T)
126	38 31 10.10	77 17 09.44	MARINE 2 R.M.1 (Del-Cal-F)
128	38 29 20.91	77 16 26.57	SANDY 3 (Del-T)
130	38 31 21.84	77 15 26.28	LOWER (Del-T)
136	38 28 55.63	77 16 28.88	Dolphin (Cal-F)
138	38 33 05.86	77 14 14.63	STUMP NECK NORTH BASE (Del-T)
140	38 28 10.55	77 19 09.21	PR V12C (Cal-F)
141	38 31 34.70	77 15 17.31	PR M10A (Cal-F)
164	38 33 38.34	77 15 26.61	BOUNDARY MONUMENT 46 (Del-T)

(PHOTO) VISUAL SIGNALS

Signal No.	Lat meters	Long meters	T-sheet
140*	38 30 408.9	77 18 75.9	00329
260	38 28 600.9	77 16 436.5	00329
261	38 28 243.9	77 16 256.3	
262	38 28 322.9	77 15 1450.6	
263	38 28 182.2	77 15 1283.3	
264	38 27 1785.4	77 15 1366.1	
265	38 28 63.8	77 16 45.2	
270	38 29 1536.0	77 18 817.7	
271	38 30 509.2	77 17 1363.4	00326
272	38 30 824.8	77 17 1258.3	
273	38 30 1040.5	77 17 1081.3	
274	38 30 1608.1	77 17 780.5	

* - Not to be confused with Calibration Station 140

(PHOTO) VISUAL SIGNALS

Signal No.	Lat	Long	T-sheet No.
275	38 30 1622.8	77 18 209.4	00326
276	38 30 1795.7	77 18 971.0	
277	38 30 1327.8	77 18 1121.5	
280	38 31 1033.5	77 17 215.1	
281	38 31 1222.3	77 17 21.9	
282	38 31 1270.8	77 17 303.7	
283	38 31 1506.5	77 17 260.1	
284	38 32 44.8	77 16 1124.8	
285	38 31 1020.5	77 17 414.2	
286	38 31 1647.5	77 17 492.4	
287	38 31 1726.4	77 17 165.5	
288	38 32 567.6	77 16 1424.2	
289	38 32 712.7	77 17 940.0	
290	38 32 917.6	77 17 301.5	
291	38 32 1488.2	77 17 846.8	
292	38 32 1562.0	77 18 198.0	
293	38 32 1840.5	77 17 1288.1	
294	38 33 622.1	77 18 302.0	
295	38 33 1157.8	77 18 656.0	
133	38 32 339.4	77 16 1171.6	Center of 3 stacks
590	38 31 1648.7	77 14 491.2	00327
591	38 31 1813.8	77 14 330.5	
592	38 32 488.2	77 13 1246.2	
593	38 32 817.8	77 13 1428.8	
594	38 32 966.7	77 13 1180.0	
595	38 32 1458.4	77 13 813.9	
596	38 33 236.7	77 13 620.0	

(PHOTO) VISUAL SIGNALS

Signal No.	Lat	Long	T-sheet No.
597	38 32 1407.1	77 14 175.0	00327
598	38 32 1184.5	77 14 686.6	
599	38 32 292.9	77 14 1123.0	
600	38 32 1703.6	77 12 247.5	

GEOGRAPHIC NAMES

H-9322

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			
CHICAMUXEN CREEK	✓										1
CHOPAWAMSIK CREEK	✓										2
CHOPAWAMSIK ISLAND	✓										3
CLIFTON POINT	✓										4
COCKPIT POINT	✓										5
GOOSE BAY	✓										6
LINTON POINT	?										7
LIVERPOOL POINT	✓										8
MALLOWS BAY	✓										9
MOSS POINT	✓										10
POINT LANDING	✓										11
POSSUM NOSE	✓										12
POSSUM POINT	✓										13
POTOMAC RIVER	✓										14
QUANTICO	✓										15
QUANTICO CREEK	✓										16
SANDY POINT	✓	30									17
SHIPPING POINT	✓										18
STUMP NECK	✓										19
WIDEWATER	✓										20
											21
											22
											23
											24
											25

APPROVED

Chas. E. Harrington

CHIEF GEOGRAPHER - C3x8

10 JULY 1978

HYDROGRAPHIC SURVEY STATISTICS

H-9322

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		3	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ARC, EXCESS		3	
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1		1			1 - MISCELLANEOUS data
CAHIERS	2 with fathos. & P.O.'s					
VOLUMES	11					
BOXES			1			

T-SHEET PRINTS (List)

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			2874
POSITIONS CHECKED		290	
POSITIONS REVISED		150	
SOUNDINGS REVISED		60	
SOUNDINGS ERRONEOUSLY SPACED		20	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		4	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL		12	
VERIFICATION OF POSITIONS		60	
VERIFICATION OF SOUNDINGS	3	25	
COMPILATION OF SMOOTH SHEET		2	
APPLICATION OF TOPOGRAPHY		35	
APPLICATION OF PHOTOBATHYMETRY		--	
JUNCTIONS		3	
COMPARISON WITH PRIOR SURVEYS & CHARTS		24	
VERIFIER'S REPORT		16	
OTHER		114	
TOTALS	3	291	294
Pre-Verification by C. Meekins	Beginning Date 08/21/74	Ending Date 08/23/74	
Verification by M. Hickson, F. Saunders, D. Mason	Beginning Date 04/15/75	Ending Date 08/23/77	
Verification Check by R. Hill	Time (Hours) 100	Date 05/02/78	
Marine Center Inspection by G. Trefethen	Time (Hours) 4	Date 05/03/78	
Quality Control Inspection by → <i>H. W. Williams</i> Hydrographic Inspection Team (AMC)	Time (Hours) 14 ³⁷	Date 05/19/78 ⁷⁻¹⁰⁻⁷⁸	
Requirements Evaluation by <i>J. B. ...</i>	Time (Hours) 3	Date 9/28/78	

✓ GMM

REGISTRY NO. _____

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE _____ TIME REQUIRED _____ INITIALS _____

REMARKS:

REGISTRY NO. H-9322

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQUIRED _____ INITIALS _____

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9322

FIELD NOS. 742-10-4-72 and HSL-
10-1-72

Virginia and Maryland, Potomac River, Vicinity of Quantico

SURVEYED: May 4 through October 30, 1972

SCALE: 1:10,000

PROJECT NO.: OPR-409

SOUNDINGS: Raytheon DE-723
DE-723D

CONTROL: Raydist (Range-
Range), Del-
Norte (Range-
Range), Visual

Chiefs of Party ¹⁸⁵	N. C. Austin and G.R. Schaefer
Surveyed by	G. R. Schaefer
.....	A. L. Sikes
.....	D. W. Yeager
.....	W. L. Adams
.....	D. V. Mason
.....	F. L. Saunders
.....	J. S. Bradford
.....	W. H. Piner
Automated Plot by	CALCOMP-618 Plotter (AMC)
Verified and Inked by	R. R. Hill
	May 23, 1978

1. Introduction

a. During verification of this survey no unusual problems were encountered. (See Q.C. Report - item 6)

b. The projection parameters have been revised and noted in the Descriptive Report. The red changes in the Descriptive Report were made by the verifier.

2. Control and Shoreline

a. The source of control is adequately described under Section F of the Descriptive Report.

b. The shoreline for this survey was transferred from final reviewed photogrammetric manuscripts TP-00326 and TP-00329 of 1971-72, and TP-00327 of 1971-73. However, topographic detail and descriptive notes were considered, in some areas, to be questionable by the verifier. This problem was caused by the faintness of the manuscripts (copies) provided. Recommend original photogrammetric manuscripts or clearer copies be used by Quality Control to check the completeness of the shoreline transfer by the verifier.

3. Hydrography

- a. Depths at crossings ^{are} ~~were~~ in good agreement.
- b. The standard depth curves, along with a supplemental 24-foot curve, ^{are} ~~were~~ adequately delineated.
- c. The development of the bottom configuration and the investigation of least depths ^{are} ~~were~~ considered adequate.

4. Condition of Survey

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

- a. Bottom sediment data on log sheets M was not provided for about half of the bottom samples taken on this survey.
- b. The location of a fixed aid to navigation, private marker "PRV 12D", was not investigated.
- c. (See Q.C. Report - item 2)

5. Junctions

Adequate junctions were effected with the following surveys:

H-9324 (1972) to the north
H-9321 (1972) to the south

6. Comparison With Prior Survey

(See Q.C. Report - item 3)

H-2708 (1904) 1:10,000 { T-5762 (1937-40) 1:10,000
T-5763 (1938-40) 1:10,000

^{isc} This prior surveys covers the area of the present survey. A comparison between the present and prior surveys reveals a general shoaling of from two to four feet in the general channel area. Depths outside of the general channel appear to be two to three feet shoaler in the northern half of the survey area and from zero to one foot shoaler in the southern half. These changes are attributed to natural causes.

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

7. Comparison With Chart #559 (9th Edition, February 27, 1971)

a. Hydrography

The charted hydrography originates with the previously discussed prior survey, with the exception of depths in Quantico Creek and

Chicamuxen Creek, whose source was not readily determined at this time. Also, the source* was not determinable for about fifty charted depths located within the channel area and forming a string of depths the length of the channel along the eastern edges. The hydrography conducted in these areas is considered adequate to supersede these charted depths.

* Source is bp 58219 (1959) - Ship COWIE

Attention is directed to the following:

(PSR item 12)

(1) [^] The submerged rock symbols and the piles charted in latitude $38^{\circ} 31' 16''$, longitude $77^{\circ} 17' 15''$ originate with BP-29672, a 1935 Coast and Geodetic Survey Coast Pilot Report. The existence of these items was neither verified nor disproved by the present survey and ^{they} should be retained as charted.

(PSR item 13)

(2) [^] The sunken wreck charted in latitude $38^{\circ} 31' 39''$, longitude $77^{\circ} 17' 17''$ originates with T-5763 (1938-39). The investigation conducted in search of this wreck failed to verify or disprove the existence of this item. It is recommended that this wreck be retained. (Submerged wreck carried forward to supplement the present survey.)

(PSR item 14)

(3) [^] The piles charted in latitude $38^{\circ} 31' 53''$, longitude $77^{\circ} 16' 55''$ originate with T-5763 (1938-39). Photogrammetric manuscripts in this area now show the existence of a duckblind at this location. It is recommended that the piles charted in this area be superseded by the duckblind.

(PSR item 15)

(4) [^] The visible wreck charted in latitude $38^{\circ} 32' 06''$, longitude $77^{\circ} 17' 07''$ originates with T-5763 (1938-39). The present survey's investigation found only a pier in ruins at this location; however, the photogrammetric manuscript in this area shows a wreck awash, along with a pier in ruins. It is recommended that the visible wreck be retained as charted and the pier in ruins be added to the chart.

(5) The piles charted in latitude $38^{\circ} 29' 41''$, longitude $77^{\circ} 18' 34''$ and latitude $38^{\circ} 33' 13.5''$, longitude $77^{\circ} 14' 12''$ originate with a not readily ascertainable source. Their disposition was not determined by the present survey and there is no indication of their existence on the final reviewed photogrammetric manuscripts. Recommend these piles be revised to submerged piles on the chart.

(6) See Q.C. Report - item 5)

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

b. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with their charted positions and adequately

serve the purposes intended. However, the Red Nun "WR44A" charted in latitude 38° 32' 48", longitude 77° 14' 45", marking a sunken wreck, is no longer there. This wreck has been removed (see Section J in the Descriptive Report, PSI #16) and the need for this buoy no longer exists. This aid should not be retained for charting.

The private marker "PRV 12D" is not charted and its disposition was not determined by the present survey; however, this non-floating aid is shown on final reviewed photogrammetric manuscript TP-00329 at latitude 38° 29' 40", longitude 77° 18' 34". Recommend that chart compiler check with Aids to Navigation Section, Rockville to determine the existence of this aid to navigation.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.


9. Additional Field Work

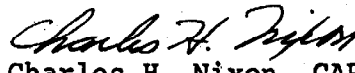
This is considered a good basic survey and no additional field work is recommended.

Inspection Report
H- 9322

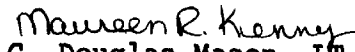
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the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


Examined and Approved:
Hydrographic Inspection Team
Date:


Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

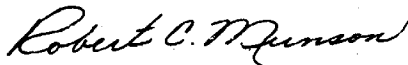

Charles H. Nixon, CAPT, NOAA
Chief, Operations Division

^{Asst}
R. D. Sanocki
Technical Assistant
Processing Division


C. Douglas Mason, LT, NOAA
Chief, Electronic Data
Processing Branch


Harry R. Smith
Team Leader
Verification Branch

Approved/Forwarded


Robert C. Munson
RADM, NOAA
Director, Atlantic Marine Center

APPROVAL SHEET
FOR
SURVEY H-9322

- 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 Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 5-24-78

Signed: Billy J. Stephenson

Title: Chief, Verification Branch

Acting



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

C352/KWW

July 10, 1978

TO: *for R.H. Carstens*
A. J. Patrick
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: K. W. Wellman *K.W. Wellman*
Quality Evaluator

SUBJECT: Quality Control Report for H-9322 (1972), Virginia-Maryland,
Potomac River, Vicinity of Quantico

A quality control inspection of H-9322 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, junctions, shoreline transfer, verifier's decisions and actions, and cartographic presentation of data.

In general, the present survey was found to conform to National Ocean Survey standards and requirements except as discussed in the Verifier's Report, the HIT Report, and as follows:

1. Geographic names should have been lettered "lightly in pencil" on the smooth sheet during verification. They were added to the smooth sheet during quality control inspection. (See section 7.3.12.3 of the Hydrographic Manual--Fourth Edition.)
2. Section 4 of the Verifier's Report is supplemented by the following:
 - c. Reference section J of the Descriptive Report for field sheet 742-10-4-72"B":

The hydrographer's discussions pertaining to Presurvey Review items 12, 13, and 14 refer to survey positions and information totally unrelated to the particular Presurvey Review items under discussion. The discussions, therefore, are irrelevant and fail to address the actual Presurvey Review items under consideration.

3. Reference section 6 of the Verifier's Report:

Two additional prior topographic surveys cover portions of the area of the present survey and should have been considered during verification.



A few charted items originating with T-5763 are not verified or disproved by the present survey. Such items should have been appropriately carried forward to the present survey during verification. (See the memorandum dated March 21, 1977, from the Office of Marine Surveys and Maps entitled "Verifier's Report Format.")

Section 6 of the Verifier's Report is supplemented by the following:

The shoreline remains essentially unchanged with scattered minor random variations generally within a range of approximately 40 meters. Two piles and a submerged wreck not disproved by the present survey have been carried forward to supplement the present survey. With these additions, the present survey is adequate . . .

4. Section J of the Descriptive Report (Presurvey Review item 8) is supplemented by the following:

The position of the wreck located in the general vicinity of Presurvey Review item 8 corresponds to the charted position of an islet and is considered to clarify the nature of the charted islet. The actual submerged wreck charted in latitude 38°28.12', longitude 77°15.99' comprising the subject of the requested investigation in Presurvey Review item 8, however, is not shown on the present survey and is not verified or disproved by the present survey. The charted submerged wreck should be retained on the chart.

5. Section 7-A of the Verifier's Report is supplemented by the following:

(6) Additional charted items at variance with the present survey are not verified or disproved by the present survey. Such items are considered to originate with miscellaneous sources and are referred to the chart compiler for identification, evaluation, and appropriate action.

6. Section I of the Verifier's Report is supplemented by the following:

It is noted, however, that the Descriptive Report is divided into three separate reports each of which pertains to one of the three field sheets. The three field sheets were combined to comprise the present hydrographic survey coverage as shown on the present smooth sheet.

cc:
C35
C351

