

9582

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-05-10-75**
Office No..... **H-9582**

LOCALITY

State **MARYLAND**
General Locality **BALTIMORE HARBOR**
Locality **HAWKINS POINT TO SPARROWS POINT**

1975

CHIEF OF PARTY
J. O. ROLLAND

LIBRARY & ARCHIVES

DATE **3/22/77**

☆ U.S. GOV. PRINTING OFFICE: 1975-668-353

12281
12 278

9582

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✓ Items removed from the D.R. and filed in the cahier with the field records.

HYDROGRAPHIC TITLE SHEET

H-9582

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-05-10-75

State Maryland

General locality Baltimore Harbor

Locality Hawkins Point to Sparrows Point

Scale 1:5000 Date of survey 22 Oct. to 23 Nov. 1975

Instructions dated 9 July 1975 Project No. OPR-514-AHP-75

Vessel Launch 1277

Chief of party John O. Rolland

Surveyed by W.A. Wert, F.L. Kleinschmidt, D.M. Bryant, E.W. Fanning

Soundings taken by echo sounder, hand-lead, pole

Graphic record scaled by Launch Personnel

Graphic record checked by Launch Personnel

Protracted by PDP-8/e Automated plot by PDP-8/e

COLCOMP-618-AMC

Verification by Harry R. Smith - AMC - Norfolk, Virginia

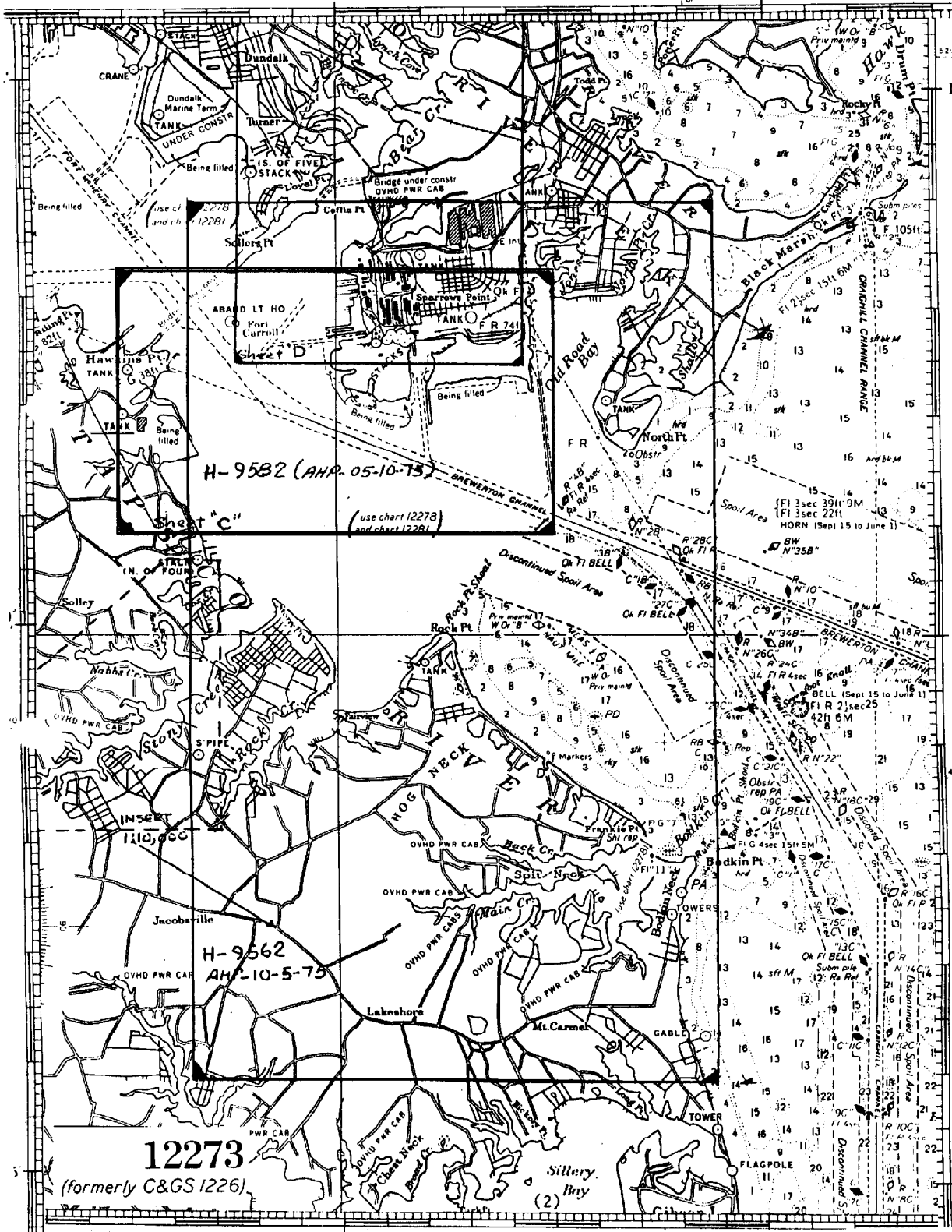
Soundings in ~~fathoms~~ feet at ~~MHW~~ ^{MLW} ~~MLLW~~

REMARKS: Notes in red by verifier.

*Applied to stds 7/5/77
COB*

7630

25



H-9582 (AHP-05-10-75)
 Sheet "C"
 (use chart 12278 and chart 12281)

H-9562
 AHP-10-5-75

12273
 (formerly C&GS 1226)

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9582 (AHP-05-10-75)

SCALE: 1:5,000

1975

VESSEL: Atlantic Hydrographic Party

Chief of Party J. O. Rolland

A. Project

OPR-514 is a hydrographic survey to provide data to update existing nautical charts of Baltimore Harbor, Maryland. The survey was accomplished in accordance with Project Instructions OPR-514-AHP-75 dated 9 July 1975, The Revised Hydrographic Manual and Chapter 3 of the AMC Manual.

B. Area Surveyed

The area encompassed by sheet AHP-05-10-75^{H-9582} is an irregular section extending from 76° 27' 45" W westward to the shoreline at Hawkins Point. The approximate limits of hydrography are bounded by 39° 11' 20"N, 76° 27' 45"W; 39° 12' 15"N, 76° 27' 45"W; 39° 12' 45"N, 76° 29' 45"W; 39° 12' 45"N, 76° 32' 00"W; and 39° 11' 20"N, 76° 32' 00"W. Junction was made with contemporary survey H-9562, AHP-10-5-75. A mainscheme Field Sheet, Channel Overlay, and a 1:1,250 scale rock and shoal investigation are presented for plotting clarity. All field work was accomplished during the period 22 October 1975 to 23 November 1975.

C. Sounding Vessel

Launch 1277 was used exclusively to accomplish the survey work on AHP-05-10-75.

D. Sounding Equipment and Corrections to Echo Soundings

A Raytheon Fathometer, model number BE 723D, serial number 1904, was used in Launch 1277. Pole soundings were necessary in shoal water. Depth corrections were obtained by averaging bar check values. Two graphs were constructed and velocity correctors were scaled in accordance with Table 3 of the Revised Hydrographic Manual. Appreciable changes in depth corrections occurred between the first and last days of hydrography; therefore, two velocity tables were constructed to reflect winter cooling of the water column. The graphs, corrector value abstracts and bar check abstract are included with this report. Settlement and squat correctors were obtained as outlined in section 4.9.4.2 of the Revised Hydrographic Manual. The graph and settlement and squat corrector abstract are included with this report.

Daily TRA corrections were determined as outlined in section 4.9.4.1 of the Revised Hydrographic Manual. Frequent A to F scale checks were taken to insure correct stylus arm length. All initial settings were adjusted to zero. All fathograms were scanned to mean out sea swell action where applicable.

E. Hydrographic Sheets

Field sheets were constructed, raw master tapes were logged and data plotted on the field sheets by the launch's on board PDP 8/e Hydroplot System. Edited master and corrector tapes, velocity tapes, signal tape, and TC/TI tape were logged by launch personnel and submitted for smooth plotting by Processing Division, Atlantic Marine Center.

F. Control Stations

Control stations Smallwood 1975, White 1915, 1973, Piling '75 (Light "8"), East 1975, Sparrows Point 1975, Cutoff 1973, Brewerton Front Range Light, and Drydock 1975 were established or verified by Coastal Mapping Division, Atlantic Marine Center. Refer to Horizontal Control Report OPR-514 Baltimore Harbor, Maryland for surveying methods, geodetic abstracts and computations. Control station Brewerton Front Range Light (ecc) was established by party personnel using a steel tape measure, magnetic compass, and program RK407. The printout of RK407 is included with this report.

G. Hydrographic Position Control

Del Norte positioning equipment, which operates in a range-range mode, was used to control most of the hydrography on sheet AHP-05-10-75. Seven separate control networks were used on this sheet. All shore stations were located at or eccentric to established third-order triangulation, intersection, or traverse stations. Whenever possible, calibration was established twice daily by positioning the launch at a known third order intersection station. Del Norte ranges were compared to ranges calculated by PDP-8/e computer using the RK407 program. Refer to daily raw data printouts for calibration data, and see appendix for abstract of correctors. A maximum difference of 7 meters between morning and evening calibrations was observed, with mean daily changes ranging between 1.86 and 0.75 meters. The mean standard deviations of calibrations throughout the project ranged between 2.52 and 0.92 meters. These figures do not adequately reflect the generally poor performance of the Del Norte equipment, which was due to the presence of numerous skip zones and local interference throughout the project area. This resulted in an excessive number of erroneous positions which had to be plotted by time-and-course interpolation (approximately 5.5% of all soundings on the sheet). The following is a summary of equipment utilization during the project; refer to the enclosed signal list for shore station names and locations:

Shore Stations

<u>Signals #</u>	<u>S/N</u>	<u>Julian Days Used</u>
1	248	295-297, 301
2	216	304, 307-311, 315-316 321-324, 327
7	181	323
8	181	324, 327
8	188	307-311, 315-316, 321
9	181	295-297, 301, 304, 307@308
11	181	310-311, 322-324
12	188	323

Mobile Transponder

<u>S/N</u>	<u>Julian Days Used</u>
159	295-327

Distance Measuring Unit

<u>S/N</u>	<u>Julian Days Used</u>
182	295-327

Positions 1727-1735, 1738-1742, and 2762-2812 were determined by various "See Boatsheet Methods" such as: along Bulkheads and Pier Faces, estimating distances from identifiable objects, 50 meter line spacing determined by measurement and placement of temporary signals on shore, estimating distances from the shoreline, maintaining course and speed, and valid fix data. For plotting purposes, X and Y coordinates were scaled off the raw field sheet by a plastic millimeter scale, converted to range-range mode using program RK300, and the calculated ranges edited onto the raw master tapes. All soundings between these calculated fixes were interpolated by time and course.

H. Shoreline

Shoreline and topographic details were transferred from a penciled manuscript furnished by AMC. The MLW line was not delineated by hydrography due to the small tidal range; however the 3 foot curve was defined in some areas and the 6 foot curve was defined in most areas.

THE FOLLOWING MANUSCRIPTS ARE NECESSARY FOR SHORELINE ON THIS SURVEY (TP-00843, TP-00844, TP-00846, AND TP-00847). THESE MANUSCRIPTS WERE NOT AVAILABLE AT THE TIME THE SHORELINE FOR THE BOATSHEET WAS DRAWN.

(5) J. Rolland

I. Crosslines

Approximately 13.9 nautical miles of 9.8% of the main scheme hydrography run on sheet AHP-05-10-75 ^{H-9562} were crosslines. The agreement with main scheme lines was excellent and all soundings agreed to the nearest foot.

J. Junctions

Junction with H-9562, AHP-10-5-75, ^{on the S and SE.} was very good with most soundings agreeing to the nearest foot. The maximum discrepancy was 3 feet (3 soundings). H-9643
H-9563

K. Comparison with Prior Surveys

No prior surveys were available.

Presurvey review items were investigated with the following results:

- 18. Dangerous Sunken Wreck, PA charted in Lat. 39° 12.03', Long. 76° 27.93'.
25 meter spacing lines were run in the vicinity of the charted position.
The fathogram was examined with no indication of the wreck. Recommend additional work such as wire drag or diver verification. *pos'n. Nos. 69-71, 77-79, 92-94, 142-144 and 666-674. The wreck was located at 39° 12.06' N 76° 28.08' W on H-9562 (75-16)*
- 23. Visible Wreck, PA charted in Lat. 39° 12.61', Long. 76° 32.07'. ^{12 wk RWD 9/80}
This area was visually examined with no indication of the wreck. Recommend that the visible wreck symbol be deleted from future editions of the chart. *(Retain; see Verifiers Report -section 7-A-2)*
- 24. Dangerous Sunken Wreck, PA charted in Lat. 39° 12.70', Long. 76° 30.06'. Closely spaced lines were run in the vicinity of the charted position. The fathogram was examined with no indication of the wreck. This area is presently being filled. Recommend additional work such as wire drag or diver verification. *No data of this investigation was found.*
- 26. Obstructions, Charted Positions:

	<u>Latitude</u>	<u>Longitude</u>	<u>Cleared Depth</u>
a.	39° 12.27'	76° 31.71'	<i>pos'n-2131-2134-- depth found-10'</i>
b.	39° 11.76'	76° 30.98'	<i>pos'n-1602-1609 " " 15'</i>
c.	39° 11.51'	76° 30.80'	<i>pos'n-1596-1601 6 " " 14</i>

25 meter spacing lines were run in the vicinity of the charted positions. The fathogram was examined with no indication of the obstructions. Recommend additional work such as wire drag or diver verification. *See D.R. H-9562 (1975-76), para K, Item 26, page 10. These items have been disproved and should be deleted from the chart. RWD 9/80*

Dashed Circle Items:

1 foot rock, charted in Lat. $39^{\circ} 12.22'$, Long. $76^{\circ} 27.94'$.
10 meter spacing lines were run in the vicinity of this charted position. A least depth of 4 feet was noted on the fathogram near this position. Refer to Rock's Shoal Investigation 1:1,250 scale for further details. Recommend additional work such as wire drag or diver verification to determine the least depth of this rock. *Pos'n. 99-137 192-199*
See QC. Report, para 3.

16 foot sounding, charted in Lat. $39^{\circ} 11.69'$, Long. $76^{\circ} 29.04'$.
25 meter spacing lines were run in the vicinity of the charted sounding. A least depth of 18 feet was noted on the fathogram near this position. Recommend that the depth be changed and position be adjusted on future editions of the chart. *Pos'n. 2507-2517*
Concur

12 foot sounding, charted in Lat. $39^{\circ} 12.09'$, Long. $76^{\circ} 30.10'$.
25 meter spacing lines were run in the vicinity of the charted sounding. A least depth of ~~13~~ feet was noted on the fathogram near this position. Recommend that the depth be changed and position be adjusted on future editions of the chart. *Pos'n. 1503-1595.*

Other Items:

16 foot sounding, charted in Lat. $39^{\circ} 11.99'$, Long. $76^{\circ} 30.66'$
25 meter spacing lines were run in the vicinity of this charted sounding. Least depths found at this position range from 25 to 34 feet. Recommend deletion of this 16 foot sounding from future editions of the chart. *Pos'n. 2747-2761*
Concur

L. Comparison with the Chart

A comparison with ~~C&GS~~ Chart 545, 29th Edition, 17 August 1974 shows general agreement with ² feet. Contemporary survey soundings show 3 to 5 feet deep in the vicinity of Latitude $39^{\circ} 11' 35''$, Longitude $76^{\circ} 31' 45''$ whereas charted soundings show 8 feet deep. The 6 foot curve off of Hawkins Point has migrated inshore approximately 250 meters. Contemporary survey soundings show a 17 foot hold centered at Latitude $39^{\circ} 12' 19''$, Longitude $76^{\circ} 31' 52''$ whereas charted soundings show 9 feet deep. Contemporary survey soundings show 10 feet in the vicinity of Latitude $39^{\circ} 11' 37''$, Longitude $76^{\circ} 31' 26''$ whereas charted soundings show 3 feet.

M. Adequacy of Survey

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

N. Aids to Navigation

Comparison of the floating aids to navigation with the light list volume 1, 1975 and C&GS Chart 545, 29th Edition, 17 August 1974 showed the following discrepancies: RBN, Obstruction Buoy (Old Road Bay) is located in 15 feet, Light List shows 12 feet. R "8B" (LL 2786) observed to have a radar reflector, Light List and chart show no radar reflector.

C "11B" is located in 34 feet, Light List shows 41 feet. "1M" (LL 2789) is located in 19 feet, Light List shows 24 feet. RN "4" is located in 14 feet, Light List shows 10 feet. RN "2" is located in 15 feet, Light List shows 10 feet. C "1" observed no radar reflector, Light List and chart show radar reflector, is located in 32 feet, Light List shows 36 feet.

Comparison of the Fixed Aids to Navigation with the Light List Volume 1, 1975 and C&GS Chart 545, 29th Edition, 17 August 1974 showed no discrepancies. See Field Edit Report, OPR-514 Baltimore Harbor, MD. for discussion of privately maintained fixed aids.

O. Statistics

<u>Vessel</u>	<u>Nautical Miles of Soundings</u>	<u>Sq. Nautical Miles</u>	<u>No. of Bottom Samples</u>	<u>No. of Positions</u>
Launch 1277	204.0	3.9	32	2823

P. Miscellaneous

Velocity corrections have not been applied to soundings due to the large number of pole soundings and the inability to use TC/TI tapes on the offline plot, RK211.

Q. Recommendations

Because of an apparent shoreline discrepancy on Day 311, recommend that the mean electronic corrector of +1 meter be used instead of the +4 meters observed. For transponder #188 (station 8) located at Sparrows Point on Day 311.

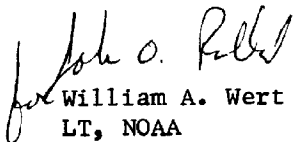
R. Automated Data Processing

<u>Program Title</u>	<u>Program Number</u>	<u>Version Date</u>
On-Line R/R R.T.S.	RK111	8/7/74
Grid's Signal Plot	RK201	4/18/75
Off-Line R/R Non R.T.S.	RK211	8/16/74
Utility	RK300	5/22/75
Corrector Abstract	PM360	3/21/74
Lambert P.C. Conversion	AM400	4/1/73
Geodetic Direct/Inverse	RK407	8/15/74
Predicted Tides	AM500	11/10/72
Elinore	AM602	5/21/75

S. References to Reports

1. Horizontal Control Report OPR-514 Baltimore Harbor, MD., 1975.
2. Field Edit Report OPR-514 Baltimore Harbor, MD., 1975.

Respectfully Submitted


William A. Wert
LT, NOAA
OIC, Launch 1277

5/14/76

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

Tide Station Used (NOAA Form 77-12): Hawkins Point

Period: October 22 - November 23, 1975

HYDROGRAPHIC SHEET: H-9582

OPR: 514

Locality: Baltimore Harbor, Md.

Plane of reference (mean ~~low~~ low water): 3.27 ft.

Height of Mean High Water above Plane of Reference:

1.1 ft.

Remarks: Zone direct

James R. Hurlbut
for _____
Chief, Tides Branch

SIGNAL LIST

OPR-514

AHP-05-10-75

H-9582

SIGNAL	I	LATITUDE		LONGITUDE		DPC	ELEV	FREQ	NAME
001	3	39 09	50044	076 28	35728	254	0000	000000	SMALLWOOD, 1975
002	6	39 10	24770	076 29	17151	250	0000	000000	WHITE, 1915, 1973
004	3	39 10	58803	076 31	01479	243	0000	000000	PIILING '75 (LIGHT "8")
007	0	39 13	02042	076 31	34867	250	0000	000000	EAST, 1975
008	0	39 12	05999	076 29	44667	254	0000	000000	SPARROWS Pt., 1975
009	6	39 11	48896	076 26	55046	250	0000	000000	CUTOFF, 1973
011	0	39 12	28126	076 31	58435	254	0000	000000	BREWERTON FRONT RANGE (ECC), 1975
012	4	39 12	46424	076 30	04732	250	0000	000000	DRYDOCK, 1975

-4 -3 -2 (Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET FATHOMS

NOAA FORM 15-21 19-741	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY	
VELOCITY CORRECTIONS		
Ship	AHP LAUNCH 1277	
	W.A. WERT	Comdg.
These corrections are to be used		
between	22 OCT 19 75	and 12 NOV 19 75
in the locality	BALTIMORE HARBOR	
for hydrographic surveys Nos.	H-9582	

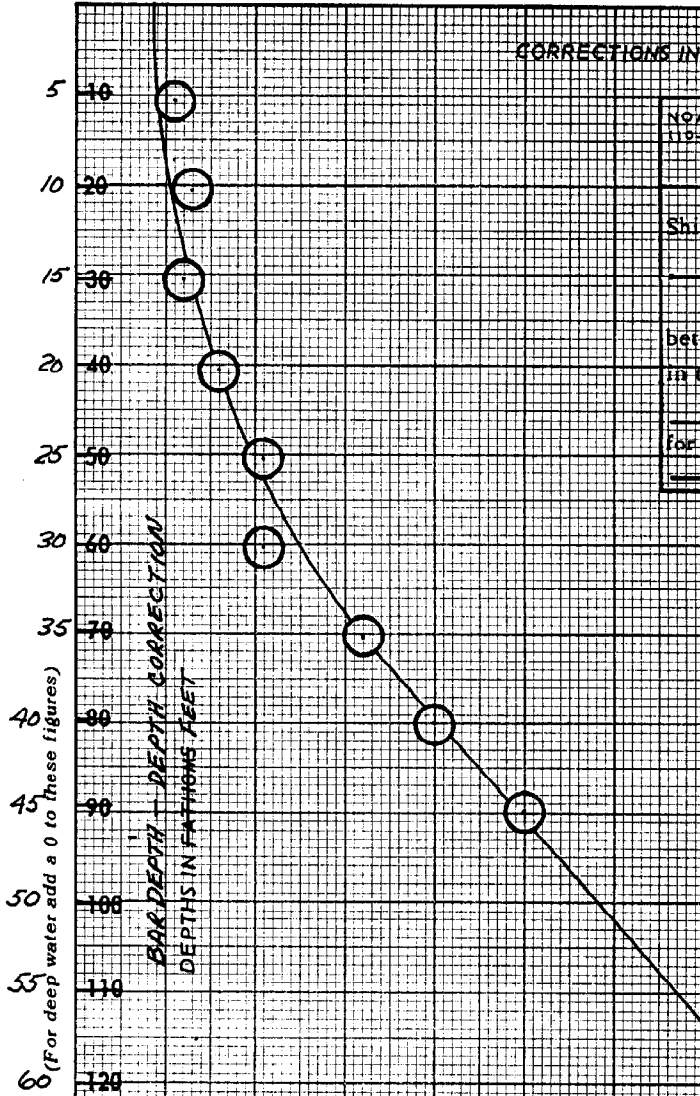
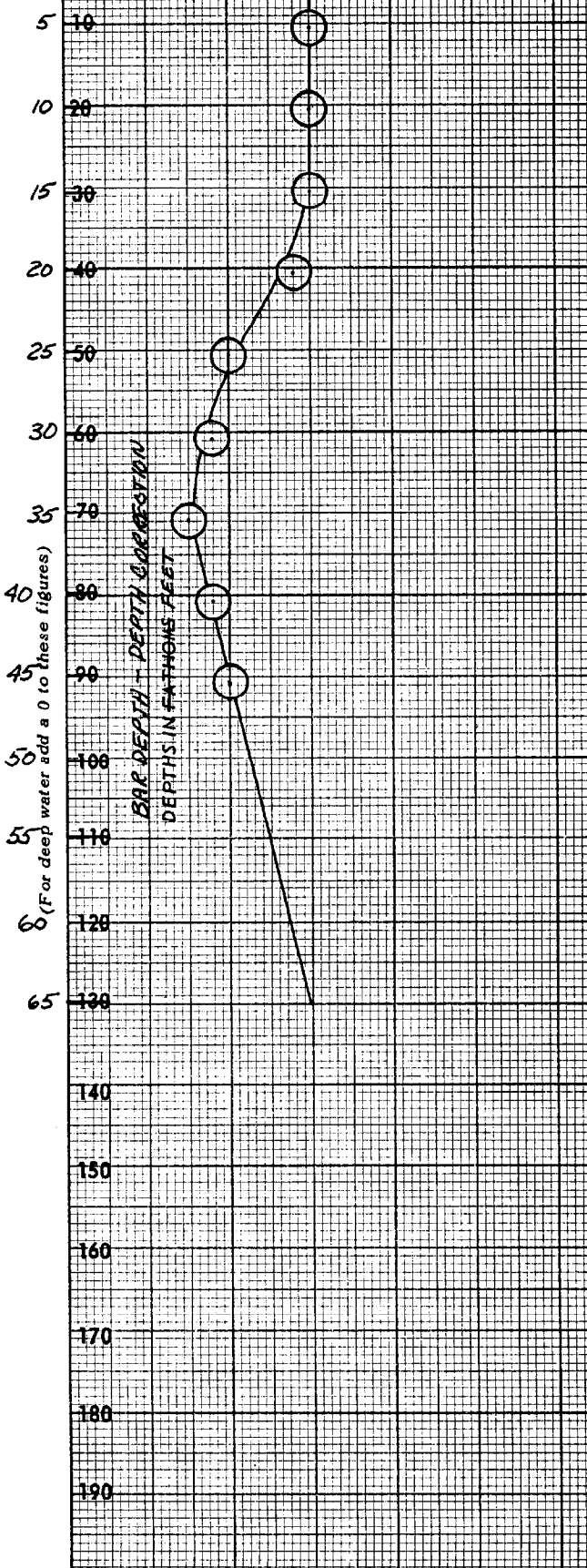


TABLE 1

DEPTH	CORRECTION
0.0 - 8.6	-0.4
8.6 - 33.9	-0.2
33.9 - 45.6	0.0
45.6 - 56.6	+0.2

-6 -5 -4 -3 -2 -1 0 +1 +2
(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET FATHOMS



NOAA FORM 16-21
10-72 U.S. DEPARTMENT OF COMMERCE
NOAA NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship ANPLAUNCHER 1277
W.A. WERT Comdr.

These corrections are to be used
between 17 NOV 1975 and 23 NOV 1975
in the locality BALTIMORE HARBOR

for hydrographic surveys Nos. H-9582

TABLE 2

DEPTH	CORRECTION
0.0-65.0	-0.4

SETTLEMENT & SQUAT

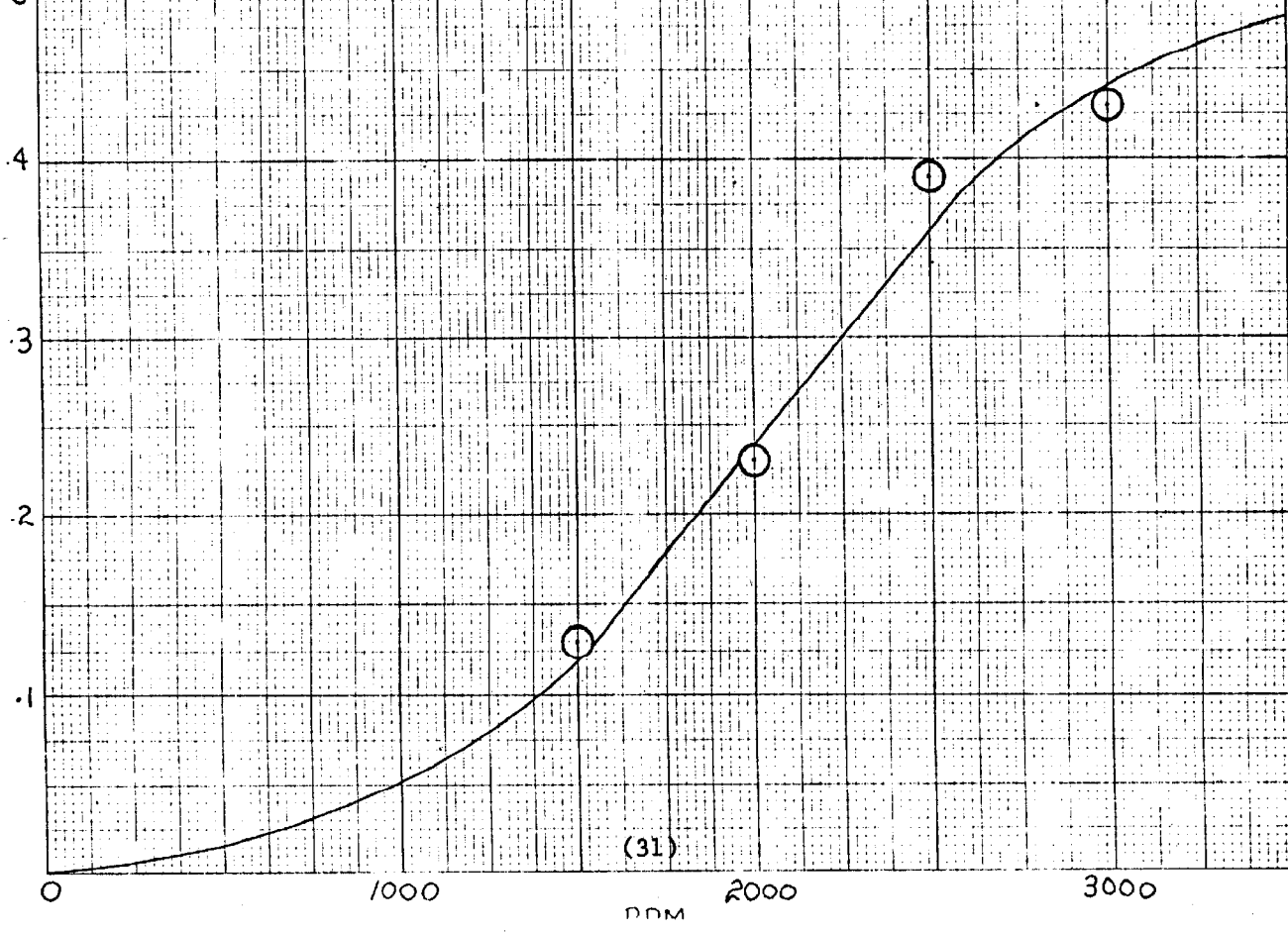
LAUNCH 1277

MAY 7, 1974

ABSTRACT OF SETTLEMENT & SQUAT

RPM	CORRECTION (FT)
0-1499	0.0
1500-2000	+0.2
2001-3000	+0.4

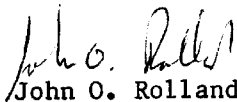
CORRECTION (FT)



APPROVAL SHEET

SURVEY H-9582 AHP-05-10-75

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



John O. Rolland
LCDR, NOAA

Chief, Atlantic Hydrographic Party

H-9582

VELOCITY CORRECTIONS FOR SURVEY H 9582.

TABLE NUMBER 1. UNIT IS FEET.

DEPTH+TRA	VELOCITY	CORRECTION
8.5	-0.4	/
33.8	-0.2	/
45.4	0.0	/
56.6	0.2	/
99999.9	0.2	/

TABLE NUMBER 2. UNIT IS FEET.

DEPTH+TRA	VELOCITY	CORRECTION
65.0	-0.4	/
99999.9	-0.4	/

7

6

5

H-9582 Velocity Tables

H-9582

***** TAPEMARK *****
000085 - 0004 0001 000 127700 051075
000338 - 0002
000454 0000
000566 0002
999999 0002

Vel. Tac

***** TAPEMARK *****
000650 - 0004 0002 000 127700 051075
999999 - 0004
***** TAPEMARK *****
***** TAPEMARK *****
***** TAPEMARK *****

TG/TI H-9582 7-25-76

Tot

185704	0	0002	0001	295	127700	001975
171315	0	0000	0000	296	127700	001975
172322	0	0002	0001	296	127700	001975
183554	0	0000	0001	296	127700	001975
193104	0	0000	0000	296	127700	001975
193114	0	0002	0001	296	127700	001975
194932	0	0000	0000	296	127700	001975
195127	0	0002	0001	296	127700	001975
191011	0	0000	0000	297	127700	001975
191018	0	0002	0001	297	127700	001975
191009	0	0000	0000	301	127700	001975
191049	0	0002	0001	301	127700	001975
185846	0	0000	0000	307	127700	001975
185936	0	0002	0001	307	127700	001975
191225	0	0000	0000	307	127700	001975
191232	0	0002	0001	307	127700	001975
152512	0	0000	0000	311	127700	001975
152844	0	0002	0001	311	127700	001975
174053	0	0000	0000	315	127700	001975
174341	0	0002	0001	315	127700	001975
175618	0	0000	0000	315	127700	001975
180014	0	0002	0001	315	127700	001975
181056	0	0000	0000	315	127700	001975
181455	0	0002	0001	315	127700	001975
182722	0	0000	0000	315	127700	001975
183049	0	0002	0001	315	127700	001975
184053	0	0000	0000	315	127700	001975
184752	0	0002	0001	315	127700	001975
190732	0	0000	0000	315	127700	001975
191613	0	0002	0001	315	127700	001975
192526	0	0000	0000	315	127700	001975
192930	0	0002	0001	315	127700	001975
193629	0	0000	0000	315	127700	001975
193733	0	0002	0001	315	127700	001975
194611	0	0000	0000	315	127700	001975
194625	0	0002	0001	315	127700	001975
200405	0	0000	0000	315	127700	001975
200419	0	0002	0001	315	127700	001975
165534	0	0000	0000	316	127700	001975
165541	0	0002	0001	316	127700	001975
170630	0	0000	0000	316	127700	001975
170830	0	0002	0001	316	127700	001975
162236	0	0002	0002	321	127700	001975
162655	0	0000	0000	321	127700	001975
162948	0	0002	0002	321	127700	001975
163942	0	0000	0000	321	127700	001975
165118	0	0002	0002	321	127700	001975
170047	0	0000	0000	321	127700	001975
170344	0	0002	0002	321	127700	001975
171657	0	0000	0000	321	127700	001975
172011	0	0002	0002	321	127700	001975
173258	0	0000	0000	321	127700	001975
173909	0	0002	0002	321	127700	001975
184925	0	0000	0000	321	127700	001975
185451	0	0002	0002	321	127700	001975
163025	0	0000	0002	327	127700	001975
193710	0	0002	0002	327	127700	001975
193710	0	0000	0000	400	127700	000000

***** TAPEMARK *****

***** TAPEMARK *****

***** TAPEMARK *****

7

6

5

4

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9582

- 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.

Date: Feb. 22, 1977

Signed:

William J. Janno

Title: Chief, Verification Branch

- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: 3-1-77

Signed:

RA Trausch

Title: Chief, Processing Division

GEOGRAPHIC NAMES

H-9582

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			
BREWERTON ANGLE											1
BREWERTON CHANNEL											2
COAL PIER CHANNEL											3
FORT CARROLL											4
FORT MCHENRY CHANNEL											5
HAWKINS POINT											6
HAWKINS POINT SHOAL											7
MARINE CHANNEL											8
PATAPSCO RIVER											9
SPARROWS POINT											10
SPARROWS POINT (Pp)											11
SPARROWS POINT CHANNEL											12
											13
											14
											15
											16
											17
											18
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											25

Approved:

Chas. E. Harrington
Chief Geographer - C3x5

20 APRIL 1977
7 JAN. 1981

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. **H-9582**
AHP-05-10-75

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET with smooth PNO & excess overlay		I	BOAT SHEETS (3 parts, paper)		I	
DESCRIPTIVE REPORT		I	OVERLAYS (preliminary)		2	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1-smooth			X
CAHIERS	I accordion folder *					
VOLUMES						
BOXES			XK			

T-SHEET PRINTS (List) * fathograms, printouts, tides & misc. data

SPECIAL REPORTS (List)

(in cahier) Control Report by Photo Party 6I, dated Oct. 1975

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				2840
POSITIONS CHECKED		300		
POSITIONS REVISED		145		
DEPTH SOUNDINGS REVISED		130		
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		16		
JUNCTIONS		2		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		24		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		219		
TOTALS		261		

PRE-VERIFICATION BY J. Griffin	BEGINNING DATE 3/15/76	ENDING DATE 3/15/76
VERIFICATION BY D. V. Mason and R. G. Roberson	BEGINNING DATE 6/30/76	ENDING DATE 9/9/76
REVIEW BY H. R. Smith	BEGINNING DATE 9/30/76	ENDING DATE 2/23/77

Q. G. Wellman 4/19/77 42 hrs
Carstensen 5/6/77 13 hrs * U.S. G.P.O. 1972-769-562/439 REG.#6

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-9582

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:

During update the 1-foot sounding at record #13800 should be revised in the data bank to effect a future automated plot of a rock awash symbol. Other revisions made during quality control inspection have been annotated in the Smooth Plot P/O.

H-9582

Items for Future Presurvey Reviews

The following charted items should be investigated and verified or disproved by formal wire-drag survey or other appropriate means.

<u>Item</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Source</u>
Submerged Wreck PA	39°12.03'	76°27.93'	NM 49/68
Visible Wreck PA	39°12.61'	76°32.07'	LNM 18/72
Submerged Wreck PA	39°12.70'	76°30.06'	LNM 37/70
Obstruction	39°12.27'	76°31.71') CL 317/48
Obstruction	39°11.76'	76°30.98'	
Obstruction	39°11.51'	76°30.80'	
Pier Ruins	39°12.49'	76°31.95'	H-4371 (1924)

<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>
391	0764	4	8	25 years
391	0763	3	8	25 years

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO: H-9582
FIELD NO: AHP-05-10-75
LOCATION: Baltimore Harbor
Hawkins Point to
Sparrows Point
SURVEYED: 22 Oct. to 23 Nov. 1975
SCALE: 1:5,000
PROJECT NO: OPR-514-AHP-75
SOUNDINGS: Raytheon Fathometer
DE-723D
Pole
CONTROL: Del Norte
Range Azimuth

Chief of Party: J. O. Rolland
Surveyed by: W. A. Wert
F. L. Kleinschmidt
D. M. Bryant
E. W. Fanning
Automated Plot by: Calcomp Plotter #618 (AMC)
Verified and Inked by: H. R. Smith

1. Introduction

No unusual problems were encountered during the verification of this survey.

2. Control and Shoreline

- a. The control is adequately described in the Descriptive Report and the Control Report - Photo Party 61, dated October 1975.
- b. The shoreline was taken from Class I, final compilation, unreviewed manuscripts: TP-00843, TP-00844, TP-00846, and TP-00847. Date of photography, Oct. 1974, Field edit, Nov. 1975.

3. Hydrography

- a. The depths at crossings are in excellent agreement.
- b. Standard depth curves 6, 12, 18, and 30 adequately represent the bottom.
- c. The development of the bottom configuration is considered adequate.

4. Condition of Survey

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

- a. No sounding volumes were used as required by Sec. 4.8.3.1 of the Manual.
- b. The Approval Sheet, page 32 of the Descriptive Report, is incomplete ~~was required by Sec. 5.3.10), of the Manual.~~
(See provisional manual -

5. Junctions

- a. H-9562 (1975), 1:5,000 - south and east
- b. H-9643 (1976), 1:5,000 - northeast
- c. H-9563 (1975), 1:5,000 - northwest

None of the above surveys have been received at AMC.

6. Comparison with Prior Surveys

- a. 2358 (1898), 1:10,000
2395 (1899), 1:10,000
4371 (1924), 1:10,000
6210 (1937), 1:10,000

A comparison between the present survey and the above prior surveys, which cover the common area, reveals considerable change in the shoreline due to filling and construction. Channels in the area have been dredged deeper and wider. Otherwise, the bottom configuration and general depth reveal only minor changes.

The one-foot rock charted at Lat. 39°12.22', Long. 76°27.03' (dashed circled unnumbered Pre-Survey Review Item).⁹⁷ The present survey developed the area with a four-foot depth taken from the fathogram. Diver or wire-drag is considered necessary to determine the least depth on the rock. The one-foot depth is carried forward from prior survey ~~H-2358~~ to the present survey. (See Q.C. Report -
H-4371 (1924) item 3)

Except as noted above, the present survey is adequate to supersede the prior surveys in the common area.

6. Comparison with Prior Surveys (continued)

- d. Pre-Survey Review Item #26, which originates with NOS Wire-Drag Investigation Chart Letter 317 (1948). This item is discussed elsewhere in this report. Par. 744, pg. 4

7. Comparison with Charts

- 12281 (formerly C&GS #545), 30th ED., dated August 16, 1975
 12278 (formerly C&GS #549), 4²rd ED., dated ~~April 3, 1976~~ (See Q.C. Report
 October 4, 1975 item 5)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys, which require no further consideration,

Attention is directed to the following: (See Q.C. Report-item 6)

- (1) The dangerous sunken wreck, PA, Pre-Survey Item #18, charted at Lat. 39°12.03', Long. 76°27.93' originates with Notice to Mariners No. 49 of 1968. The present survey developed the area and the fathogram was examined with no indication of the wreck found. It is recommended that the wreck remain charted as is until proved or disproved by diver or wire-drag. See DR, para K page 6. RWD 9/80 ✓
- (2) The visible wreck, PA, Pre-Survey Item No. 23, charted at Lat. 39°12.61', Long. 76°32.07' originates with Local Notice to Mariners No. 18, 1972. A visual examination was made in the area with no indication of the wreck found. As this wreck is reported to be a 22-foot cabin cruiser partially submerged and tied to a rock and was not found by a visible search, it is recommended that the visible wreck symbol be replaced with the dangerous sunken wreck symbol on the chart until the item can be proved or disproved by diver. ✓
- (3) The dangerous sunken wreck, PA, Pre-Survey Review Item No. 24, charted in Lat. 39°12.7', Long. 76°30.06' originates with Local Notice to Mariners No. 37 of 1970. Although the Descriptive Report lists this item as having been searched for with closely spaced lines, the data contain no such examination. It is recommended that this item be located by diver or wire-drag at the earliest convenient time because of ✓

7. Comparison with Charts (continued)

its location (PA) near the dredge channel (it is noted that the Descriptive Report lists the area as being filled). It is recommended that the dangerous sunken wreck symbol be retained as charted.

- (4) The obstructions a, b, and c, Pre-Survey Review Item No. 26, originates with NOS Wire-Drag Investigation Chart Letter 317 of 1948, charted at:

- a. Lat. 39°12.27', Long. 76°31.71' Delete From chart
 b. Lat. 39°11.76', Long. 76°30.98' " " "
 c. Lat. 39°11.51', Long. 76°30.80' " " "

See D.R. of H-9562 (1975-76), para K, Item 26, page 10 RWD

The present survey searched for each of these obstructions. The fathogram was examined with no obstructions found. Depths of 10, 15, and 14 feet, respectively, were found. It is recommended that the obstructions and cleared depths remain charted until proved or disproved by diver or wire-drag.

- (5) A wreck, bare 10 feet at MHW, taken from Manuscript TP-00843 and located at Lat. 39°12'31", Long. 76°31'44". This wreck was not included in the Pre-Survey Review or located by the present survey. It is recommended that this item be added to the chart as it is plotted on the smooth sheet.

(6) and (7) See Q.C. Report-item 7

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

2 b. Controlling Depths

The charted controlling depths for Brewerton Channel and Brewerton Angle are from Corps of Engineers information of 1975^{59 and 1971}. The present survey indicates a 36-foot depth^{34 and} in the outside (left and right) quarters of Brewerton Angle. The chart (54^g) indicates 40.8 and 41-feet, respectively.⁵

c. Aids to Navigation

The aids to navigation in the present survey are in substantial agreement with the chart and adequately serve the purposes intended. (See Q.C. Report-item 8)

8. Compliance with Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

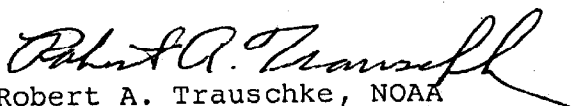
This is a very good basic survey. Additional field work is not recommended except as noted in this report.

10. Additional Notes

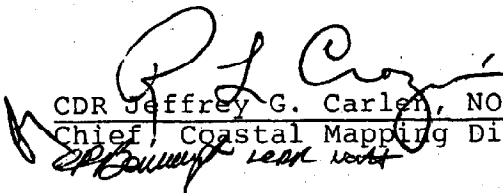
- a. Suggest that additional work should have been accomplished in and around Sparrows Point Ore Pier and also inside Sparrows Point and around Sparrows Point Dry Dock, or documentation of existing circumstances during time of hydrography.
- b. Additional work or delineation^{of} of MLW needed in vicinity of Swan Creek, southwest corner.

Survey H-9582

Examined and Approved:
Hydrographic Inspection Team
Date: February 24, 1978



CDR Robert A. Trauschke, NOAA
Chief, Processing Division



CDR Jeffrey G. Carlen, NOAA
Chief, Coastal Mapping Division



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



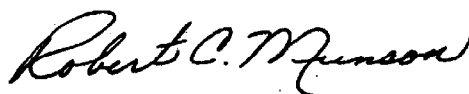
William L. Jonns
Chief, Verification Branch



Guy F. Trefethen
Verification Branch

~~SECRET~~

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

April 19, 1977

A. J. Patrick
TO: 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-9582 (1975), Maryland, Baltimore Harbor, Hawkins Point to Sparrows Point

A quality control inspection of H-9582 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 sheets H-9562 (1975), H-9563 (1975), and H-9643 (1975) are not available for inspection of the junctions. The junctions will be considered during the course of the quality control inspections of the adjoining surveys.

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

1. The position of Sparrow Point Dry Dock Light P4 falls approximately 25 meters north of electronic control station 12 (Drydock, 1975). The control station (Drydock, 1975) was erroneously identified as ". . . Light P4" during verification. The apparent displacement of the signal necessitated an examination of the records to determine the correct status of the electronic control station. During quality control inspection the station name on the smooth sheet was revised to Drydock, 1975 and Sparrow Point Dry Dock Light P4 was added and appropriately annotated on the smooth sheet.
2. Triangulation station Hawkins Point, The Glidden Company Water Tank, 1957 in latitude $39^{\circ}12'26.192''$, longitude $76^{\circ}32'27.614''$ was plotted in error approximately 30 meters to the northeast of its actual position. In addition, this triangulation station was improperly symbolized as a



landmark rather than a triangulation station. (See provisional manual--section 7.3.3.1 and Appendix B--Cartographic Code 139.) The position and symbol were revised during quality control inspection.

3. A submerged rock (4 feet) was improperly annotated in latitude $39^{\circ}12.22'$, longitude $76^{\circ}27.94'$. The development in the area was intended to verify a charted rock (Presurvey Review dashed circled item). Inasmuch as the hydrographer did not actually note the sounding as on a rock nor claim that the rock was located, it is considered misleading to include the notation "Rk" in black ink on the smooth sheet. During quality control, a shoaler depth of 1 foot in the vicinity [designated as a pinnacle rock in the Descriptive Report of H-4371 (1924)], from prior survey H-4371 (1924) (considered to be a more reliable source than H-2358 (1898) used by the verifier), was brought forward as a rock awash--covered 1 foot at MLW. See DR. page 7.

4. The rock awash in latitude $39^{\circ}12.63'$, longitude $76^{\circ}32.15'$ was improperly symbolized by the verifier as 1 Rk. During quality control inspection the 1 Rk was revised to a rock awash symbol and annotated "cov 1 ft at MLW" (see provisional manual--appendix B, figure B-1).

5. The edition of chart 549 current at the date of the survey was not used in the chart comparison. In addition, the charts used during verification were not forwarded with the survey records [see provisional manual--sections 6.3.10 and 8.3(12)].

6. When questionable charted features are adequately disposed of by appropriate recommendations included in the Descriptive Report, it is sufficient to include a reference in the Verifier's Report (Comparison with Chart) directing attention to the appropriate section of the Descriptive Report, thereby obviating the need to include additional comments concerning the same features in the Verifier's Report [see provisional manual--section 6.6(12)]. In addition, a note indicating concurrence with, or necessary revisions to, the hydrographer's recommendations should be added to the relevant sections of the Descriptive Report.

7. Appropriate recommendations for three additional charted items not shown on the present survey were not included in section 7-A of the Verifier's Report (Comparison with Chart).

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

(6) The pier in the vicinity of latitude $39^{\circ}12.10'$, longitude $76^{\circ}28.90'$ is charted as extending approximately 595 meters beyond the maximum extent as shown on TP-00847 and the present survey. It was extended on the chart through an erroneous interpretation of L 1129B/1973. The chart should be revised as considered appropriate.

L 1129/73, "B", Length shown on the permit was 594.7m (1950') as charted
 Length was revised on charts 12281(545), 12278(549) from TP 00847, Dashed
 Line was deleted from this report. JWC 8-1-77

^P(7) The submerged wreck charted in latitude 39°12.32', longitude 76°32.05' originates with H-2358 (1898) which shows a wreck at a depth of 5 feet. The present survey shows a line of soundings (depths of 2 to 3 feet) within approximately 10 meters of the position of the wreck. The soundings were taken at near low water (0.2 foot of tide), with no indication of the wreck noted in the field records. Inasmuch as the existence of this wreck is not confirmed by H-4371 (1924) or the present survey, its continued existence is considered unlikely. It is no longer considered significant to navigation and should be deleted from the chart. Deleted 8-1-57 JP

(8) The area along the south shore of Sparrows Point charted as "being filled" is not delineated on the present survey and should be retained as charted. ✓

8. Section 7-C of the Verifier's Report is supplemented by the following: ✓

The following charted floating aids to navigation are not shown on the present survey.

<u>Buoy</u>	<u>Latitude</u>	<u>Longitude</u>
C"9"	39°12.36'	76°29.08'
N"10"	39°12.36'	76°29.00'
C"11"	39°12.44'	76°29.12'
N"12"	39°12.56'	76°28.93'

These charted aids to navigation adequately mark the intended features.

9. The Verifier's Report is not accompanied by a H.I.T. Report as required by section 8.1 of the provisional manual. ✓

10. Numerous descriptive notations on piles above MHW were improperly lettered in slanting letters instead of vertical (see provisional manual--section 7.2.5.2). ✓

11. In gently sloping areas depth curves were drawn toward the center of limiting soundings rather than including the sounding as is the desired practice (see provisional manual--sections 6.3.4.4 and 7.3.9.1). ✓

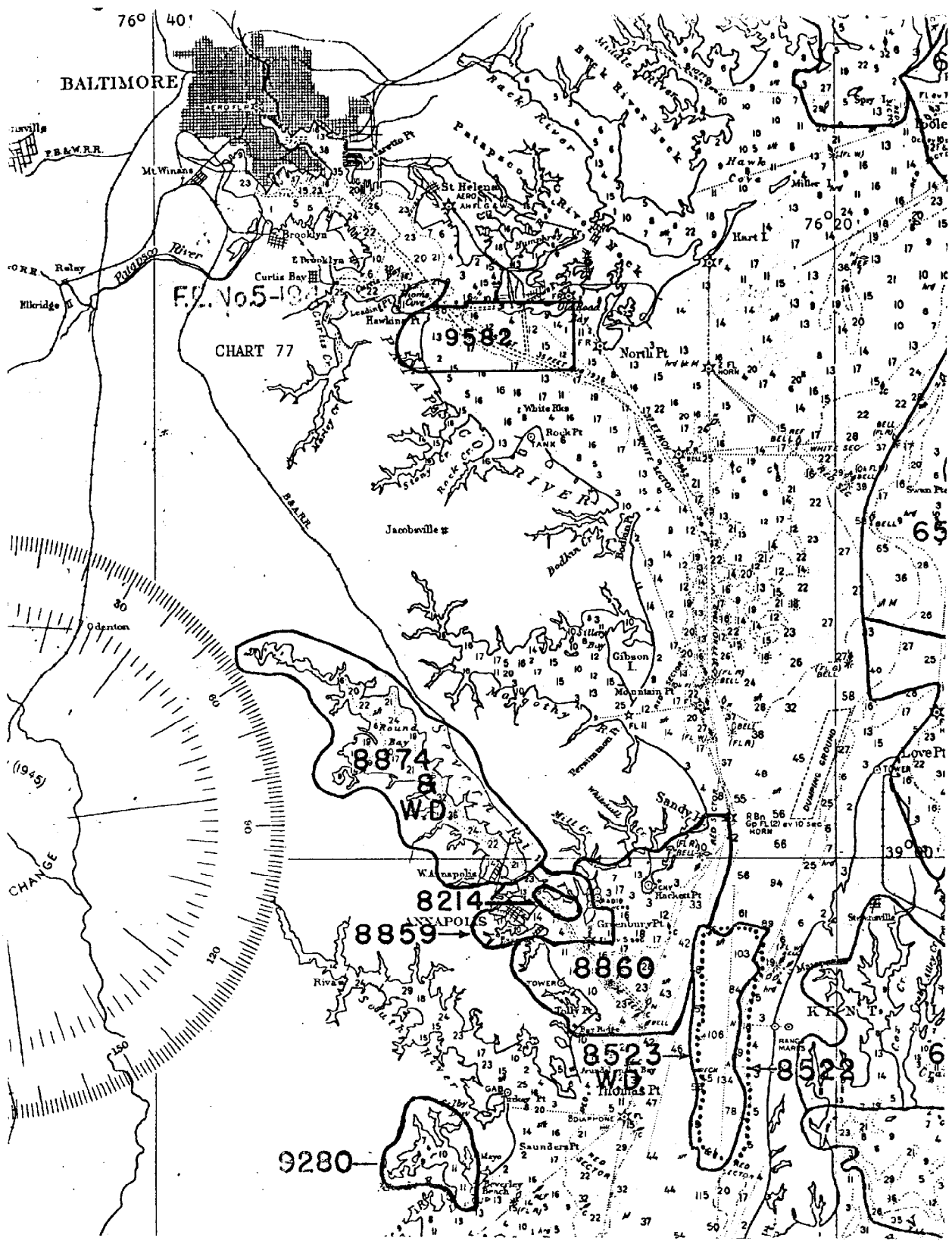
12. Annotations of arcs with centers off the position number overlay should include the signal number rather than just the signal name. ✓

13. The pier in the vicinity of latitude 39°12.49', longitude 76°31.95', on H-4371 (1924), is not verified or disproved by the present survey. Inasmuch as submerged remnants of this pier may still be extant, it was brought forward as submerged pier ruins and appropriately annotated as such during quality control inspection. ✓

14. Geodetic control stations are customarily identified with vertical red lettering on the smooth sheet. If the control station name does not obviously identify the published light list designation of a station used as an aid to navigation, then the published light list name is added in slanted lettering below the control station name on the smooth sheet (see provisional manual--sections 7.2.5.2 and 7.3.11.1).

The applicable station names were omitted from the smooth sheet; the stations being identified by only the light list name in slanting letters during verification. Two of the stations had been erroneously identified; e.g., Drydock 1975 and Brewerton Front Range, 1975, which are eccentric from, but were identified as, Sparrow Point Dry Dock Light P4 and Brewerton Channel Range Front Light respectively. The names of the two misidentified stations were revised and lettered with vertical lettering during quality control inspection; however, it is not considered necessary to revise the lettering identifying the remaining stations.

cc:
C351



76° 40'

BALTIMORE

F.L. No 5-19

CHART 77

9582

65

8874

8214

8859

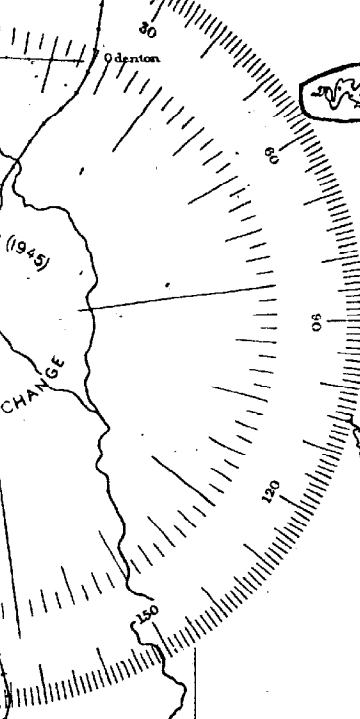
8860

8523

9280

(1945)

CHANGE



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9582

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
545	7/20/77	<i>Birvine</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. 45
549	7/29/77	<i>D. Harpine</i>	Full Part Before After Verification Review Inspection Signed Via Drawing No. 59 <i>Appd thru chart 545</i>
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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