

9292

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)

HYDROGRAPHIC

Type of Survey

Field No. 742-10-3-73

Office No. H-9292

LOCALITY

State VIRGINIA

General Locality POTOMAC RIVER

Locality OCCOQUAN BAY

1973

CHIEF OF PARTY
Ned C. Austin

LIBRARY & ARCHIVES

DATE October 11, 1977

9292

Area 2

Charts

12285-5F(10)

12289 (10)

H-9292

HYDROGRAPHIC TITLE SHEET

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.

742-10-3-73

State Virginia

General locality Potomac River

Locality Occoquan Bay

Scale 1:10,000 Date of survey 15 June 1973 ¹⁶⁶
thru 30 July 1973 ²¹¹

Instructions dated 9 January 1973 Project No. OPR-409

Vessel Hydrographic Field Party 742

Chief of party Ned G. Austin, CDR NOAA

Surveyed by R. K. Norris & R. A. Lewis

(DR-723)

Soundings taken by echo sounder, hand lead, pole echo sounder & pole

Graphic record scaled by Party personnel

Graphic record checked by Party personnel Verification Branch (AMC)

Protracted by Party personnel Automated plot by AMC CALCOMP 618

Soundings penciled by CALCOMP 618 (AMC)

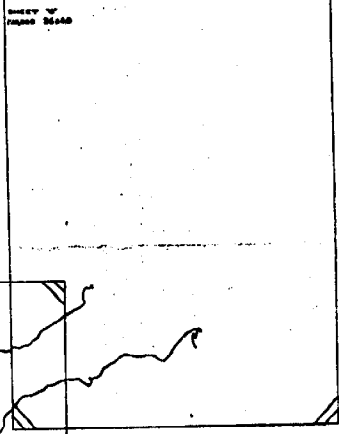
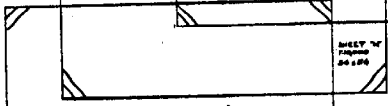
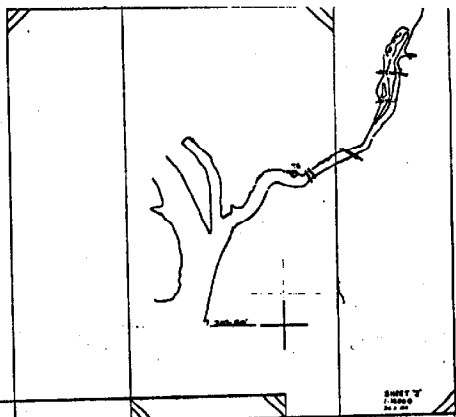
Soundings in ~~####~~ feet at MLW ~~####~~

REMARKS: Time meridian for hydrography is GMT

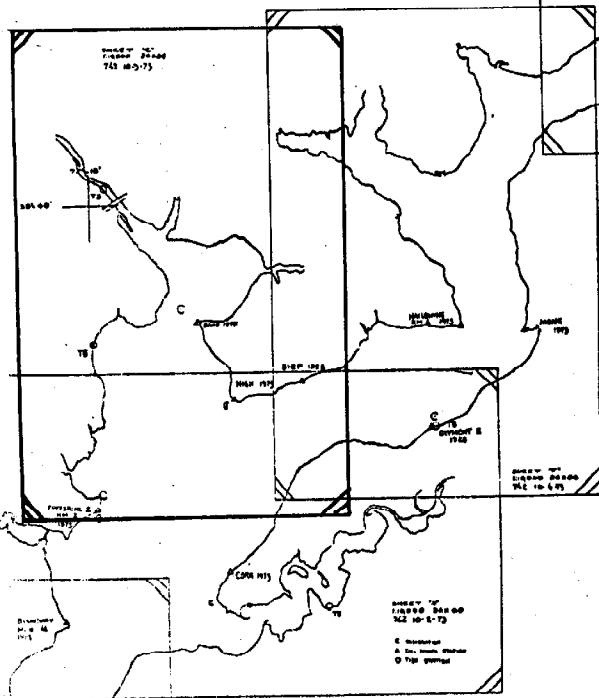
Identification by: L.G. Crann

changes in red by L.G. Crann

Misc items have been removed from the D.R. and filed in the cabinet with the field records



SHEET LAYOUT
OPR-409
CHART 260



SHEET LAYOUT
10-3-73 (H-9292)

742 10-3-73

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- F. Approval Sheet

DESCRIPTIVE REPORT
HYDROGRAPHIC SURVEY H-9292

Field No. 742 10-3-73

A. PROJECT

Sheet 742-10-3-73 of project OPR-409 was done in accordance with Project Instructions dated January 9, 1973, Change No. 1 dated January 12, 1973 and Change No. 2 dated January 30, 1973.

B. AREA SURVEYED

The southern limit of this survey is latitude 38°36'00" and extends north including Occoquan Bay, Belmont Bay and Occoquan River to the head of navigation. The eastern limit extends up the Potomac River on the Virginia side to longitude 77°10'30". This survey makes junction with contemporary surveys H-9324, (1973) scale 1:10,000, on the south and H-9349, (1973) scale 1:10,000 on the east. Hydrography began 15 June 1973 and ended 30 July 1973.

C. SOUNDING VESSELS

Launch 1260(742-3), color-red, was used on the west side of Occoquan Bay while launch 1259(742-2) color-blue, was used on the eastern half of the bay. Skiff 570(742-4), color-violet, was used for shore line in Occoquan Bay, all Belmont Bay and Occoquan River.

D. SOUNDING EQUIPMENT

Raytheon Fathometer number 1884 was used on launch 1260 (Mon-^vArk), 806 was used on launch 1259 (Penn Yan) and fathometers 1885 and 806 on skiff 570. A sounding pole was used for soundings under 3 feet, detached positions and soundings along bulkheads and piers in the Tyme n' Tyde Marina small boat harbor.

E. SMOOTH SHEET

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

F. CONTROL

All triangulation stations used for Del Norte sites and visual
signals on this survey were located by Photo Party 61. Their
method of location and a list of geodetic positions is included
in the control report in the appendix of this report.

G. SHORELINE

Shoreline details for this survey were obtained from shoreline ✓
manuscripts TP-00324 and TP-00320. also TP-00323

H. CROSSLINES

Crosslines were run at approximately 10% of the regular ✓
lines. Crossline soundings are in good agreement except for
an occasional 1 foot discrepancy due to the use of predicted
tides for boat sheet soundings.

I. JUNCTIONS

Junctions were made with survey H-9324⁽¹⁷⁷⁾ on the south and survey ✓
H-9349⁽¹⁸³⁾ on the east. Soundings were in good agreement and depth
curves can be adequately drawn at these junctions.

J. COMPARISON WITH PRIOR SURVEYS

A comparison was made with prior survey reg. no. 2705, scale ✓
1:10,000, date 1904, and survey reg. no. 2714, scale 1:10,000,
date 1904.

Soundings in Occoquan Bay are approximately 1 to 2 feet shallower
on the present survey as compared to the prior survey.
Consequently, the 6 foot curve in this vicinity has shifted
off shore or southeastward approximately 1 mile. The area of
the survey east of High Point shows good agreement with
depths agreeing and depth curve configurations remaining
unchanged.

The present survey shows that the channel leading into ✓

Occoquan River appears to be 2 to 3 feet deeper than the old survey, however, the position of the channel appears unchanged. Soundings in Belmont Bay are in good agreement with those of the old survey except for soundings in the vicinity of Conrad Island which was not in existence at the time of the old survey.

The small island shown on the old survey at the mouth of Massey Creek is no longer in existence, however, the shoals awash in this vicinity shown on the new survey are probably the remains of the island. Further comparison up the Occoquan River is impossible due to the sparse soundings taken on the old survey, however, the channel in the vicinity of highway 1 bridge appears to be 3 to 5 feet deeper on the new survey.

None of the PSI items are shown on the prior survey, therefore they will be discussed under comparison with the chart (section K).

K. COMPARISON WITH THE CHART

A comparison with Chart 560, 32nd. ed. Feb. 26, 1972, scale 1:40,000, was made. There is good agreement between this survey and the chart with the exception of these items noted under prior surveys. *During Verification Chart 560, 33rd Ed. Feb 24/73*

PSI items were not shown on the prior survey, therefore they will be discussed under this heading. There are 10 PSI items included on this sheet. A discussion of these items follows:

PSI #20-Vol. 6, P. 38-41- Structure charted at lat. 38°-36' 37", longitude, 77° 14' 44" was verified as a line of rocks approximately 100 ft. long, 15 ft. wide and bares ~~at~~ ^{ok} ~~1~~ ft. at mean low water.

PSI #21, Vol. 6, P.43-44: The foul area charted at Latitude 38° 37' 07", longitude 77° 14' 34" was carefully investigated and found to be clear of obstructions; however, ~~a single~~ ^{ok} ~~two~~ piling ~~was~~ found near this area. ~~at latitude 38° 37' 09", longitude 77° 14' 42", bares~~ 1 foot at mean low water. (Vol. 9 P.55). ~~3~~ The piling bare

PSI #22, Vol. 6, P.42-43: The islet at latitude $38^{\circ} 37' 14''$ longitude $77^{\circ} 13' 37''$ was verified and found to bare 25 feet at mean highwater. It consists of a rock pile covered with vegetation and one large tree.

PSI #23, Vol. 7, P.4: The rock awash charted at latitude $38^{\circ} 37' 49''$, Longitude $77^{\circ} 12' 51''$ was found to be at latitude $38^{\circ} 37' 81''$, longitude $77^{\circ} 12' 88''$ and covered by ~~1 foot of water~~ ^{awash} at mean low water. The rock is approximately 10 feet in diameter.

The rock charted at latitude $38^{\circ} 38' 06''$, longitude $77^{\circ} 12' 57''$ was verified at latitude $38^{\circ} 38' 09''$, longitude $77^{\circ} 12' 95''$. It was found to be a pinnacle rock with a least depth of ~~21 feet~~ ^{awash} at mean low water. Pos. 4320

PSI #24, Vol. 9, P.44-47: ^{charted in the vicinity of Lat $38^{\circ} 30'$ Long $77^{\circ} 13' 15''$} The submerged piles and snags were searched for and verified using a modified wire drag (day 192, positions 4968-4983). The area of submerged piles and snags was found to be much larger than that shown on the chart. It is recommended that the foul area shown on the boat sheet be charted. A pile located at latitude $38^{\circ} 38' 48''$, longitude $77^{\circ} 12' 52''$ (Vol. 9, P.46, position 4981), bare 1.4 feet at mean low water, was located within this area, however, this pile should be charted separately or conspicuously due to its location near the entrance to Belmont Bay. This pile was a 12 inch by 12 inch timber and is quite permanent in its position.

PSI #25: The fathograms obtained during hydrography in Belmont Bay were carefully scanned for rocks, however, none were found except for one covered by ~~0.4~~ ^{0.4} foot of water at mean low water. The rock was located at latitude $38^{\circ} 39' 18''$, longitude $77^{\circ} 13' 30''$ (Vol. 7, P.29). On two occasions during extreme low water the rocks were searched for visually but none were found. It is recommended that the notation "numerous uncharted rocks" be deleted from the chart.

See Verifier's Report -
Section 2, 2

PSI #26: Visible wreck; ^{in the vicinity of Lat $38^{\circ} 39' 25''$ Long $77^{\circ} 12' 10''$} this feature was searched for by running a cart wheel investigation with the fathometer over an area 400 meters in diameter in the vicinity of the charted wreck (Vol. 8, P.62). Nothing was found at the charted position, however, a stranded wreck (30 foot wooden barge, 15 feet wide, bare 3 feet at mean high water) was located near the shore, ~~250~~ ¹⁹⁰ meters north-northeast,

(Vol. 8, P.62, position 4797). It is believed this barge is the one previously charted ^{Charted from C. 1152 (1750)}

PSI #27: Sunken wreck; ^{in the vicinity of lat 38°40' Long 77°14'20"} submerged piles; These features are, within the area of construction of the new U. S. 1 bridge (old bridge collapsed June 1972). The wreckage of the old bridge is now piled on the shore at the position of the submerged wreck. The wreck symbol should be deleted on the chart. The broken and submerged piles are still in existence, however, they are being removed in the process of construction of the new bridge. (See Q.C. Report-item 2a)

PSI #28: Sunken wreck; ^{in the vicinity of lat 38°40'45" Long 77°15'10"} This wreck was thoroughly searched for using a fathometer and visually with no indication of the wreck being obtained. It is recommended this feature be deleted from the chart. (See Q.C. Report-item 2b)

PSI #35: Wreck; ^{in the vicinity of lat 38°38.57' Long 77°13.28'} No portion of this wreck remained above the water. A wire drag investigation revealed wreckage in this vicinity which could be the remains of the mentioned wreck. The wreck was found to be covered 3 feet at mean low water (Vol. 9 P.47, position 4988).

L. ADEQUACY OF THE SURVEY

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

M. AIDS TO NAVIGATION

There are 9 fixed aids to navigation maintained by the U. S. C. G. within the limits of this survey and 1 fixed aid maintained by the state of Virginia. A temporary obstruction buoy was established to mark an obstruction located under the U. S. 1 highway bridge (Vol. 9, P.36, position 4949). A comparison with these aids and the Light List indicates no changes or corrections are necessary. These aids adequately serve the purposes for which they were established.

N. STATISTICS

LAUNCH	TOTAL NUMBER OF POSITIONS	MILES OF SOUNDING LINES
1260	409	54.3
1259	510	69.5
570	1070	121.3

This survey covers 10.5 square miles and 33 bottom samples were taken in this survey area.
1789 of these positions are controlled by Del-Norte

O. MISCELLANEOUS

A modified wire drag was used to search for submerged features. This drag consisted of a $\frac{1}{4}$ inch steel cable, 100 feet long, drawn between two skiffs. The cable was weighted at each end by 2 concrete blocks and was dragged along the bottom. Upon snagging an object the skiffs would begin to come together; at this point they would be pulled back manually over the object and a sounding pole or leadline sounding would be obtained.

P. RECOMMENDATIONS

None

Q. REFERENCES

1. Field Edit Report for TP-00324 and TP-00320 to be submitted by Chief, Photo Party 61.
2. Control Report for sheet 742-10-3-73, H-9292, prepared by Photo Party 61 and included in this report.
3. Hydrographic Field Party 742 Field Season Report for OPR-409, 1973.
4. Report of Corrections to Echo Soundings for OPR-409, 1973.

Respectfully submitted,

Robert K. Morris Staff NOAA

APPENDIX A

Tide Note

Tide reducers for all boat sheet soundings are from predicted tides for High Point, Occoquan Bay, Virginia. A portable bubbler gage was installed at the Tyme n' Tyde Marina in Occoquan Bay for this survey. Gage name (Marumsc). The unverified Hourly Height Tide Tape Printout for the inclusive days of hydrography (15 June 1973 thru 30 July 1973) is included in this report. A temporary tide staff was established in the Occoquan Marina, Occoquan River, Virginia to furnish tide control for the portion of the survey north of the U. S. 1 highway bridge. The staff was read only during the time hydrography was being run in this area (7/9/73 & 7/10/73). A Hourly Height Tide Tape Printout of these staff readings is included in this report. (verified hourly heights and datum information will be supplied by Rockville).

9/26/75

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): Marumco, Ocoquan River staff

Period: June 15 - July 19, 1973

HYDROGRAPHIC SHEET: H-9292 ✓

OPR: 409

Locality: Potomac River

Plane of reference (mean ~~lower~~ low water): 2.5 ft. - Marumco
2.3 ft. - Ocoquan River staff

Height of Mean High Water above Plane of Reference: 1.7 ft.

Remarks: Recommended zoning:

- (1) In the Potomac River zone direct on Marumco.
- (2) In the Ocoquan River zone direct on the staff (*not used*)

for James R. Hubbard
Chief, Tides Branch

APPENDIX C

CONTROL REPORT

Boat Sheet HFP 742 10-3-73

PH 7012, OPR 409

Potomac River, Maryland-Virginia

Prepared by

National Ocean Survey

Photo Party 61

July 1973

Control Report for Boat Sheet HFP 742 10-2-73

PH 7012, OPR 409

June 1973

1. Authority

Hydro support was performed in accordance with Project Instructions: OPR-409-742-73, Potomac River, Maryland-Virginia, dated Jan. 9, 1973; and Potomac and Anacostia Rivers Change No. 2, dated Feb. 15, 1973.

2. Purpose

To provide hydro support for electronic Del Norte control and visual control on Boat Sheet HFP 742-10-3-73. Boat sheet preparation, except for photo signal location, was not performed by this party.

3. Locality of Control

Boat sheet limits include the area of the Potomac River between Neabsco Creek (Lat. $38^{\circ} - 36'$) on the southwestern limit and extend north to the northern limit of navigation for the Occoquan River (Approx. Lat. $38^{\circ} - 41'$), terminating north eastward slightly west of Sycamore Point. The sheet limits include Occoquan and Belmont Bays and the Occoquan River.

4. Control

Del Norte shore stations consisted of three third order traverse stations as listed on the attached signal sheet (stations High 1973, Corn 1973, and Freestone 2, R.M. 2, 1973) and one resection station, Sand 2, 1973. This last station was located originally by four-point theodolite fix

(third order methods) on Sandy Pt. and called Sand, 1973. The station mark, however, was destroyed and a new station named Sand 2, 1973 was established on Sandy Point approximately two feet from the original station and by the same methods. All hydrography was controlled from Sand 2, 1973. Positions of both stations are included on the signal list.

Three calibration stations were accessible to the survey launches for direct calibration. Their field positions were determined by intersection from third order stations and are included on the attached signal list. There were 29 photo hydro signals used for visual control, mainly in Belmont Bay where combined electronic (Del Norte) and visual hydrography was performed and in Occoquan River where strictly visual control was used. The positions of these signals are listed on the signal sheet.

One recovered triangulation, Woodbridge Relay Mast, 1957, was used for visual control. See attached list.

Two hydro signals were located by sextant fix. One of these, signal 376, is "Daybeacon 13" and was verified by theodolite cut. The other is a sign structure located at the entrance to the Occoquan River.

5. Recommendations

None.

6. Disposition of Data

All film ozalids containing all photo-hydro signals will be transmitted to Chief, Coastal Mapping Division, Rockville, Attn. C3423 (Mr. Battley).

All field records for all field positions will be forwarded to Photogrammetry Division, AMC, Attn. CAM 211, Mr. Beugnet.

7. Attached

A complete signal list for all hydrographic control concerning the boat-sheet is attached.

Respectfully Submitted,

James W. Davis

James W. Davis
LTJG NOAA
Chief, Photo Party 61.

SIGNAL LIST

Boat Sheet HFP 742 10-3-73

Photo-Hydro Signals

<u>Signal</u>	o	<u>Lat.</u> meters	o	<u>Long.</u> meters
360	38	38 456.6	77	12 1413.6
362	38	38 1113.3	77	12 23.5
363	38	38 1407.3	77	11 1318.3
364	38	39 803.1	77	11 1375.3
365	38	39 146.2	77	11 926.7
366	38	39 811.2	77	12 14.5
367	38	39 787.8	77	12 618.5
368	38	39 745.5	77	12 1335.2
369	38	39 883.4	77	13 382.1
370	38	39 831.8	77	13 595.8
371	38	39 1508.8	77	12 600.2
373	38	39 1835.2	77	14 431.8
374	38	39 1419.2	77	14 376.2
375	38	40 52.1	77	14 630.7
378	38	39 809.8	77	13 1449.7
390	38	40 207.5	77	14 826.8
391	38	40 515.5	77	14 837.9
392	38	40 603.7	77	14 1093.8
393	38	40 626.2	77	14 1241.8
394	38	40 839.2	77	15 112.2
395	38	40 940.2	77	15 175.5
396	38	40 1300.2	77	15 139.5
397	38	40 1523.3	77	15 302.9
398	38	40 1464.2	77	15 435.8
399	38	40 1723.5	77	15 395.1
400	38	40 1753.8	77	15 685.3
401	38	41 92.4	77	15 873.5
402	38	41 232.1	77	15 1081.0
403	38	41 262.4	77	15 1239.3

Intersection Stations

	o	i	"	o	i	"	
377	38	39	45.329 ✓	77	14	6.701 ✓	Light 12
379	38	38	56.895 ✓	77	13	25.830 ✓	Light 9
380	38	38	57.593 ✓	77	13	23.485 ✓	Daybeacon 8
381	38	38	25.764 ✓	77	13	13.626 ✓	Daybeacon 7
382	38	38	24.109 ✓	77	13	9.060 ✓	Light 6
383	38	37	45.910 ✓	77	12	53.168 ✓	Daybeacon 4

* - Occoquan Creek Channel Lt/ 10

SIGNAL LIST (Continued)

Intersection Stations (Continued)

	o	i	"	o	i	"	
√152	38	37	24.047	77	12	43.979	Light 2
√150	38	37	0.912	77	12	20.499	PRV 16 B ← PRI # AA
√151	38	35	36.030	77	14	47.513	PRV 16 A

Resection Stations

√38	38	14.625	77	12	58.001	Sand 2
38	38	14.644	77	12	57.978	Sand 1

Traverse Stations

√145	38	34	24.733	77	12	24.011	CORN, 1973
√146	38	35	25.356	77	14	51.406	Freestone 2, R.M. 2, 1973
√149	38	37	05.775	77	12	16.678	HIGH, 1973

Recovered Triangulation Stations

√154	38	38	45.188	77	14	13.976	Woodbridge Relay Station, 1957
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Hydro Signals

√376	38	39	51.054	77	14	16.417	Daybeacon 13
√386	38	39	30.031	77	13	42.623	

SIGNAL LIST PRINTOUT 742-10-3-73
(METERS)

Sig. No.	LAT		LONG	
360	38 38	0457	77 12	1414
362	38 38	1113	77 12	0024
364	38 39	0803	77 11	1375
365	38 39	0146	77 11	0927
366	38 39	0811	77 12	0014
369	38 39	0883	77 13	0382
371	38 39	1509	77 12	0600
373	38 39	1835	77 14	0432
375	38 40	0052	77 14	0631
378	38 39	0810	77 13	1450
390	38 40	0208	77 14	0827
391	38 40	0516	77 14	0839
392	38 40	0604	77 14	1094
393	38 40	0626	77 14	1242
394	38 40	0839	77 15	0112
395	38 40	0940	77 15	0176
396	38 40	1300	77 15	0140
397	38 40	1523	77 15	0303
398	38 40	1464	77 15	0436
399	38 40	1724	77 15	0395
400	38 40	1754	77 15	0685
401	38 41	0092	77 15	0874
402	38 41	0232	77 15	1081
403	38 41	0262	77 15	1239

SIGNAL LIST PRINTOUT 742-10-3-73
(SECONDS)

Sig. No.	LAT			LONG		
154	38	38	4519	77	14	1398
376	38	39	5105	77	14	1642
386	38	39	3003	77	13	4262
377	38	39	4533	77	14	0670
379	38	38	5690	77	13	2583
380	38	38	5759	77	13	2348
381	38	38	2576	77	13	1363
382	38	38	2411	77	13	0906
149	38	37	0578	77	12	1668

APPENDIX F
APPROVAL SHEET
SURVEY 742 10-3-73

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



Robert K. Norris

LTJG, NOAA, OIC HFP-742

APPROVAL SHEET
FOR
SURVEY H- 9292 (1973)

- 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:

September 15, 1977

Signed:

William L. Jones

Title:

Chief, Verification Branch

GEOGRAPHIC NAMES

H-9292

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	RANDOM USUALLY ATLAS	U.S. LIGHT LIST			
BELMONT BAY ✓										1	
CONRAD ISLAND ✓										2	
DEEPHOLE POINT ✓										3	
FARM CREEK ✓										4	
HIGH POINT ✓										5	
KANES CREEK ✓										6	
MARUMSCO CREEK ✓										7	
MASON NECK ✓										8	
MASSEY CREEK ✓										9	
OCCOQUAN BAY ✓										10	
OCCOQUAN RIVER ✓										11	
POTOMAC RIVER ✓										12	
SANDY POINT ✓										13	
TAYLORS POINT ✓										14	
WAGNER POINT ✓										15	
OCCOQUAN ✓										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	

APPROVED

Chas. E. Harrington

STAFF GEOGRAPHER -C51x2

21 Nov. 1977

HYDROGRAPHIC SURVEY STATISTICS

H-9292

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	1 & 3- ³ prelims
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1		1 -fil			
VOLUMES	10					
BOXES			1-Final P/O			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List) Report on Corrections to Echo Soundings

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			1989
POSITIONS CHECKED		300	
POSITIONS REVISED		100	
SOUNDINGS REVISED		30	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	

TIME - HOURS

CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	6	0	
VERIFICATION OF CONTROL	4	1	
VERIFICATION OF POSITIONS		78	
VERIFICATION OF SOUNDINGS		119	
COMPILATION OF SMOOTH SHEET		40	
APPLICATION OF TOPOGRAPHY		24	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		4	
COMPARISON WITH PRIOR SURVEYS & CHARTS		12	
VERIFIER'S REPORT		7	
OTHER		0	
TOTALS	10	285	

Pre-Verification by N. H. Tyndall, R. G. Roberson	Beginning Date 01/31/74	Ending Date 02/15/77
Verification by L. G. Cram	Beginning Date 02/14/77	Ending Date 08/20/77
Verification Check by E. J. Stephenson, W. L. Jonns	Time (Hours) 20	Date 09/09/77
Marine Center Inspection by Hydrographic Inspection Team, AMC	Time (Hours) 8	Date 09/23/77
Quality Control Inspection by A. W. Wellman	Time (Hours) 44	Date 11-29-77
Requirements Evaluation by A. W. Wellman	Time (Hours) 4	Date 3/22/78

Carlan 11 hr 1/27/78

Reg. No. H-9292

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 REQ'D _____ INITIALS _____

REMARKS:

Reg. No. H-9292

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 REQ'D. _____ INITIALS _____

REMARKS:

Items for Future Presurvey Reviews

1. The submerged wreck charted in lat. $38^{\circ}40'46''$, long. $77^{\circ}15'10''$ (P.S.R. Item No. 28) should be investigated and verified or disproved by formal or improvised wire-drag investigation during future work in the area.

2. The numerous uncharted rocks in Belmont Bay (P.S.R. Item No. 25) are not adequately disproved by the present survey. The discussion of P.S.R. Item No. 28 (O.P.R. 409, sheet 3 of 3, dated 3-13-72) states that the rocks are reported as "...covered at LW but visible on strong N.W. wind." During future work in the area Belmont Bay should be investigated under similar conditions to verify or discredit the source report of such rocks.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
383	0772	2	4	50 years
384	0772	1	1	50 years

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9292

FIELD NO. 742-10-3-73

Virginia; Potomac River, Occoquan and Belmont Bays, Occoquan River

SURVEYED: June 15 through July 30, 1973

SCALE: 1:10,000

PROJECT NO.: OPR-409

SOUNDINGS: DE-723 and Pole

CONTROL: Del-Norte and Visual

Chief of Party CDR N. C. Austin
Surveyed by R. K. Norris
..... R. A. Lewis
Automated Plot by Calcomp Plotter #618 (AMC)
Verified and Inked by L. G. Cram
April 1, 1977

1. Introduction

a. No unusual problems, nor any nonstandard procedures, were encountered during verification.

b. A list of detached positions and a list of duplicate positions were added to the survey at the time of verification. Also, the projection parameter was changed during verification.

2. Control and Shoreline

a. The control for this survey is adequately described in Section F and Appendix C of the Descriptive Report.

b. The shoreline was taken from Class I, final reviewed manuscripts TP-00320, TP-00323, and TP-00324 of 1971/1972-73.

3. Hydrography

a. The agreement of soundings at crossings is adequate.

b. The depth curves are adequate to delineate the basic bottom configuration, with one exception. There is not enough hydrographic or topographic information to draw the low water line with any continuity.

c. The field unit adequately developed the bottom configuration and least depths, with the exception noted above in item b. A modified wire drag was used for some objects. There

is no position-by-position description of the areas swept by the drag; all hangs or snags have positions, least depths, and descriptions.

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, except as follows:

a. No geographic positions for Presurvey Review Items were given in the Descriptive Report.

b. No disposition of Presurvey Review Item "A" was noted in the Descriptive Report.

c. The obstruction located by the field, Volume 6, page 45, was not adequately described.

d. It was necessary during verification to make an enlarged scale plot of a development at latitude $38^{\circ} 36' 37''$, longitude $77^{\circ} 14' 42''$. This enlarged scale plot will accompany this survey. (See Q.C. Report-item 5)

5. Junctions

Adequate junctions were effected with the following surveys:

H-9349 (1973) to the east
H-9324 (1973) to the south

These junctions are complete to the extent that no further consideration is necessary.

6. Comparison With Prior Surveys

H-2705 (1904) 1:10,000
H-2714 (1904) 1:10,000
T-5760 (1937-39) 1:10,000

Minor differences occur between these ~~two~~ prior surveys and the present survey. The shoreline has changed by as much as 50 meters in some areas of the present survey, with other lesser changes throughout the survey area. There is little change in the bottom configuration. It was noted, however, that numerous trees, snags, and piles appear on the present survey that were not on the prior surveys. The changes can be attributed to both natural and cultural changes.

(See Q.C. Report-item 7)

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

7. Comparison With Chart 560 (33rd Edition, February 24, 1973)

a. Hydrography

Most of the charted data came from the prior surveys and have been disposed of in that section of this report.

There were ten soundings, color-coded and identified on the chart accompanying this survey, for which no source could be readily determined at this time. The line spacing and hydrography in this area seems adequate to supersede these soundings. There are numerous piles and snags charted in the vicinity of latitude 38° 38' 40", longitude 77° 13' 10" for which no source was readily ascertainable at the time of this report. The field unit did extensive work in locating these items and they are considered superseded by that information. For further information, the Descriptive Report should be consulted, under Section K.

The Presurvey Review Item #25, "numerous uncharted rocks", on the chart was discussed under Section K of the Descriptive Report and recommended that this item be deleted from chart. Due to the small change in the bottom configuration it is felt that these rocks could still exist and that a study should be made of the source of this notation before deleting from chart. (See Q.C. Report-item 1)

With the exception noted above, the present survey is considered adequate to supersede the charted information.

(See Q.C. Report-item 8)

8. Compliance With Instructions

This survey adequately complies with the Project Instructions dated January 9, 1973.

9. Additional Field Work

This is a good basic survey. No additional field work is recommended.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Atlantic Marine Center
439 West York Street
Norfolk, Virginia 23510

File No: D6-5
Ser. No: 77-133

September 28, 1977

CAM3/RAT

TO: RADM Robert C. Munson *RCM*
Director, Atlantic Marine Center

FROM: CDR Robert A. Trauschke
Chief, Processing Division

SUBJECT: Hydrographic Inspection Team Report, H-9292 (1973)

This is a basic hydrographic survey of part of the Potomac River conducted by Hydrographic Field Party 742.

FIELD WORK

The Hydrographic Inspection Team had no comments on the field work beyond what was discussed in the Verifier's Report.

VERIFICATION


The Hydrographic Inspection Team suggested a number of changes in the description of some features, in order to better describe the feature.

There were eight HIT hours devoted to this sheet.



H-9292 (1973)

Examined and Approved:
Hydrographic Inspection Team
Date: September 21, 1977


CDR Robert A. Trauschke, NOAA
Chief, Processing Division

*
CDR Charles H. Nixon, NOAA
Chief, Operations Division

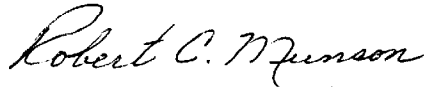

C. Douglas Mason, LT, NOAA
Chief, EDP Branch


R. D. Sanocki
Technical Assistant
Processing Division


Harry R. Smith
Verification Branch

* ABSENT

Approved/Forwarded



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



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

C352

November 29, 1977

TO: *A. J. Patrick*
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-9292 (1973) Virginia,
Potomac River, Occoquan Bay

A quality control inspection of H-9292 has been accomplished to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, shoreline transfer, decisions and actions by the verifier, and cartographic presentation of data.

Junctional surveys H-9349 (1973) on the east and H-9324 (1973) on the south are not available for inspection of the junctions. The adequacy of the junctions will be considered during the course of their respective quality control inspections. (See item 6 below.)

In general, the present survey was found to conform to National Ocean Survey standards and requirements except as follows:

1. Reference section K (Presurvey Review Item No. 25) of the Descriptive Report:

The referenced section of the Descriptive Report should have been annotated during verification to direct attention to important additional comments included in section 7a of the Verifier's Report. Such annotations conform to customary



review-verification procedures and should be included where appropriate. The referenced section of the Descriptive Report was appropriately annotated during quality control evaluation.

Section 7a (Presurvey Review Item No. 25) of the Verifier's Report is supplemented by the following:

The rocks referred to in the charted note are not verified or disproved by the present survey. However, it is probable that the extent of the uncharted rocks is more limited than indicated on the chart. The note should be revised to emphasize the foul area outlined on the survey.

*cht Foul
Area
Deleted
cht. note*

2. Section K of the Descriptive Report is supplemented by the following:

a. Reference Presurvey Review Item No. 27:

The submerged piling in the area should be retained as presently charted pending receipt of reliable information pertaining to their removal.

ok

b. Reference Presurvey Review Item No. 28:

The charted wreck is not considered disproved by the present survey and should be retained as presently charted.

ok

3. Several elevations (e.g., obstruction in the vicinity of lat. 38°39.27', long. 77°13.10'; pile in the vicinity of lat. 38°39.13', long. 77°12.99'), originating with TP-00324 and present survey information, were improperly shown on the verified smooth sheet, i.e., inappropriately referenced to M.H.W. rather than M.L.W., and/or shown with elevations other than those justified by the source information. Due care should be exercised to properly represent such elevations. The same principles governing the methods of showing elevations for rocks apply equally for other objects, i.e., piles, stakes, obstructions. (See provisional manual-section 7.3.7.3.) Appropriate revisions were effected during quality control evaluation.

4. A crossline discrepancy of 2 to 3 feet and an unnatural distortion of the 6-foot depth curve in the vicinity of lat. $38^{\circ}39.12'$, long. $77^{\circ}13.63'$, adversely limiting the continuity of the channel in the area necessitated a detailed reexamination of the field data. It was thus determined that a revised right angle (position 5096) resulted in the noted anomalous depth curve and crossing. Appropriate revisions were effected during quality control evaluation.

5. Reference section 4d of the Verifier's Report:

The referenced enlarged scale plot appears only on the smooth position overlay. No such sounding development appears on the smooth sheet as implied by the referenced section of the Verifier's Report.

6. The 3-foot depth curve in the vicinity of lat. $38^{\circ}36.17'$, long. $77^{\circ}14.85'$ was in conflict with plotted soundings. The erroneous depth curve segment was revised in pencil pending receipt of the adjoining survey H-9324 (1973). ✓

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

Conrad Island in the vicinity of lat. $38^{\circ}38.85'$, long. $77^{\circ}13.25'$ was created by the dumping of spoil since 1904. Some erosion has occurred in the limits of this low lying islet. In addition, the narrow peninsula extending approximately 700 meters to the southeast from the former shoreline in the vicinity of lat. $38^{\circ}39.90'$, long. $77^{\circ}14.42'$ and the prior island in the vicinity of lat. $38^{\circ}39.45'$, long. $77^{\circ}13.65'$ have developed or eroded respectively since 1904. The present survey shows depths of 0 to 1 foot in the vicinity of the former island. ✓

Three former piers not determined on the present survey have been carried forward as pier ruins from T-5760 to supplement the present survey.

8. Reference section 7 of the Verifier's Report (Comparison with Chart...):

Subsections b (Controlling Depths) and c (Aids to Navigation) of the standard format were not included in the referenced

section of the Verifier's Report. (See the memorandum dated 3-21-77 from the Office of Marine Surveys and Maps entitled "Verifier's Report Format" and section 6.6(12) of the provisional manual.)

Section 7 of the Verifier's Report is supplemented by the following:

b. Controlling Depths

Present survey depths are in general agreement with the charted controlling depths of the Occoquan River Approach Channel (between High Point and Taylors Point) with the following exceptions:

(1) Two uncharted submerged wrecks are shown on the present survey in proximity to the western limits of the channel in the following vicinities:

<u>latitude</u>	<u>longitude</u>	<u>least depth</u>
38°38'39"	77°13'18"	4 feet ✓
38°38'33"	77°13'16"	3 feet ✓

(2) The present survey reveals 3-foot depths intruding into the general area of the western channel limits in the vicinities of lat. 38°38.85', long. 77°13.38' and lat. 38°38.78', long. 77°13.36'. The charted controlling depths in the area are 6 feet.

(3) The present survey reveals 2- to 4-foot depths--comprising the underwater extension of Sandy Point--intruding into the area of the channel in the vicinity of lat. 38°38.25', long. 77°13.11'. The charted controlling depths in the area are 5 feet. The chart should reflect this danger. 1 1/2 FT 1975

c. Aids to Navigation

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

