9488

Diag. Cht. No. 77-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC

Field No. AHP-5-7-74

Office No. H-9488

LOCALITY

State District of Columbia

General Locality Potomac River

Locality Roosevelt Island to Chain Bridge

1974 & 76

CHIEF OF PARTY
F.T. Smith, J.O. Rolland, W.R. Daniels

LIBRARY & ARCHIVES

DATE July 20, 1978

☆ U.S. GOV. PRINTING OFFICE: 1976—689-441

9488

12285
12259

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-9488

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

FIELD NO. AHP-5-7-74

State District of Columbia

General locality Potomac River

Locality Roosevelt Island to Chain Bridge

Scale 1:5,000 **Date of survey** 11 Nov - 27 Nov 1974, 12 Nov - 15 Nov 1976.

Instructions dated Aug 2, 1974 - Sept 5, 1974 **Project No.** OPR-409

Vessel Launch 1270 - Skiff 062 - Launch 1282

Chief of party Lt. Cdr. F. T. Smith; Lt. Cdr. W. R. Daniels; Lt. Cdr. J. O. Rolland

Surveyed by Lt. (jg) R. Wells; Ens. C. Berg; Lt. Ken Perrin

Soundings taken by echo sounder, hand lead, pole all

Graphic record scaled by MR, EF, JJ, RH, RS, FL

Graphic record checked by RW, CB, LCG, RH, KWP, FL

Protracted by Launch Personnel **Automated plot by** AMC CALCOMP 618

Verification by AMC, Verification Branch

Soundings in ~~[illegible]~~ **feet at MLW** ~~[illegible]~~

REMARKS: Notes in red are made by Verifier

Applied to stds 12/18/78 [illegible]

1

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GPO: 1974-0-768-081/1207

2

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9488 (AHP-5-7-74)

SCALE: 1:5,000 1974 and 1976
VESSEL: Hydrographic Surveys Branch Chief: Fidel T. Smith
John O. Rolland
William R. Daniels

A. PROJECT

This survey was completed under Project Instructions OPR-409-AHP-74 with project instructions dated 2 August 1974. Change No. 1 to project instructions was issued on 5 September 1974.

B. AREA SURVEYED

This survey covers the area of the Potomac River from Roosevelt Bridge to Chain Bridge. The survey starts at latitude 38°53'30" and continues up river to latitude 38°55'45". The survey junctions on the south with AHP-5-6-74 (H-9478). Survey started November 11, 1974 - November 27, 1974, additional work November 12, 1976 - November 15, 1976.

C. SOUNDING VESSEL

The soundings on this survey were taken by Launch 1270, Skiff 062, and Launch 1282. The survey conducted by Launch 1270 and Skiff 062 was done in 1974. Launch 1270 is a 22 ft. Pen Yan with a tunnel drive. Skiff 062 is a 21 ft. Starcraft by Chrysler and is powered by an 85 hp Evinrude. All position numbers were blue regardless of launch number or skiff number. Additional survey was accomplished by Launch 1282 in November 1976. Launch 1282 is a 21 ft. Maritime with a 140 hp Evinrude.

D. SOUNDING EQUIPMENT

Both the launches and the skiff used Raytheon DE 723B fathometers. Launch 1270 used fathometer s.n. 927, Launch 1282 used s.n. 1279, and the skiff used fathometer s.n. 1278. The fathometers were kept in good adjustment and A-F checks were made. Velocity corrections were determined by bar checks. An abstract of bar checks with velocity curves and velocity tables is included in the appendix of this report.

All soundings were reduced to the nearest two-tenths of a foot. For depths less than 4.0 feet, a pole was used.

Settlement and squat corrections were determined for Launch 1270 and are listed in the appendix. Skiff 062 has no settlement and squat corrections. Settlement and squat corrections were determined for Launch 1282 and are also listed in the appendix.

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E. Smooth Sheet

The smooth sheet will be plotted at the Atlantic Marine Center by the Processing Division, Norfolk, Virginia.

F. Control

Horizontal control was from existing control and from control established by the launch party and Photo Party 61. The survey was done by Range-Azimuth. SBS (See Boat Sheet) methods were used when the line of sight precluded the use of the theodolite. All fixes bearing SBS have been scaled and position data has been logged.

G. Hydrographic Position Control

Positioning of the sounding vessel was by Range-Azimuth.

a. (Range-Azimuth) was used by the following method, (1) A T-2 and A Del Norte Shore Station was set up on a signal.
b. The launch or skiff steered on Del Norte arcs and T-2 observations (from shore) were taken on the fix.
c. Fix marks were given by use of flag signals from the vessel to the shore party. (1974 work)
d. All T-2 observations were transferred to the sounding volumes and the entries checked.
e. In November 1976, Launch 1282 returned on project OPR-409, H-9488, to do additional work and complete the survey. Their control was by Range-Azimuth. The information was recorded in the sounding volumes as the work progressed. They had radio communications between launch and T-2 observer.

H. Shoreline

Shoreline and topographic details were transferred to the boatsheet from enlargements of TP-00217 and TP-00318, 1:10,000 manuscripts expanded to 1:5,000. Field edit of these manuscripts was performed by Photo Party 61. A comparison was made between the field edit and the boatsheet with no discrepancies to be resolved.

The MLW line could not be defined by soundings due to the steep banks and rocky shoreline.

The MHL was established by the photogrammetrist.
The hydrographer revised the shoreline in one area and did so with red ink (see Boatsheet).

I. Crosslines

The river bottom is extremely irregular and crossings did not agree in some cases. One crossline (pos. 61 to 71 Launch 1270) does not agree in several places of flat bottom and the difference appears to be tide. The river is very narrow and the tide influenced accordingly.

J. Junctions

This survey (H-9488) junctions with the survey H-9478 at the Roosevelt Bridge. There is no holiday. The 30 foot curve is discontinuous at this point due to shoaling which has occurred downstream from the bridge as indicated on H-9478 and current edition of chart.

K. Comparison of Prior Surveys

A comparison with prior survey dated 1872, was made with present survey 1974-76. Considering the length of time between surveys, the surveys are in good general agreement. The present survey shows a greater number of submerged rocks and shoals due to closer line spacing and the use of fathometers to obtain soundings. T-1340 (1:2500) 1872 and H 2004 (1890) 15000 were used.

P.S.I. #78 - The southern most of the two wrecks was located 11 November 1974 - J.D. 315 - Launch 1270 - Vol. 1, pg. 11, pos. 35 and 36 at Latitude 38°53.73', Longitude 77°03.59'. A wire drag search was made for the other wreck during the 1976 additional work with two obstructions being located at Latitude 38°53.93', Longitude 77°03.65', Vol. 5, pg. 34-35, pos. 735, 738. A positive identification could not be made so they were plotted as obstructions. Recommend retention of wreck symbol or replacement with obstructions. For additional comments on PSI's see verifier's report

P.S.I. #79 - Soundings were obtained on four of the six rocks mentioned in this item during main scheme hydro. A specific investigation was not made for the remaining rocks and it is recommended they be retained as charted. See quality control report.

P.S.I. #80 - The pier ruins have been pulled ashore; however, there are rocks at Latitude 38°54.00'N, Longitude 77°03.78'W, Vol. 5, pg. 33, pos. 729. These rocks probably were the foundation for the old pier. See development overlay #3.

P.S.I. #81 - Pier ruins that appear on the present survey, Latitude 38°54.02'N, Longitude 77°04.14'W, shows only piling remains. Recommend feature be retained as charted. See quality control report.

P.S.I. #82 - Two 13 ft. soundings were obtained during main scheme hydro run in 1974 at the location of the charted 10 ft. obstructions. When the hydro party returned in 1976, a fathometer search was made with an additional D.P. being obtained at Latitude 38°54.17', Longitude 77°04.24', Vol. 5, pg. 29, pos. 710. It is recommended the feature be retained as charted.

P.S.I. #99 - The two-foot sounding charted at Latitude 38°54.35', Longitude 77°05.46' was searched for specifically when the hydro party returned in 1976. A number of shoal soundings were obtained with the shoalest being a three ft. at this position, Vol. 5, pg. 22, pos. 681t7 See development overlays #1 and #2.

P.S.I. #100 - There was a wire drag sweep made in the area, but with the irregular bottom the drag did not snag. However, there was a development

5

made November 12, 1976 and the fathogram shows a least depth of 8 feet MLW, Latitude 38°54.88'N, and Longitude 77°06.18'W, Vol. 5, pg. 9-11.
Detached position No. 632 indicates 9 feet depth at lat 38°54'54" long. 77°06'12".

L. Comparison to the Chart See verifier's report

This survey was compared with Chart 12289 (formerly C&GS 560 36th Ed. 1976 and 101SC 18th Ed. 1976). There is good general agreement with this survey and the chart. From this point north to the Chain Bridge, the survey was compared to 12285 formerly 101SC. The survey and chart show good agreement. The changes to be noted on both charts are listed above in Section "K."

M. Adequacy of Survey

This survey is adequate to supersede prior surveys for charting. Additional hydrography was run in November 1976.

N. Aids to Navigation

There are no charted aids to navigation on this boat sheet. There are no aids listed in the 1974 Light List.

Two private buoys were located, one on position 314 (vert. stripe orange and white) at Latitude 38°54.27'. Longitude 77°04.51', and one on position 518 (red buoy) marking a rock, Latitude 38°54.38', Longitude 77°05.36'.

O. Statistics

Day	Vessel	Number Position	Naut. Miles of Sounding Lines	Naut. miles of Cross Lines
315	1270	169	7.8	1.2
318	1270	146	5.7	0.6
322	062	93	1.8	- - -
323	062	91	3.3	0.9
331	062	22	0.6	- - -
317(1976)	1282	45	2.0	- - -
320(1976)	1282	98	4.1	- - -
		864	25.3	2.7

Total of Sounding Lines 28.0
Total Cross Lines 2.7

Area 0.7 square nautical miles

P. Miscellaneous

On Launch 1282 a modified sweep was utilized to search for submerged objects. The sweep consisted of two trawl boards 18" X 24" similar to those used by shrimp trawlers with 65 feet of small chain between them. The trawl boards were bridled and towed in such a manner as to drag along the bottom. The distance between the two trawl boards while dragging is approximately 40 to 45 feet. The distance of the drag astern of the vessel was determined in a ratio of 1:3; water depth/length of tow line.

Upon snagging an object the two lines to the trawl boards which were generally 60° apart would come together slowly allowing sufficient time for the coxswain to stop the vessel. The sweep was then pulled aboard until the snagged object was close enough to the vessel to get a sounding pole or leadline sounding on the object.

Q. Recommendations

None

R. References to Reports

Descriptive Report H-9478 (AHP-05-6-74)

Respectfully Submitted,

for Robert Lewis
Kenneth W. Perrin
LT, NOAA
OIC, Launch 1282

APPROVAL SHEET
Survey H-9488 (AHP-05-7-74)

The hydrographic records transmitted with this report are complete and adequate.

95 per cent of the field work was done in 1974 under the supervision of LCDR F. T. Smith.

Final field work was completed by LTJG K. W. Perrin in 1976.

This survey is complete and adequate with no additional field work recommended.

William R. Daniels
LCDR, NOAA
Chief, Hydrographic Surveys Branch

OPR-409

H-9488 (AHP 05-7-74)

SIGNAL LIST

160	7	38	54	00556	077	03	30739	254	000	0007	000000	FLAGPOLE (Third order traverse)
161	7	38	54	24339	077	04	23159	139	000	0000	000000	Georgetown University, Spires
162	7	38	54	10974	077	05	13975	250	000	0003	000000	DC-Va. Boundry Witness Mark No. 4, 1946
163	7	38	54	17222	077	05	29088	250	000	0003	000000	CAMP (USE) 1925
164	7	38	54	39	077	06	03	250	000	0003	000000	ROCK-2
165	7	38	55	11267	077	06	25809	250	000	0003	000000	SAND (Arlington Co.)
166	7	38	55	16064	077	06	31302	250	000	0003	000000	DC-Va. Boundry witness Mark No. 2

#1

-0.2 0 +0.2

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

CORRECTIONS IN FEET, FATHOMS

SKIFF 062

NOAA FORM 76-21 (10-72) U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship Atlantic Hydro Party (C&GS (270) FT Smith — J.O. Rolland Comdg.

These corrections are to be used

between 11 Oct 19 74 and 29 ~~Oct~~ NOV 19 74

in the locality Potomac River Wash, DC

for hydrographic surveys Nos. H-9477-H-9478 H-9480

(SKIFF 062) Fath 1278

Table #1

3.4 -0.4

24.2 -0.2

deeper -0.4

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS

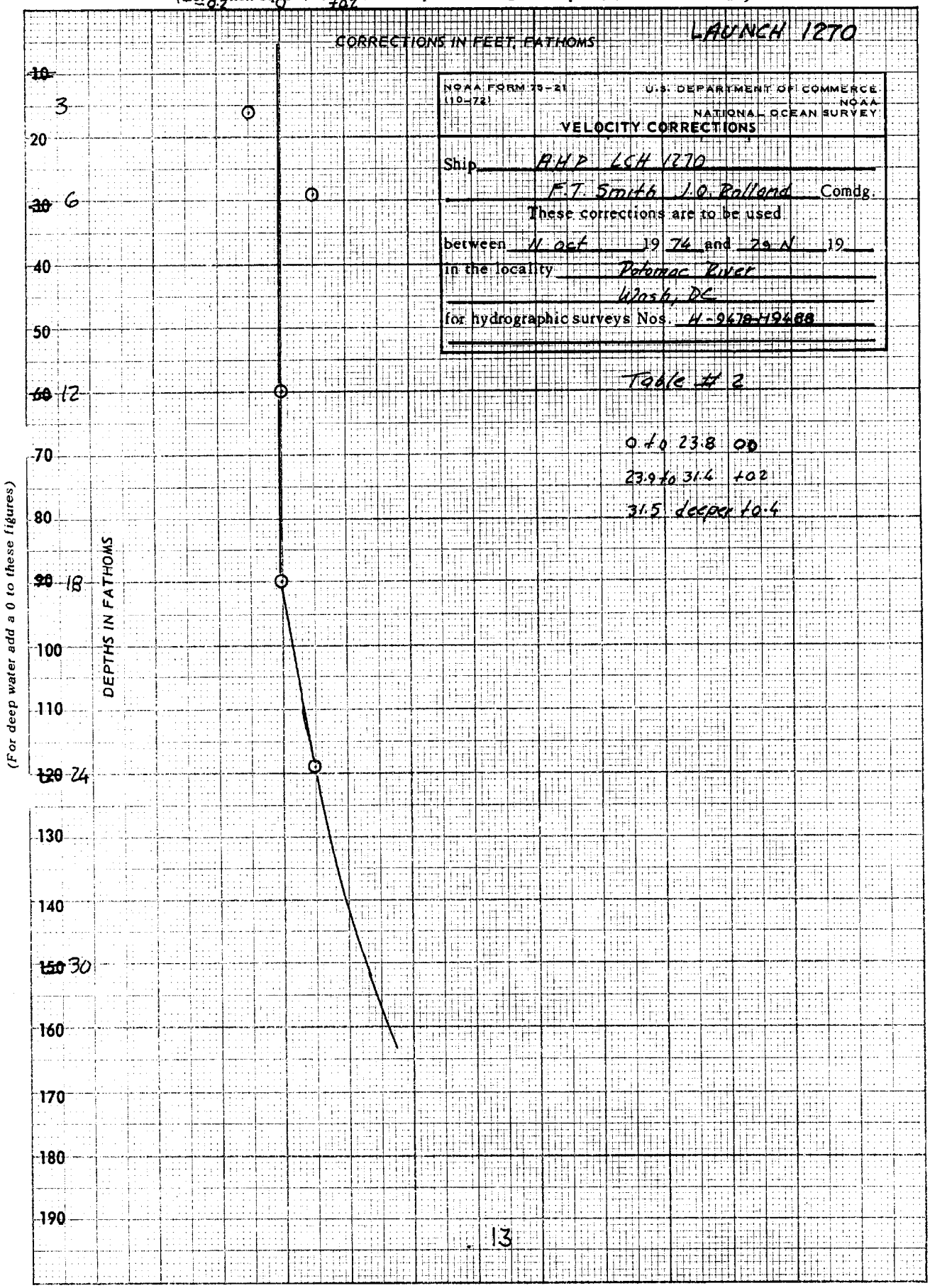
10 3 20 6 30 40 50 60 12 70 80 90 18 100 110 120 24 130 140 150 160 170 180 190

12

10

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

#2



11

#3

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

CORRECTIONS IN FEET, [redacted]

Launch 1282
Fath. 1279

NOAA FORM 76-21 (10-72) U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship HSB - Launch 1282
LCDR William R. Daniels Comdg.

These corrections are to be used

between 12 Nov. 1976 and 15 Nov. 1976

in the locality Potomac River
Washington, D.C.

for hydrographic surveys Nos. H-9488

Table #3

Depth (Ft.)	Corr. (Ft.)
2.5 - 8.5	+0.2
8.6 - 30.0	+0.4
30.1 - 39.0	+0.6
39.1 - 44.5	+0.8
44.6 - 49.5	+1.0
49.6 - deeper	+1.2

DEPTHS IN [redacted] FEET

(For deep water add a 0 to these figures)

5 10 15 20 25 30 35 40 45 50 150 160 170 180 190

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12

OPR-409

H-9488 (AHP-05-7-74)

Velocity Tables #1, #2, #3

Skiff 0620 #1

Launch 1270 #2

Launch 1282 #3

```
000034 0 0004 0001 000 062000 009488
000242 1 0002
999900 1 0004
000238 0 0000 0002 000 127000 009488
000314 0 0002
999999 0 0004
000025 0 0000 0003 000 128200 009488
000085 0 0002
000300 0 0004
000390 0 0006
000445 0 0008
000495 0 0010
999999 0 0012
```

NOAA 59-11

OPR-409 - H-9488 (AHP. 05-7-74)

Potomac River

Skiff 062 Bar Check Abstract Fath. 1278

J.D.	Depth								
	3.0	6.0	12.0	18.0	24.0				
290	-0.6	-0.1	-0.2	-0.2	-0.4				
317	-0.2	-0.1	-0.1	-0.1	-0.2				
Mean	-0.4	-0.1	-0.2	-0.2	-0.3				

Table #1

Launch 1270 Fath. 927

294	-0.2	-0.05	00	-0.2				
298	0.0	-0.15	00	00				
305	-05	+0.2	+0.2	+0.2	+0.1			
315	00	+0.2	00	-0.2				
Mean	-0.1	+0.1	0.0	0.0	+0.1			

Launch 1282 Fath. 1279

1976	5	10	15	20	25	30	35	40
306	+0.2	+0.5	+0.4	+0.5	+0.4			
307	+0.2	+0.4	+0.4	+0.4				
308	+0.2	+0.4	+0.4	+0.7	+1.0 R			
319	+0.2	+0.3	+0.5	+0.4	+0.3	+0.5	+0.7	+0.7
Mean	+0.2	+0.4	+0.4	+0.5	+0.4	+0.5	+0.7	+0.7

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Settlement and Squat Test

4 October 1974
J.D. 277

Launch 1270

Two runs were made at 1000 RPM's, 1500 RPM's, and 2000 RPM's. These speeds are the boats most suitable hydro speeds.

The procedure was to anchor a marker buoy with a short scope. Launch 1270 was then stopped alongside the marker buoy and the depth of water was measured with the echo sounder. Then the vessel was run past the marker buoy at normal sounding speeds, and another accurate echo sounding was taken when in the same position relative to the buoy. Changes in tidal heights were taken into consideration. The tests were repeated in a second location for comparisons. After a comparison of data was made, the average valve for each hydro speed was determined. A curve constructed and a settlement and squat table was prepared.

The following data is respectfully submitted:

W. E. George, Lt.(jg), NOAA

Run #1

Note: At no time did the tide change more than 0.1 foot during each S & S run.

	1000 RPM	1500 RPM	2000 RPM	2500 RPM
Still	5.5'	5.5'	5.5'	5.5'
Underway	5.1'	5.0'	4.8'	4.5'
S&S Corr.	+0.4'	+0.5'	+0.7'	+1.0'

Run #2

	1000 RPM	1500 RPM	2000 RPM	2500 RPM	3000 RPM
Still	4.3'	4.3'	4.3'	R	R
Underway	3.9'	3.8'	3.7'		
S&S Corr.	0.4'	0.5'	0.6'		

1000 RPM	+0.4'	+0.4'	+0.4'
1500 RPM	+0.5'	+0.5'	+0.5'
2000 RPM	+0.7'	+0.6'	+0.65'
2500 RPM	+1.0	R	+1.0'

Settlement & Squat Curve for Launch 1270

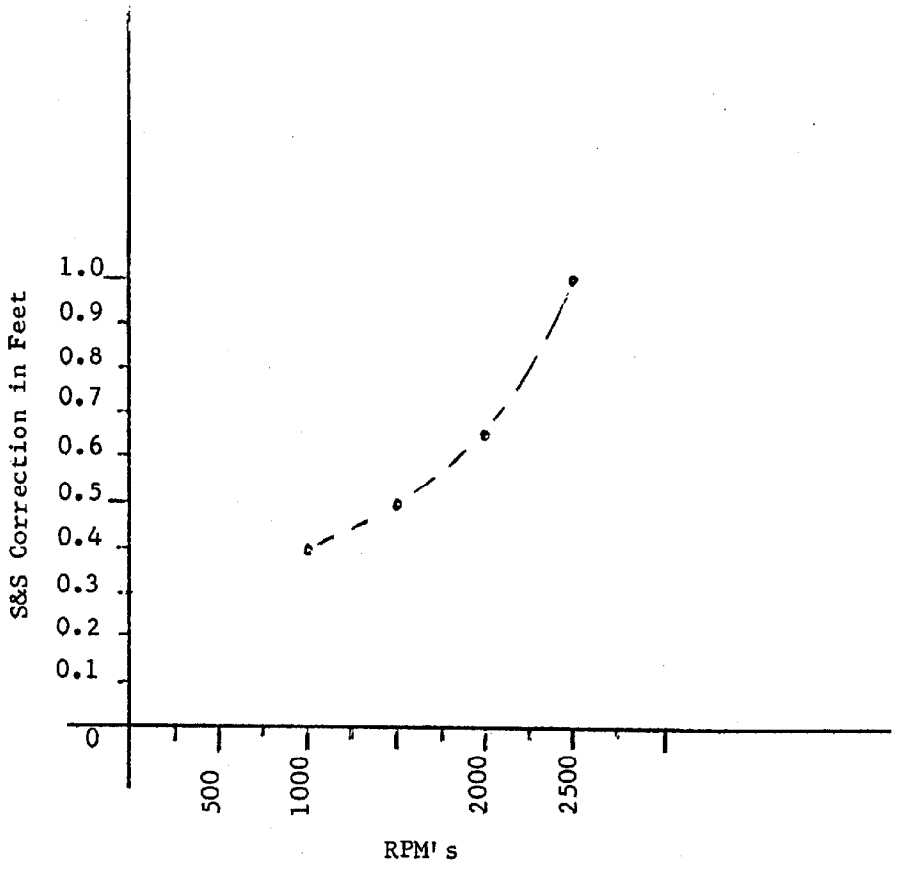


Table of S&S Correction

1000 RPM	+0.4 ft.
1500 RPM	+0.5 ft.
2000 RPM	+0.7 ft.
2500 RPM	+1.0 ft.

SETTLEMENT AND SQUAT TEST

October 20, 1976

Launch 1282

140 hp outboard

Four runs were made at five speeds, 1000 rpm, 1500 rpm, 2000 rpm, 2500 rpm and 3000 rpm. The boats speed range for hydrography is 1000 rpm to 2000 rpm. Two runs were made at each speed in one direction and two runs were made in the opposite direction.

The procedure was to have a person with a level on shore and a person holding a level rod on the boat. The vessel would run by the observer at each speed and a reading was taken from the level rod. After a comparison of data was made, the average value for each hydro speed was determined. A curve constructed and a settlement and squat table was prepared. The changes in tidal heights were taken into consideration.

Test Run - 20 October 1976

NOTE: At no time did the tide change during each settlement and squat run.

Run #1

	1000	1500	2000	2500	3000
Still	9.65	9.65	9.65	9.65	9.65
Underway	9.70	9.80	9.90	9.95	10.00
S&S Correction	0.05	0.15	0.25	0.30	0.35

Run #2

	1000	1500	2000	2500	3000
Still	9.70	9.70	9.70	9.70	9.70
Underway	9.75	9.85	9.95	10.00	10.00
S&S Correction	0.05	0.15	0.25	0.30	0.30

Run #3

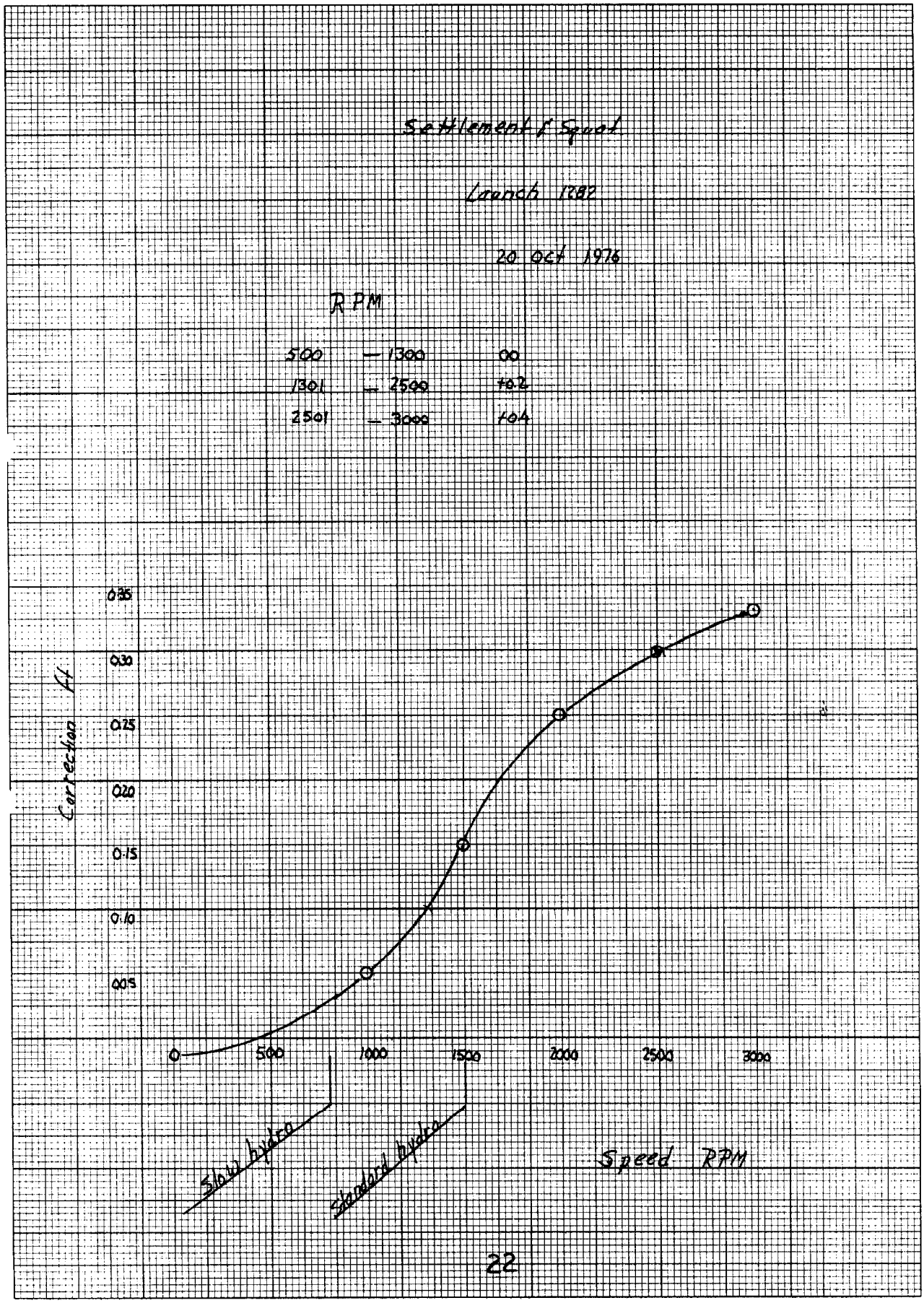
	1000	1500	2000	2500	3000
Still	9.70	9.70	9.70	9.70	9.70
Underway	9.75	9.85	9.95	10.00	10.05
S&S Correction	0.05	0.15	0.25	0.30	0.35

Run #4

	1000	1500	2000	2500	3000
Still	9.75	9.75	9.75	9.75	9.75
Underway	9.80	9.90	10.00	10.05	10.05
S&S Correction	0.05	0.15	0.25	0.30	0.30

Average Correctors for each speed

1000	1500	2000	2500	3000
0.05	0.15	0.25	0.30	0.33


Settlement of Speed
Governor 1282
20 Oct 1976
RPM
500 — 1300 00
1301 — 2500 +0.2
2501 — 3000 +0.4
Correction %
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0
500
1000
1500
2000
2500
3000
Speed RPM
Slow hydro
Standard hydro
22

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from the standard gage at Washington, D.C. corrected to Key Bridge. All times of both predicted and recorded tides are GMT.

A Bristol bubbler gage was installed at the Chain Bridge at Latitude 38°55.47', Longitude 77°07.01' in October 1974 and ran through the completion of the 1974 field season.

A comparison in level records indicated there was no shift in the tide staff between the time of installation and removal.

Another Bristol bubbler gage #S/N 68A-14935 was installed at the same location above and began operation 11 November 1976 for the additional hydro accomplished in 1976. The gage remained in operation for five days.

A comparison of level records show a negligible shift of less than 0.004 ft.

March 22, 1977

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): Chain Bridge

Period: Nov. 11-27, 1974 and Nov. 12-15, 1976

HYDROGRAPHIC SHEET: H-9488

OPR: 409

Locality: Potomac River, Washington, D. C.

Plane of reference (mean lower low water): 2.2 ft. - 1974
0.4 ft. - 1976

Height of Mean High Water above Plane of Reference is 2.8 ft.

Remarks: Zone direct.

James C. Hubbard
for Chief, Tides Branch

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-9488

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
CHAIN BRIDGE										1
EASBY POINT										2
GEORGETOWN										3
GEORGETOWN CHANNEL										4
LITTLE RIVER										5
PALISADES PARK										6
POTOMAC RIVER										7
ROSSLYN										8
THEODORE ROOSEVELT ISLAND										9
THREE SISTERS ISLANDS										10
WASHINGTON										11
										12
										13
										14
										15
										16
										17
										18
										19
						APPROVED				20
						Chas. E. Harrington				21
						CHIEF GEOGRAPHER - C3x8				22
						20 SEPT. 1978				23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

☆ U.S. G.P.O. 1972-769-565/516 REG. #6

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APPROVAL SHEET
FOR
SURVEY H-9488

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: 7/5/78

Signed: Harry L. Seib

Title: Chief, Verification Branch

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-9488

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

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

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						1- MISC. DATA
CAHIERS	1-with Printouts		X			
VOLUMES	8	1				
BOXES						

T-SHEET PRINTS (List): TP-00217, TP-00318 8- BLOW UPS OF TP-00217, & TP-00318

SPECIAL REPORTS (List): 1 CHART #12289

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS: PRE-VERIFICATION	AMOUNTS: VERIFICATION	AMOUNTS: TOTALS
POSITIONS ON SHEET			690
POSITIONS CHECKED		690	
POSITIONS REVISED		96	
SOUNDINGS REVISED			
SOUNDINGS ERRONEOUSLY SPACED			
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		1	
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	9		
VERIFICATION OF CONTROL		2	
VERIFICATION OF POSITIONS		30	
VERIFICATION OF SOUNDINGS		70	
COMPILATION OF SMOOTH SHEET		68	
APPLICATION OF TOPOGRAPHY		5	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		1	
COMPARISON WITH PRIOR SURVEYS & CHARTS		7	
VERIFIER'S REPORT		14	
OTHER		6	
TOTALS	9	203	212

		Beginning Date	Ending Date
Pre-Verification by	D. Mason, K. Ainsley	04/20/77	04/20/77
Verification by	K. Ainsley, F. Saunders B. Stephenson, R. Roberson	05/10/77	07/10/78
Verification Check by	H. R. Smith	Time (Hours) 8	Date 06/30/78
Marine Center Inspection by	Hydrographic Inspection Team (AMC)	Time (Hours) 16	Date 07/06/78
Quality Control Inspection by	George Myers	Time (Hours) 30	Date 9/18/78
Requirements Evaluation by	D. S. Hill	Time (Hours) 2	Date 11/17/78

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9488 FIELD NO. AHP-5-7-74

District of Columbia, Potomac River, Roosevelt Island to Chain Bridge

SURVEYED: November 11 through November 27, 1974 and November 12 through November 15, 1976

SCALE: 1:5,000 PROJECT NO.: OPR-409

SOUNDINGS: Raytheon DE-723 Fathometer, Pole CONTROL: Range-Azimuth See Boat Sheet

Chief of Party ..... F. Smith
..... J. Rolland
..... W. Daniels
Surveyed by ..... C. Berg
..... K. Perrin
..... R. Wells
..... E. Fanning
..... L. Gilden
..... R. Hill
..... J. Johnson
..... F. Lamison
..... M. Robinett
..... R. Snow
Automated Plot by ..... CALCOMP-618 Plotter (AMC)
Verified and Inked by ..... R. Roberson R. Ro
July 10, 1978

1. Introduction

a. During verification the location of signal 164 was found to be in error. The error was corrected, and geographic positions recomputed for the affected areas. A negligible difference was found (one to two hundredths of a second). A printout of the affected area will be submitted with the survey records.

b. Projection parameters were revised and inserted during verification.

2. Control and Shoreline

a. Control is adequately discussed in Sections F and G of the Descriptive Report.

b. Shoreline originates with enlarged portions of Class I photogrammetric manuscripts TP-00217 and TP-00318 of 1972-74.

See quality control report.

Enlargements were made by the U.S. Army Corps of Engineers, Norfolk District, Reproduction Section.

Shoreline scale was inadequate for the scale of this survey.

3. Hydrography

a. Crosslines are in good agreement. Depths vary from one to two feet.

b. Depth curves were not adequately delineated in some areas.

c. Developments run were not adequate to delineate the bottom configuration and least depths.

4. Condition of Survey

Condition of the survey was adequate except for the following:

a. Daily bar checks were not taken as prescribed in Section 1.5.2 of the Hydrographic Manual.

b. Eight shoal soundings were found in the vicinity of the bridge northeast of Roosevelt Island. The soundings were put on excess level 9. They were on the bridge abutments.

c. The hydrographer did not properly note least depths or rock elevations in several instances.

d. Presurvey Review item #79 was not adequately disposed of as per the Presurvey Review. See quality control report.

5. Junctions

H-9478 (1974) to the south

Satisfactory junction was effected with H-9478 (1974).

6. Comparison With Prior Surveys

T-1340 (1872) 1:2,500
H-2004 (1890) 1:5,000

General comparison between the survey is fair. In the areas of deep water there has been shoaling. Differences can be attributed to natural and cultural changes, and advanced survey technology.

This survey is adequate to supersede the prior surveys in their common areas.

7. Comparison With Charts 12289 (36th Edition, March 6, 1976)
12285 (19th Edition, November 27, 1976)

a. Hydrography

Agreement between the survey and charts is good.

Presurvey Review item #78, the two wrecks at 38° 53' 43", 77° 03' 36" and 38° 53' 53", 77° 03' 37" were dragged for but positive identification was not made on both wrecks. The southerly charted wreck was located at 38° 53' 43.49", 77° 03' 35.55". Two obstructions were located in the vicinity of the northerly wreck (38° 53' 54.67", 77° 03' 37.98" and 38° 53' 55.76", 77° 03' 39.19"). Recommend retention of wreck and the northerly wreck be replaced by obstruction symbols.

Presurvey Review item #79, the ~~six~~ 7 rocks originating from Corps of Engineers' blueprints were not thoroughly investigated nor were least depths obtained as per the Presurvey Review. The rocks should be retained as charted. See quality control report.

Presurvey Review item #80; the hydrographer reported the remnants of the pier had been removed but that a rock foundation extends from the shore to 38° 53' 59.96", 77° 03' 47.32". Boat sheet delineation is adequate to show extent. The feature should remain as charted.

Presurvey Review item #81, pier ruins exist as charted from 38° 54' 01.51", 77° 04' 08.65" to shore. Boat sheet delineation is adequate. Recommend ruins be retained. See quality control report.

Presurvey Review item #82, three charted 10-foot obstructions were located on main hydrography with plotted depths of 11 and 12 feet. Their locations are as follows:

11 feet	38° 54' 08.35"	77° 04' 15.10"
12 feet	38° 54' 07.40"	77° 04' 15.44"
12 feet	38° 54' 12.06"	77° 04' 15.40"

Development is inadequate to verify or disprove possible "obstructions".

Presurvey Review item #99, the charted 2-foot sounding was searched for and a 3-foot sounding was located at 38° 54' 19.83", 77° 05' 27.35".

Presurvey Review item #100, the charted 8-foot sounding, was dragged for with negative results; however, a development of the area located an 8-foot sounding at 38° 54' 52.63", 77° 06' 10.63". It is recommended that the sounding remain as charted. See quality control report.

The present survey, with the exceptions noted above, is adequate to supersede the charted hydrography in the common area.

b. Aids to Navigation

There are no charted aids to navigation in the survey area. The hydrographer located three privately maintained aids to navigation.

8. Compliance With Instructions

This survey complies with the Project Instructions, except Presurvey Review instructions, items #79, and #82, ~~and #100~~.

9. Additional Field Work

This is an adequate basic survey and no additional field work is recommended.

Inspection Report
H-9488

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

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

R. D. Sanocki
R. D. Sanocki
Technical Assistant
Processing Division

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

Billy J. Stephenson
Billy J. Stephenson
Team Leader
Verification Branch

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/GKM

September 18, 1978

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

FROM: G. K. Myers
Chief, Quality Control Branch

SUBJECT: Quality Control Report for H-9488 (1974-1976), Potomac River, Roosevelt Island to Chain Bridge

A quality control inspection of H-9488 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigation hazards, junctions and shoreline transfer, sounding line crossings, smooth plotting, decisions and actions taken by the verifier, and cartographic presentation of data. In general, it was found to conform to the National Ocean Survey standards and requirements except as stated in the report by the verifier and Hydrographic Inspection Team and as follows:

1. The shoreline was compared with reviewed photogrammetric manuscripts T-00217 and T-00318 during quality evaluation. Areas alongshore delineated by black dashes and described as rocky were revised more appropriately to foul areas with rocks by the quality evaluator.

2. A 20 RK (Presurvey Review Item 79) charted at latitude 38°58.14', longitude 77°04.18' falls in present depths of 18 feet. It is recommended that present depths be considered for charting in this area.

3. Four dolphins (Presurvey Review Item 81) charted in the immediate vicinity of latitude 38°54.05', longitude 77°04.18' were not mentioned by the hydrographer. However, these features fall in an area described as ruins on T-00318.

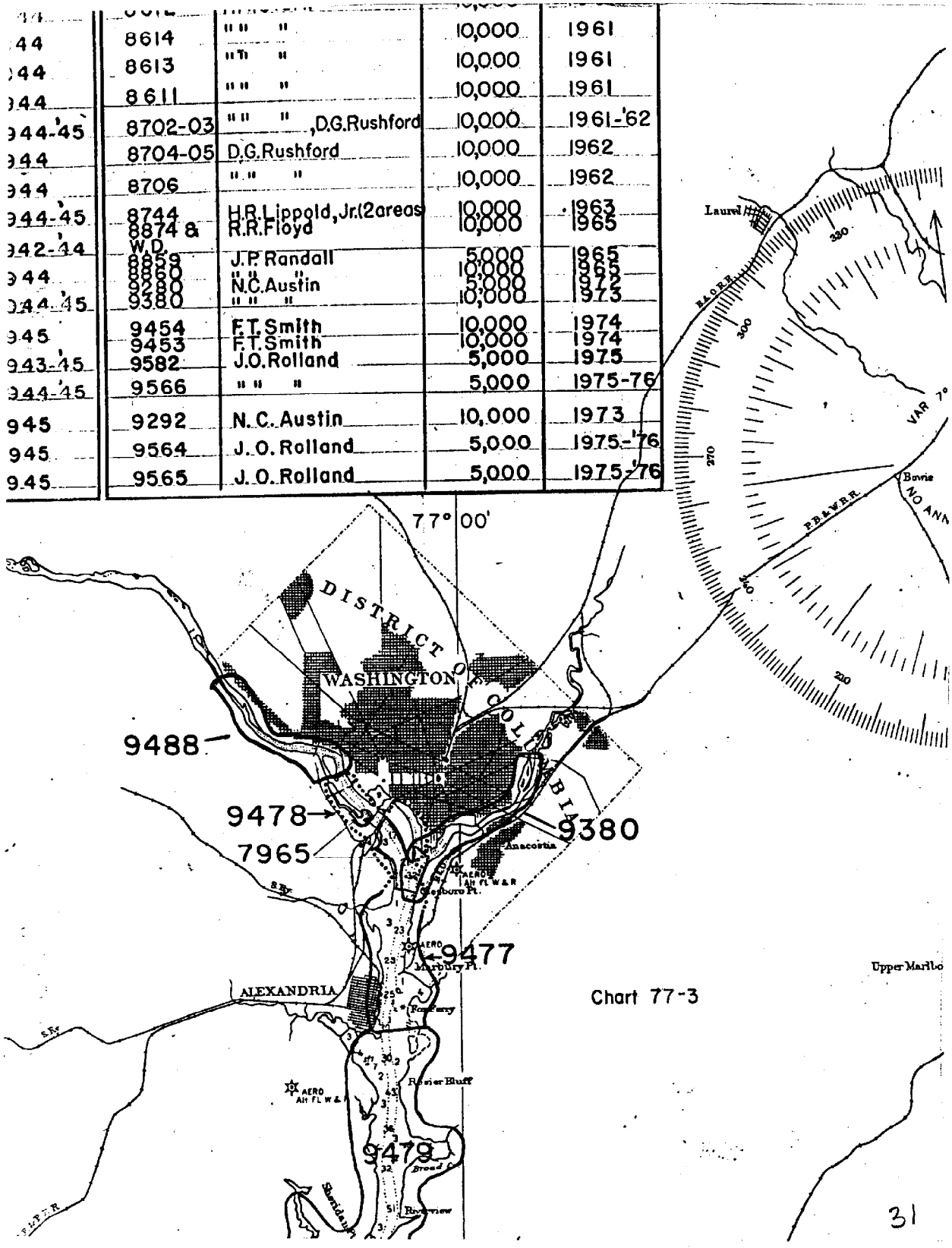
4. The pier charted at latitude 38°55.12', longitude 77°06.17' from T-8601 (1946) falls in a foul area on the present survey. This feature should be deleted from the chart.

5. A fathometer investigation in the immediate vicinity of the 8-foot depth (Presurvey Review Item 100) charted at latitude 38°54.91', longitude 77°06.21' from T-1340 verified the existence of this sounding. The area should be charted in accordance with present hydrography.

cc:
C35
C351

30

44	8614	" " "	10,000	1961
44	8613	" " "	10,000	1961
44	8611	" " "	10,000	1961
44-45	8702-03	" " ,D.G.Rushford	10,000	1961-'62
44	8704-05	D.G.Rushford	10,000	1962
44	8706	" " "	10,000	1962
44-45	8744	H.R.Lippold,Jr.(2areas	10,000	1963
42-44	8874 & W.D.	R.R.Floyd	10,000	1965
44	8859	J.P.Randall	5,000	1965
	8860	" " "	10,000	1965
44-45	9280	N.C.Austin	5,000	1972
	9380	" " "	10,000	1973
45	9454	F.T.Smith	10,000	1974
	9453	F.T.Smith	10,000	1974
43-45	9582	J.O.Rolland	5,000	1975
44-45	9566	" " "	5,000	1975-76
945	9292	N.C.Austin	10,000	1973
945	9564	J.O.Rolland	5,000	1975-'76
945	9565	J.O.Rolland	5,000	1975-'76



FORM C&GS-8352
(1-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9488

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12285	1-25-79	Bill Wanless	Full ~~Part Before~~ After Verification Review Inspection Signed Via
101-50			Drawing No. #22
Mc			
12289	1-31-79	Bill Wanless	Full ~~Part Before~~ After Verification Review Inspection Signed Via
560			Drawing No. 43
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63