10042

Diagram No. 294-2 & 295-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic

Field No. ... HSB-10-8-82

Registery No. ... H-10042

LOCALITY

State ... Delaware--New Jersey

General Locality ... Delaware River

Sublocality ... New Castle Flats to Cherry Island Flats

19 82

CHIEF OF PARTY
LCDR G.W. Jamerson

LIBRARY & ARCHIVES

DATE ... October 16, 1986

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

10042

Area 1
charts:
12312
12311
} For Sign-off See Record of Application

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

HYDROGRAPHIC TITLE SHEET

H-10042

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. HSB-10-9-82

State Delaware ~~- New Jersey~~

General locality Delaware River

Locality New Castle Flats to Cherry Island Flats ~~to New Castle Flats~~

Scale 1:10,000 Date of survey 26 August to 2 Nov. 1982

Instructions dated 8 March 1982 Project No. OPR-D218-HSB-82

Vessel NOAA Launch 1283 & Launch 519

Chief of party George W. Jamerson, LCDR., NOAA

Surveyed by Robert Snow (AOIC) HFP3 & Brian Link (AIOC) HFP5

Soundings taken by echo sounder, ~~hand lead~~, pole Raytheon 719-B

Graphic record scaled by CFB, DBE, MJM, RS, BAL, JMR, CSW

Graphic record checked by RS & BAL

Protracted by N/A ~~Field sheet FDR-8/E~~ Automated plot by AMC Xynetics 1200 Plotter

Verification by AMC - Verification Section R.L. Keene

Soundings in ~~fathoms~~ feet at ~~MLW~~ ~~XXXXXX~~ MLLW

REMARKS: All survey times are Coordinated Universal Time

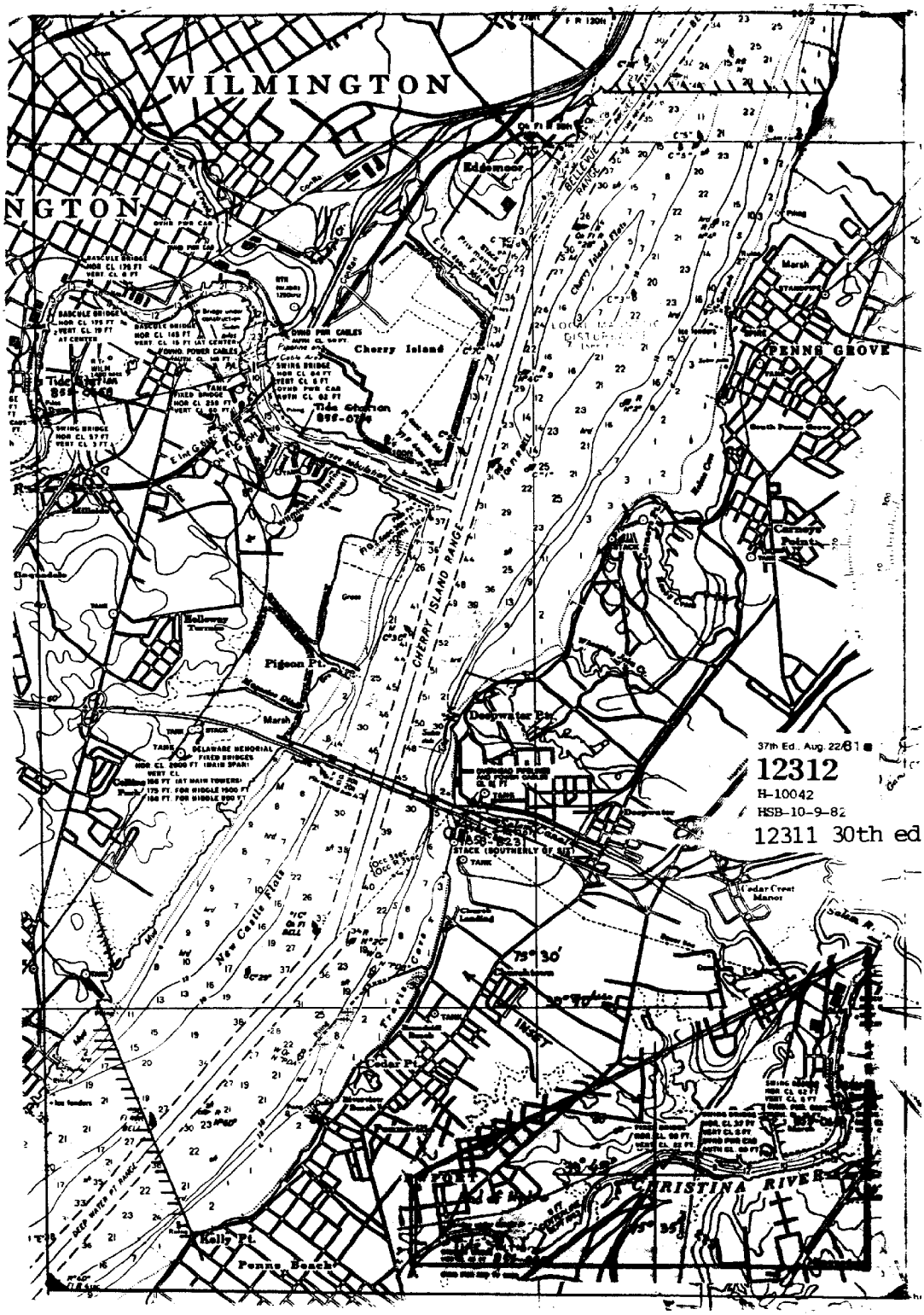
CFB - Carl Bush
DBE, Dave Elliott
MJM - Mark McMann
RS - Robert Snow
BAL - Brian Link
JMR - Mike Robinette
CSW - Steve Weisner

Notes in red appended to Descriptive Report were inserted during office processing.

AWOIS/SURF CmSm 10/31/86

☆ U.S. GPO: 1974-0-768-081/1207

INDEX


WILMINGTON
Edgemoor
Cherry Island
PENNS GROVE
Pigeon Pt.
Marsh
CHERRY ISLAND RANGE
New Castle Flats
Kelly Pt.
Penns Beach
CHRISTINA RIVER
37th Ed. Aug. 22/81
12312
H-10042
HSB-10-9-82
12311 30th ed

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10042
HSB-10-9-82

Scale: 1:10,000
Chief of Party: Lt. Cdr. George W. Jamerson
Assistant Officer in Charge: Mr. Robert Snow
Hydrographic Surveys Branch, Hydrographic Field Party #3 and 5
Launches 1283 and 519

A. PROJECT

This survey was accomplished under Project Instructions OPR-D218 dated March 4, 1982 and amended by Change No. 1 dated April 21, 1982.

B. AREA SURVEYED

The area surveyed was the Delaware River from Cherry Island Flats to New Castle Flats, including the Christina River and Brandywine Creek and bounded by the following points:

Latitude 39°39'30"N, Longitude 75°33'35"W
Latitude 39°45'15"N, Longitude 75°27'45"W

This survey was conducted from August 26, 1982 to November 2, 1982 (JD 238 to 306) inclusive.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launches 1283 and 519 (EDP # 1283 and 519). All survey records are annotated with the vessel numbers 1283 and 519.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon fathometer equipment was used during the survey:

Launch 1283:	JD 238 - 306	Recorder	Model #719B Serial #6211
Launch 519:	JD 288 - 300	Recorder	Model #719B Serial #7727

No unusual problems were encountered with this equipment. The fathometer was monitored continuously while sounding and was under constant adjustment to insure that no initial corrections were necessary.

Settlement and squat tests on Launches 1283 and 519 were run on October 15, 1982/October 21, 1982 at Delaware River/ Delaware River. The results of these tests are included in

the Appendix of this report. Settlement and squat corrections will be applied via the TC/TI tape during plotting of the smooth sheet at the Atlantic Marine Center and were not applied to the field sheets.

Velocity and instrument corrections were determined by barchecks taken twice daily, weather and sea conditions permitting. The lengths of the line on the bar were checked on August 24, 1982 and November 8, 1982. The results of this inspection showed that no correction was necessary.

E. SURVEY SHEETS

The field sheets were prepared in the field using a PDP8/e computer and a DP-3 complot plotter. Work sheets, semi-smooth sheets, smooth field sheets, and overlay sheets are included with this survey. Mainscheme hydrography and crosslines are plotted on the smooth field sheets while developments, splits, bottom samples, prior survey soundings, junctions soundings, charted soundings, presurvey review items, and aids to navigation are shown on various overlay sheets. Projection parameter tape listing for the field sheets is included in the Appendix of this report. The final smooth sheet and verification of this survey will be accomplished at the Atlantic Marine Center on the Harris/7 computer and the Xynetics 1201 plotter.

F. CONTROL STATIONS

Control stations used during this survey were either existing geodetic control stations published by National Geodetic Survey or were established by Hydrographic Surveys Branch Field Support Group to third order or better standards. All stations are referred to the North American 1927 datum. A list of all control stations used during this survey is included in the Appendix of this report.

G. HYDROGRAPHIC POSITION CONTROL

The method used to control this survey was Range/Azimuth and Range/Range. The equipment used to control this survey was:

Launch 1283		Launch 519	
Del Norte Master	#76-162	Del Norte Master	#78-263
Del Norte Remote	#76-251	Del Norte Remote	#74-222
	#78-220		#72-180
Del Norte DMU	#395	Del Norte DMU	#517
Wild T1	#13017		

No problems were encountered with the use of this equipment. The control equipment was calibrated twice daily between control stations using distances computed with program RK407. Del Norte corrections were applied by corrector tapes to the field sheets and will be applied during smooth plotting at AMC. Correctors were determined from the daily calibrations, as they were congruent with base line data and appear to be more accurate for each day's hydrography.

H. SHORELINE

Shoreline detail for this survey was obtained from class III photo manuscripts TP-00246, TP00247, TP00248, and TP00249 dated 1979, Chart #12311 blown up to the scale of the survey 29th Edition dated Autust 16, 1980.
See Eval. Report for topo and chart comparisons.

Shoreline corrections were necessary at Lat 39°42'50", Lon 75°28'50" in Helms Cove a small island is shown on the chart and T-sheet that is no longer there.

Photogrammetric locations of piles and other salient features from the manuscript were checked by hydrographic Range/Azimuth and Range/Range means. See list of features and charting recommendations in accordian file containing fathograms.
See Eval. Report, sec. 4 a.

I. CROSSLINES

Crosslines constitute 30% of the mainscheme hydrography. Ninety percent (90%) of the crossings agree within one foot. No soundings are in disagreement at crossing by more than two feet.

J. JUNCTIONS

This survey junctions with the following survey:

H-10027 to the North.

Ninety per cent (90%) of these junction soundings agree within one foot when compared with the current survey and none of the junction soundings are in disagreement by more than two feet.

The hydrographer recommends that in the junction areas, the soundings from the present survey be charted.

K. COMPARISON WITH PRIOR SURVEYS

This survey was previously covered by the following surveys:

~~1. H-1501b (1881), 1:5,000 scale~~
2. H-1502a (1881), 1:5,000 scale
3. H-1502b (1881), 1:5,000 scale
4. H-1503a (1881), 1:10,000 scale
5. H-2497 (1900), 1:9,600 scale

Comparison showed that significant changes have been made due to dredging to maintain the ship channel. Strong currents and ice flows have deepened areas near dredged channels. Concur

~~Where discrepancies exist~~, I~~t~~ is recommended that the soundings from the present survey supersede the prior surveys' soundings.

L. COMPARISON WITH THE CHART

This survey was compared as the survey progressed with Chart 12311, 29th Edition and with Chart 12312, 37th Edition, blown up to the scale of the survey. The following presurvey review items were investigated during this survey:

PSR Item #78 was searched for on JD 295 for one hour. The barge was reported in 1975 to be barges aground at Lat. 39°40'11", Lon 75°30'52". Area of charted wreck was inspected at extremely low tide. Area in vicinity of item 78 was exposed at time of search with no evidence of barge remains. Awois #1408

The hydrographer recommends that submerged wreck be deleted from chart. Concur. See Eval. Report, sec. 7.c.16. Chtd.

PSR Item #76 - The submerged wreck was reported in 1979 at Lat 39°43'43.00", Lon 75°32'06.00". The wreck was found on JD 301. A detached position was taken Position #2021. ~~Sub~~ Stranded ~~merged~~ wreck should ~~remain~~ be charted at Lat 39°43'49.~~150~~, .080" Lon 75°32'04.249". (awash at time of survey) Awois #1414

PSR Item #77 - The sunken ship was reported in 1975 at Lat 39°43'57.00", Lon 75°33'37.00". The wreck was found on JD 302. Two detached positions were taken at the bow and stern positions #2137 - 2184. The wreck is a 110-foot ferry exposed 20 feet entire length at all stages of tide. Wreck should remain as charted with ends at Lat 39°43'56.7", Lon 75°33'38.275" and at Lat 39°43'55.10", Lon 75°33'38.75". Do not concur, chart the wreck as shown on the pros. survey. Awois #1416

PSR Item #102 - The submerged wreck was reported in 1970 at Lat 39°42'38", Lon 75°31'07". The submerged wreck was searched for on JD 295 for one hour. The water was clear and the bottom was visible. The only thing that was found at this location was two rows of piles positions #1760-1761. Delete submerged wreck and replace with piles at Lat 39°42'43.791", Lon 75°31'06.623" and Lat 39°42'38.11~~5~~", Lon 75°31'10.02~~1~~". Awois #1412

Expunge the charted submerged wreck

PSR Item #79 was searched for on JD 295 for one hour. The barge aground was reported in 1975 at Lat 39°40'08.11", Lon 75°30'52.95". The area was bare during the time of search and an 8"X10" timber was located with a detached position #5567. The timber was found lying in an east/west orientation and is the only evidence of barge wreckage in the area. The wreck should remain charted as submerged at this location Lat 39°40'08.15", Lon 75°30'58.022". Awois #1407

Do not concur - Expunge from chart. See Eval. Report, sec 7.c.16

PSR Item #80 - The visible wreck was reported in 19~~75~~ 76 at Lat 39°39'58.04", Lon 75°31'25.17". The wreck was found on JD 295. Two detached positions were taken, position #5564 - 5566 on JD 295. The wreck lies in a north/south orientation. Visible wreck should remain as charted at Lat 39°39'57.~~0364~~, .170" Lon 75°31'~~25.873~~ 26.130". (Rep. not visible, 197 Awois #1404

Do not concur See Eval. Report, sec. 7.c.18

The four rows of piles at Lat 39°42'40", Lon 75°30'57" were searched for on JD 295 at extreme low water. The bottom was visible and an area of 200 meter radius was searched with no indication of the piles. It is recommended this feature be deleted from the chart.

Concur

(Reported not visible, 1975) 46

PSR Item #81 - The visible wreck was reported in 1975 at Lat 39°39'56.03", Lon 75°31'27.68". The wreck was found on JD 295. Two detached positions were taken, positions 5562 - 5563. The wreck lies in a north/south orientation. Chart as visible wreck at Lat 39°39'51.83", Lon 75°31'30.73". Awois #1403

Do not concur, see Eval. Report, sec. 7.c.18

PSR Item #82 - The visible wreck was reported in 1975 at Lat 39°39'52.59", Lon 75°31'30.41". The wreck was found on JD 295. Two detached positions were taken, positions 5560 - 5561. The wreck lies in a north/south orientation. Remain as charted but as submerged wreck at Lat 39°39'47.02", Lon 75°31'35.31". Chart 12311 30th Edition was received after the survey was completed. The above comparisons also pertain to the 30th Edition. Awois #1402

M. ADEQUACY OF SURVEY Chart wreck as shown on present survey See Eval. Report, sec 7.c.19.

This survey is complete and adequate to warrant its use to supersede prior surveys for charting in the common areas. concur

N. AIDS TO NAVIGATION See Eval. Report, sec 7.c and 7.f

All floating and fixed aids to navigation in the survey area were located and comparisons between their charted, Light List (Vol. 1, 1982), and surveyed positions and descriptions were made. All aids were found to adequately serve the apparent purpose for which they were established. Do not concur All landmarks were found to be correctly charted.

Cable and bridge clearances were checked and found to be accurately charted. A D.P. was not obtained on Cherry Island Flats East Channel Buoy 5. It was observed to be on station during hydro operations.

O. STATISTICS

Number of positions	2997
Nautical miles of sounding line	12.5
Nautical miles of crossline	41.1
Nautical miles of development	39.5
Total miles of hydrography	261.6
Number of bottom samples	64
Number of barchecks	38
Number of TDC casts	N/A

P. MISCELLANEOUS

1) On JD 295 Brandywine Creek was surveyed by "See Field Sheet" method from Position # 1793 to Position # 1812. A centerline was conducted from the Market Street Bridge down river to the mouth were it intersects with the Christina River 1.6 miles above the mouth. The Coast Pilot #3 was referred to and deemed adequate in its description of Brandywine Creek.

2) On JD 300 the upper half of the Christina River was surveyed by "See Field Sheet" method from Position # 1813 to Position # 1836. A centerline was conducted from the Water Street Bridge at Newport, Delaware to the railroad bridge at Lat 39°43.5', Lon 75°33.6'. The Coast Pilot #3 was referred to and deemed adequate in its description of the Christina River.

Q. RECOMMENDATIONS

See Sections H, L, and P for specific recommendations.

R. AUTOMATED DATA PROCESSING

Programs used during field data acquisition and field processing of this survey are as follows:

PROGRAM	DESCRIPTION	VERSION DATE
RK201	Grid, Signal and Lattice Plot	04/18/75
RK211	Range-range Non-real time Plot	01/15/76
RK212	Visual Station Table Load	04/01/74
RK216	Range-azimuth Non-real time Plot	02/05/76
RK300	Utility computations	02/05/76
RK330	Reformat and Data Check	05/04/76
RK407	Geodetic Inverse/Direct Computation	09/25/78
AM500	Predicted Tide Generator	11/10/72
AM602	Elinore-line oriented editor	05/20/75

S. REFERENCE TO REPORTS

Descriptive Report H-10027, 1982, 1:10,000
Descriptive Report H-9964, 1981, 1:10,000

Respectfully submitted,

Robert Snow

Robert Snow, NOAA
AOIC, HFP-3

SIGNAL LIST
H-10042
HSB-10-9-82

											61-29-NJ, 1978 FRONT LIGHT
103	1	39	48	04713	075	26	01109	250	0003	000000	MARCUS HOOK RANGE, ^ 1978
104	3	39	46	33169	075	28	32677	250	0024	000000	MOOR USE, 1932
105	3	39	45	01163	075	29	38020	250	0003	000000	CHERRY ISLAND RANGE FR.LT.1982
106	3	39	45	02234	075	29	40157	139	0008	000000	SNOW, 1982
107	4	39	44	03466	075	28	42686	250	0003	000000	~~RM.1, 1982~~ SNOW RM1, 1982
108	4	39	44	03504	075	28	43140	250	0003	000000	ELLIOTT, 1982
109	0	39	43	08391	075	30	38386	250	0002	000000	BUSH, 1982
110	4	39	42	38444	075	29	31749	250	0003	000000	~~PK PIPELINE, 1982~~
~~111~~	~~3~~	~~39~~	~~41~~	~~23932~~	~~075~~	~~31~~	~~35007~~	~~139~~	~~0003~~	~~000000~~	~~MCMANN, 1982~~
~~112~~	~~4~~	~~39~~	~~40~~	~~45383~~	~~075~~	~~31~~	~~03449~~	~~139~~	~~0003~~	~~000000~~	PK NEWCASTLE, 1982
113	0	39	39	2683~~2~~15	075	33	428~~29~~18	250	0003	000000	BM TERMINAL WEST USE, 1982
114	6	39	43	1407~~0~~44	075	31	4398~~07~~72	250	0003	000000	DEEP, 1982
115	3	39	43	2562~~0~~43	075	32	0082~~20~~12	250	0003	000000	JEANNE, 1982
116	0	39	43	41~~04~~0~~3~~73	075	32	0621~~7~~70	139	0003	000000	PK MARINA, 1982
117	4	39	44	0~~1336~~ 2003	075	32	0120~~1~~12	250	0002	000000	CHRISTINA, 1982
118	1	39	44	1114~~5~~652	075	32	1990~~8~~84	139	0003	000000	ROBINETT, 1982
119	4	39	38	43177	075	32	3222~~3~~14	250	0003	000000	PK DIAMOND, 1982
120	6	39	43	5805~~3~~35	075	32	434~~23~~27	250	0003	000000	PK OUTFALL, 1982
121	1	39	44	1259~~5~~56	075	33	2039~~8~~85	139	0003	000000	PK RUINS, 1982
122	3	39	44	02848	075	33	3573~~8~~83	250	0003	000000	JAMERSON, 1982
123	3	39	43	3241~~1~~10	075	33	431~~22~~11	250	0003	000000	BM 0658 B - 1982
124	4	39	43	2576~~8~~07	075	33	361~~24~~14	250	0004	000000	

STATIONS PK PIPELINE, PK NEWCASTLE, PK MARINA, PK DIAMOND, PK OUTFALL AND PK RUINS ARE 3RD ORDER STATIONS. NO DESCRIPTIONS WERE WRITTEN FOR THESE STATIONS AS THEY WERE NOT MONUMENTED WITH A NOS MONUMENT. THEREFORE THESE STATIONS ARE CONSIDERED UNRECOVERABLE THIRD ORDER STATIONS THIS WAS DISCUSSED WITH B. DeCROIX (HSB) ON 12/15/83

RHW

UNABLE TO LOCATE A DESCRIPTION FOR MARCUS HOOK RANGE FRONT LIGHT, 1978" LOCATED BY A.Y. BRYSON

NOAA FORM 76-40 (8-74)
Replaces C&GS Form 567.

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

NONFLOATING AIDS [redacted] FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

[X] TO BE CHARTED / [ ] TO BE REVISED / [ ] TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	HFP-3	Delaware New Jersey	Delaware River	11/3/82

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-D218		H-10042	1927 North American

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
LIGHT	(Cherry Island Range Front Lt) LL# 2231, Sig 106	39 45	02.235	75 29	40.158	Not plotted on field sheet	Triang Rec. F-6-V 10/8/82	12311 12312
LIGHT	Cherry Island Range Rear Light LL# 2232	39 45	42.99	75 29	24.36	Pos. from FFA listing TP-00246	ck. U.S.C.G. F-6-V 10/8/82	12312
LIGHT	(Deepwater Range Front Light) LL# 2220	39 40	45.354	75 31	03.351		F-2-6-L 10/8/82	12311
LIGHT	Deepwater Range Rear Light LL# 2221	39 41	07.60	75 30	38.00	Pos. from FFA listing TP-00247	F-6-V 10/8/82	12311
LIGHT	New Castle Flats Upper Dolphin Lt LL# 2236	(Not in place at time of				chart compiler check with U.S. Coast Guard for existence field investigation)		12311
LIGHT	New Castle Flats Lower Dolphin Lt LL# 2235	(Not in place at time of				chart compiler check with U.S. Coast Guard for existence. field investigation)		12311
LIGHT	Christina River Range Front Lt. LL# 2241	39 43	21.50	75 31	58.02	Pos from FFA TP-00247	F-6-V 10/8/82	12311 12312
LIGHT	Christina River Range Rear Lt. LL# 2242	39 43	24.75	75 32	07.88	Pos from FFA TP-00247	F-6-V 10/8/82	12311 12312
LIGHT	Christina North Dike Lt, LL#2243 (Christina ~~River~~ North ~~Ent~~ Dike Lt)	39 43	08.410	75 30	38.443		F-2-6-L 10/8/82	12311 12312
LIGHT	(Christina River South Jetty, Lt) LL# 2240	39 43	54.504	75 30	46.244		F-2-6-L 10/8/82	12311 12312

38

SU L-291(83)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	Robert Snow	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED OR VERIFIED	Robert Snow (AOIC)	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field Identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S.GPO:1975-0-665-080/1155

NOAA FORM 76-40 (8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS [redacted] FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [X] TO BE CHARTED
- [ ] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): HFP-3

STATE: Delaware / New Jersey

LOCALITY: Delaware River

DATE: 11/3/82

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.: OPR-D218

JOB NUMBER:

SURVEY NUMBER: H-10042

DATUM: 1927 North American

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	METHOD AND DATE OF LOCATION FIELD	CHARTS AFFECTED
LIGHT	Bell~~view~~ erae Range Front Lt, LL#2247 (Bellview Front Range Light)	39 44	06.931	75 30	15.612		Triang Rec 6/12/82	12311 12312
LIGHT	Bell~~view~~ erae Range Rear Lt, LL#2248 (Bellview Rear Range Light)	39 43	12.702	75 31	05.633		F-2-6-L 10/8/82	12311 12312
LIGHT	Edgemoor Outfall Light, LL#2247.10	39 44	07.801	75 30	15.296		Triang Rec 10/24/82	12311 12312
LIGHT	(Marcus Hook Range ~~Rear~~ FRONT Light) LL#2255) Sig. 104	39 46	33.169	75 28	32.677	Off smooth sheet	Triang Rec 6/12/82	12312
	NOTE: Landmarks in the vicinity of this survey were checked and found to be adequately charted. No additions, revisions or deletions to be reported. All aids with G.P.s from Fixed and Floating Aids Listing ~~will be~~ located ~~by~~ third order methods during the Spring of 1983 - A revised 76-40 will be submitted at that time.							

(83) SL-291 (83)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	Robert Snow	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	Robert Snow (AOIC)	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field Identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U. S. GPO:1975-0-665-080/1155

APPROVAL SHEET
SURVEY H-10042 (HSB-10-9-82)

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

No direct supervision was given by me during field work and the field sheet was examined only during routine field inspection of the hydro party by the former Chief of Party, Lt. Cdr. George W. Jamerson.

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

Ronald W. Jones
Lt. Cdr., NOAA
Chief, Hydrographic Field Parties Section

NOAA FORM 61-29
(12-71)

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

LETTER TRANSMITTING DATA

REFERENCE NO.
MOA23-114-86

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL
☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL *(Give number)* _____

TO:

Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
Rockville, MD 20852

DATE FORWARDED
6 October 1986

NUMBER OF PACKAGES
two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10042 (HSB-10-9-82)
OPR-D218-HSB-82--Delaware River

Pkg 1: (tube)
1 Smooth Sheet
1 Position Overlay
2 Excess Overlays (Levels 1/3 and 2&3/3)
1 Original Descriptive Report

Pkg 2: (box)
1 Cahier-Position Printout/Control Listing
1 Cahier-Sounding Printout/L-File Listing
1 Package of material removed from Original Descriptive Report (to be filed with original survey records)

FROM: *(Signature)*

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10042

Number of positions	2879
Number of soundings	11743
Number of control stations	29

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	31	17 MAR 83
Verification of Field Data	570	21 AUG 85
Quality Control Checks	274	
Evaluation and Analysis	100	26 DEC 85
Final Inspection	40	17 JAN 86
TOTAL TIME	1015	
Marine Center Approval		13 FEB 86

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10042

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	
. BRANDRIFF BEACH (locality)										1
. BRANDYWINE CREEK										2
. CARNEYS POINT										3
. CARNEYS POINT (locality)										4
. CEDAR POINT										5
. CHERRY ISLAND										6
. CHERRY ISLAND FLATS										7
. CHRISTINA RIVER										8
. CHURCH LANDING										9
. DEEPWATER										10
. DEEPWATER POINT										11
. DELAWARE (title)										12
. DELAWARE RIVER										13
. EDGEMOOR										14
. HELMS COVE										15
. LOBDELL CANAL										16
. NEW CASTLE										17
. NEW CASTLE FLATS										18
. NEW JERSEY (title)										19
. NEWPORT										20
. PENNS GROVE (locality)										21
. PENNSVILLE										22
. PIGEON POINT										23
. RIVERVIEW BEACH (locality)										24
. SALEM CANAL										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10042

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	
SOUTH PENNS GROVE (locality)										2
TRAVIS COVE										3
WHOOPING JOHN CREEK										4
WILMINGTON										5
										6
										7
										8
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										25

Approved:

Charles E. Harrington

Chief Geographer - N/CG2x5

JAN 21 1986

NOAA FORM 76-155 SUPERSEDES C&GS 197

DATE: April 27, 1983

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):
853-8231 Deepwater, NJ
855-0658 Christina River, DE
855-0714 Wilmington, DE
855-0821 Newport, DE

Period: August 25 - November 1, 1982

HYDROGRAPHIC SHEET: H-10042

OPR: D218

Locality: Delaware and Christina Rivers

Plane of reference (mean lower low water):
853-8231 = 5.65 ft.
855-0658 = 1.66 ft.
855-0714 = 2.59 ft.
855-0821 = 6.95 ft.

Height of Mean High Water above Plane of Reference is
853-8231 = 5.5 ft.
855-0621 = 5.5 ft.
855-0714 = 5.4 ft.
855-0821 - 5.1 ft.

REMARKS: Recommended Zoning:

1. In the Delaware River:

   a. North of latitude 39°40.0' zone direct on 853-8231.
   b. South of 39°40.0' zone on 853-8231, apply -10 minute time correction.

2. In the Christina River:

   a. East of longitude 75°32.5' to 75°30.7' zone direct on 855-0714.
   b. West of 75°32.5' to 75°34.0' zone direct on 855-0658.
   c. West of 75°34.0' to 75°35.5' zone on 855-0658 apply +10 minute time correction and x0.96 range ratio.
   d. West of 75°35.5' zone direct on 855-0821.

James R Hubbard

Chief, Tidal Datums Section, Tides & Water Levels Branch

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: H-10042 FIELD NO.: HSB-10-9-82

Delaware-New Jersey, Delaware River, New Castle Flats to Cherry Island Flats

SURVEYED: August 26 to November 2, 1982

SCALE: 1:10,000 PROJECT NO.: OPR-D218-HSB-82

SOUNDINGS: Raytheon Model 719-B Echo Sounder and Sounding Pole

CONTROL: Range/Azimuth Range/Range and "See Boat Sheet" method

Chief of Party ..... G. W. Jamerson

Surveyed by ..... R. Snow
..... B. A. Link

Automated Plot by ..... Xynetics 1201 Plotter (AMC)

1. INTRODUCTION

a. Problems encountered during processing are addressed in this report.

b. Notes in red were appended to Descriptive Report during office processing.

2. CONTROL AND SHORELINE

a. Control is adequately addressed in sections F and G of the Descriptive Report.

b. Shoreline is from registered Class III shoreline maps TP-00246 (1975-1978), TP-00247 (1975-1978), TP-00248 (1975), TP-00249 (1975), and TP-00250 (1975). Shoreline revisions in red are by the hydrographer. Shoreline in brown from chart 12311, 29th edition, is shown for orientation only.

3. HYDROGRAPHY

a. Depths at crossings are in agreement.

b. The standard depth curves are adequately delineated in Delaware River except for portions of the 0-foot depth curve; and sections of the depth curves inshore of the 30-foot depth curve in Christina River because of their proximity to shore. Some 3-foot depth curves, brown curves, and some dashed depth curves were added to emphasize shoal features. Depth curves were

compiled using all sounding levels, the smooth sheet and excess sounding overlays 1, 2, and 3.

c. Bottom coverage and the determination of least depths are considered, in general, excellent. Some pier face soundings were not acquired at a few piers.

4. CONDITION OF SURVEY

a. Some Class III shoreline map information transferred to the smooth sheet during processing was not verified at the time of the survey.

b. Verification or disproval of several charted features such as ruins, piles, and dolphins, where these features were not compiled on the contemporary shoreline maps, was generally ignored during the survey. These items were brought forward to the present survey when possible. Items charted from miscellaneous sources or considered to no longer exist are individually addressed in Section 7, Comparison with Chart, of this report.

c. The positions of items shown on the contemporary shoreline maps when located with range/azimuth or range/range detached positions on the survey are frequently in conflict. These conflicts were not addressed by the hydrographer. These items are shown on the smooth sheet as they are shown on the shoreline maps unless specifically addressed in Section 7, Comparison with Chart, of this report.

d. The hydrographer states on page 7 of the Descriptive Report that all landmarks were found to be correctly charted. However, no documentation was furnished with this survey. Perhaps the Descriptive Reports of junctional surveys H-10092 (1983) or H-10027 (1982) contain 76-40 forms documenting this statement. Also, contemporary shoreline maps of 1975-1978 show the charted landmarks and serve as a landmark source.

e. Numerous detached positions locating ends of piers, jetties, and ruins are plotted on the final field sheets and labeled with comprehensive descriptions. However, the configurations of these features are generally not delineated on these sheets nor were their delineations sketched in the sounding volumes. Office determinations of the delineations of these features are shown on the smooth sheet.

5. JUNCTIONS

Adequate junctions were effected with H-10027 (1982) on the north and H-10092 (1983) on the south.

6. COMPARISON WITH PRIOR SURVEYS

H-135 (1841) 1:10,000
H-136 (1841) 1:10,000
H-137 (1841) 1:5,000
H-138 (1842) 1:10,000
H-148 (1841-1843) 1:80,000

H-1183a (1873) 1:1,250
H-1394 (1878) 1:10,000
H-1502a (1881) 1:5,000
H-1502b (1881) 1:5,000
H-1503a (1881) 1:5,000
H-2496 (1900) 1:9,600
H-2497 (1900) 1:9,600

These prior surveys cover the area of the present survey and are dated prior to several changes resulting from Federal Channel Projects. A comparison with the present survey reveals numerous changes to shoreline and depths within the common area. Outside the main channel area, shoaling as great as 28 feet is noted. The area of New Castle Flats has deepened 2 to 6 feet. Cherry Island Flats, formerly uncovering at Mean Low Water, now has least depths of 2 to 3 feet at MLLW. Changes are attributed to land reclamation, dredging, scouring by strong currents and ice flows, accretion, and erosion.

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

7. COMPARISON WITH CHART 12311 (29th Edition, August 16, 1980, and CHART 12312, 36th Edition, August 16, 1980)

a. Hydrography

The charted hydrography generally originates with miscellaneous sources. Depths on the present survey are generally 1 to 5 feet deeper than charted depths, with some present survey depths as much as 10 to 11 feet deeper than charted depths.

Depths on the present survey are adequate to supersede charted depths.

b. Shoreline

Shoreline on the west side of the Delaware River has generally eroded. Maximum differences of 20 meters are noted. On the east side of the Delaware River, the southern portion has accreted approximately 25 meters while the northern portion has generally eroded 10 to 30 meters. The amount of change attributable to natural causes versus cultural change is not known.

Shoreline differences in Christina River and Brandywine Creek while resulting in part from accretion, erosion, and cultural changes are considered primarily the result of the application of inaccurate source material.

c. Features, other than soundings, extending seaward from the shoreline or falling in water.

1. The submerged ruins charted from TP-00246 (1975-1978) and TP-00248 (1975) in the vicinity of latitude 39°45.02'N, longitude 75°28.02'W fall in depths less than 2 feet. The ruins uncover at MLLW and are not a submerged feature. Chart the ruins as shown on the present survey.

2. Visible piling charted from T-8772 (1946-1949) in latitude 39°44.60'N, longitude 75°28.20'W are discredited by present survey information. Expunge the charted piling and chart the stake and obstruction as shown on the present survey in this area.

3. The pier charted from a miscellaneous source in latitude 39°44.41'N, longitude 75°28.30'W was not mentioned by the hydrographer. It is not shown on the contemporary shoreline map, falls within the present MLLW line, and, if any ruins remain, they are considered to have no charting significance. Expunge the charted pier.

4. The ruins charted from T-8772 (1946-1949) in latitude 39°44.33'N, longitude 75°28.45'W should be revised as shown on the present survey. The inshore portion of the ruins bare at MHW, the offshore portion of the ruins uncover 1 ft. at MLLW.

5. The submerged pile and ruins charted from T-8772 (1946-1949) in the vicinity of latitude 39°44.05'N, longitude 75°28.67'W should be expunged from the chart. Features shown in this area should be charted as shown on the present survey.

6. The positions of the ice fenders charted from T-8772 (1946-1949) in the vicinity of latitude 39°43.93'N, longitude 75°28.70'W are in conflict with counterpart positions shown on the contemporary shoreline map. Chart the ice fenders as shown on TP-00248 (1975).

7. The four pier-like features charted from T-8772 (1946-1949) from latitude 39°43.78'N to 39°43.89'N in longitude 75°28.56'W should be expunged from the chart. Chart the three groins falling within this area on the present survey.

8. The submerged piles charted from a miscellaneous source in latitude 39°43.70'N, longitude 75°28.60'W were not specifically addressed by the hydrographer. However, they are considered to be part of the nearby pier ruins. Expunge the charted submerged piles and chart features in this area as shown on the present survey.

9. The sewer charted from a miscellaneous source in latitude 39°42.95'N, longitude 75°29.45'W was not mentioned by the hydrographer. A charting resolution is deferred to the chart compiler.

10. The position of the pier ruins charted from a miscellaneous source in latitude 39°42.34'N, longitude 75°29.70'W is in conflict with the position of counterpart ruins shown on TP-00248 (1975). Chart the ruins as shown on TP-00248 (1975).

11. The length of the jetty charted from TP-00247 (1975-1978) in latitude 39°41.90'N, longitude 75°30.35'W is in conflict with the length of the jetty on the smooth sheet. The hydrographer states that the offshore portion of the jetty, as well as the light at the end of the jetty is gone. Disregard the delineation of this feature on TP-00247 (1975-1978) and chart the jetty as shown on the present survey.

12. The positions and delineation of several features (piers, ruins, dolphins and piles) charted from T-8773 (1946) and centered in latitude 39°41.67'N, longitude 75°30.60'W are in conflict with counterpart information on the present survey. Chart these features as shown on TP-00247 (1975-1978).

13. The four submerged dolphins charted from a miscellaneous source in latitude 39°41.53'N, longitude 75°30.65'W originate with T-8773 (1946) as six visible dolphins and were not mentioned by the hydrographer. The railroad pier in this area had been lengthened some time after 1946. Perhaps the dolphins were removed during the construction while making the pier longer. A charting resolution is deferred to the chart compiler.

14. The rock awash charted in latitude 39°41.23'N, longitude 75°30.62'W is considered to originate with two small islets shown on T-8773 (1946) subsequently revised to a rock awash symbol when not seen on revision photography. The original islets were not identified as rocks on T-8773 (1946). Recommend that the rock awash be expunged from the chart and the nearby groin be charted in this area as shown on TP-00247 (1975-1978).

15. The positions of two charted pile symbols identified as ice fenders on T-8773 (1946) at latitude 39°40.78'N, longitude 75°30.67'W are in conflict with counterpart features shown on the present survey. Chart the items as shown on TP-00247 (1975-1978) and label them ice fenders.

16. The wrecks addressed on page 6 of the Descriptive Report as Presurvey Review Items 78 and 79 are charted as submerged dangerous wrecks in latitude 39°40'08"N, longitude 75°30'53"W originated on T-8773 (1946) as five neatly aligned visible barges, simply labeled "Barges Aground." The barges were probably moored and not wrecks. The hydrographer investigated this area at low water and stated that there are no wrecks in this area. Expunge the charted submerged dangerous wrecks.

Danger #1407, 1408

17. The stranded wreck outlined and labeled on TP-00247 (1975-1978) in latitude 39°40.14'N, longitude 75°30.84'W is no longer in existence. The hydrographer stated that no wrecks were in this area. The wreck is not charted and should not be charted.

18. The two wrecks addressed on pages 6 and 7 of the Descriptive Report as Presurvey Review Items 80 and 81 in latitude 39°39'58"N, longitude 75°31'25"W and latitude 39°39'56"N, longitude 75°31'28"W respectively were located by detached positions on the present survey as one wreck with a high point uncovering 2 feet at MLLW. These wrecks are mistakenly outlined on TP-00250 (1975) as two separate wrecks. The wreck should be charted as shown on the present survey. *

Danger #1403, 1404

19. The wreck addressed on page 7 of the Descriptive Report as Presurvey Review Item 82 in latitude 39°39'53"N, longitude 75°31'31"W and shown on TP-00250 (1975) as an obstruction was located on the present survey with detached positions obtained on the north and south ends of the wreck. The high point of the wreck uncovers 4 feet at MLLW. Disregard the obstruction shown on TP-00250 (1975) and chart the wreck as shown on the present survey.

Danger #1402

* The wreck discussed on page 7 of the Descriptive Report as PSR item #81 is not the same wreck that was assigned as PSR item #81. However, it is a new wreck and should be charted as shown on the survey smooth sheet. mSm 10/30/86

20. The label, piling, charted from T-8773 (1946) in latitude 39°39.90'N, longitude 75°31.55'W describes a portion of the jetty composed of piling. While the hydrographer made no mention of piling, he did obtain minus soundings on the jetty. The piling is considered to be covered at MHW and should be labeled in slanted lettering on the chart. Also, the south end of the jetty is charted as bare at MHW, but on the present survey it uncovers 2 feet at MLLW and should be charted accordingly.

21. The delineation of ruins, piling and dolphins charted from a miscellaneous source and centered in latitude 39°39.42'N, longitude 75°31.60'W is in conflict with the delineation of counterpart features on the present survey. Chart these items as shown on the present survey.

22. The T-pier charted from a miscellaneous source in latitude 39°39.45'N, longitude 75°33.70'W was not mentioned by the hydrographer and is not shown on the present survey. Recommend that the charted pier be revised to submerged ruins on the next chart edition.

23. The positions of the four ice fenders charted from T-8773 (1946) and T-8774 (1946-1948) and centered in latitude 39°39.43'N, longitude 75°33.60'W are in conflict with the positions of counterpart features on the present survey. Chart the ice fenders as shown on TP-00250 (1975).

24. The delineation of piles and ruins charted from T-8773 (1946) and miscellaneous sources and centered in latitude 39°39.69'N, longitude 75°33.49'W is in conflict with the delineation of counterpart features shown on the present survey. Chart these features as shown on TP-00250 (1975).

25. The delineation of piling charted from T-8773 (1946) in the vicinity of latitude 39°40.00'W, longitude 75°33.06'W is in conflict with counterpart features shown on the present survey. Chart the area as shown on the present survey.

26. The position of the rock awash charted from a miscellaneous source in latitude 39°41.44'N, longitude 75°31.90'W is in conflict with its counterpart position on the present survey. Chart the rock awash as shown on TP-00247 (1975-1978).

27. The delineation of the pipeline charted from a miscellaneous source in latitude 39°41.45'N, longitude 75°31.70'W is in conflict with its counterpart position shown on the present survey. Chart the pipeline as shown on TP-00247 (1975-1978).

28. The delineation of the piers and ruins charted from T-8773 (1946) and miscellaneous sources and centered in latitude 39°41.92"N, longitude 75°31.35'W is in conflict with the delineation of counterpart features shown on the present survey. Chart these features as shown on TP-00247 (1975-1978).

29. The delineation of the pier charted from T-8773 (1946) in latitude 39°42.00'N, longitude 75°31.40'W is in conflict with its counterpart delineation shown on the present survey. Chart the pier and piling as shown on TP-00247 (1975-1978).

30. The three piles, PA, charted from a miscellaneous source in the vicinity of latitude 39°42.90'N, longitude 75°30.80'W were located by detached positions and identified as dolphins on the present survey and should be charted accordingly.

31. The submerged sewer pipe charted from a miscellaneous source in latitude 39°43.79'N, longitude 75°30.35'W was not mentioned by the hydrographer and should be retained as charted unless the chart compiler has information to the contrary.

32. The piles and piers charted from T-8772 (1946-1949) in the vicinity of latitude 39°44.00'N, longitude 75°30.30'W while not specifically mentioned by the hydrographer are considered discredited by the hydrographer's investigation of the area at approximate low water while locating ruins in this area on the present survey. Chart the area as shown on the present survey.

33. The delineation of the jetty charted from T-8772 (1946-1949) in latitude 39°44.03'N, longitude 75°30.30'W is in conflict with its counterpart delineation shown on the present survey. Chart the jetty as shown on TP-00247 (1975-1978).

34. The pile, PA, charted from a miscellaneous source in latitude 39°44.40'N, longitude 75°30.10'W while not specifically addressed by the hydrographer, is considered to be the steel "I" beam, accurately located by detached position and shown nearby on the present survey. Expunge the charted Pile, PA and chart the "I" beam as shown on the present survey.

35. The submerged piles, PA, charted from a miscellaneous source in latitude 39°44.98'N, longitude 75°29.78'W are considered to be the nearby piles uncovered 5 feet at MLLW on the present survey. Expunge the charted submerged piles, PA, and chart the nearby piles as shown on the present survey.

36. The obstruction charted from a miscellaneous source in latitude 39°45.09'N, longitude 75°29.55'W and labeled in slanted lettering is mistakenly identified as covering at MHW. The obstruction, ruins of a former pier, is bare at MHW and should be charted as such.

37. The piling charted from T-8772 (1946-1949) in latitude 39°45.22'N, longitude 75°29.57'W do not appear on the present survey nor on the contemporary shoreline map. This item is considered to have no charting significance and, unless the chart compiler has information to the contrary, it should be expunged from the chart.

38. The delineation of the jetty charted from T-8772 (1946-1949) and T-8773 (1946) in latitude 39°42.95'N, longitude 75°30.78'W to 75°31.10'W is in conflict with its counterpart delineation shown on the present survey. Chart the feature as shown on the present survey.

39. The pier charted from T-8772 (1946-1949) in latitude 39°43.31'N, longitude 75°31.90'W is now in ruins and should be charted as shown on the present survey.

40. The rock awash charted from a miscellaneous source in latitude 39°43.33'N, longitude 75°31.91'W was not mentioned by the hydrographer. However, the hydrographer's investigation at approximate low water, while locating the pile ruins that occupy the area, discredits its existence. Expunge the charted rock.

41. The two rocks awash charted in latitude 39°43.51'N, longitude 75°32.05'W and latitude 39°43.53'N, longitude 75°32.02'W, respectively were not mentioned by the hydrographer. These two rocks awash identify a rock filled area on T-8772 (1946-1949), inside the low water line and noted as "bare 3 feet at MLW." The southern rock now plots on land on the present survey. The remainder of the rock fill area is considered to have settled to present survey depths. Expunge the two charted rocks awash.

42. The feature charted from a miscellaneous source in latitude 39°43.60'N, longitude 75°32.08'W was not mentioned by the hydrographer. However, the hydrographer's investigation at low water in the area while locating the ruins that parallel the shore on the present survey discredit the continued existence of this feature. Chart the area as shown on the present survey.

43. The ruins charted from T-8772 (1946-1949) in latitude 39°44.10'N, longitude 75°32.10'W are not shown on the present survey nor the contemporary shoreline map. These ruins fall inshore of the MLLW line on the present survey and if any ruins remain, are considered to have no charting value. Expunge the charted ruins.

44. The piers charted from T-8772 (1946-1949) in the area of the marine railway in latitude 39°44.12'N, longitude 75°32.28'W were found to be in ruins on the present survey and should be charted accordingly.

45. The bridge under construction charted from a miscellaneous source in latitude 39°44.10'N, longitude 75°32.50'W was not mentioned by the hydrographer. A charting resolution is deferred to the chart compiler.

46. The pier charted from a miscellaneous source in latitude 39°44.07'N, longitude 75°32.53'W is neither shown on the present survey nor on the contemporary shoreline map. Recommend that the delineation of the pier be revised to ruins on the next chart edition.

47. The three rocks awash charted in the vicinity of latitude 39°44.00'N, longitude 75°32.95'W identify a rock filled area formerly uncovering 3 ft. at MLW on T-8772 (1946-49). The rock fill is considered to have settled to present survey depths of less than 1 foot in this area. Expunge the charted rocks awash.

48. The two visible piles charted from a miscellaneous source in the vicinity of latitude 39°43.52'N, longitude 75°33.65'W are not shown on the present survey nor on the contemporary shoreline map. The existence of the piles were neither verified nor disproved. Retain the charted piles, but as submerged features.

49. The visible pile charted from a miscellaneous source in latitude 39°43.15'N, longitude 75°33.68'W was not mentioned by the hydrographer and should be retained on the chart, but as a submerged pile.

50. The position and delineation of the ruins charted from T-8772 (1946-1949) in the vicinity of latitude 39°44.15'N, longitude 75°33.50'W are in conflict with counterpart data on the present survey. Chart the ruins as shown on the present survey.

51. The delineation of ramps charted from T-8772 (1946-1949) in the vicinity of latitude 39°44.20'N, longitude 75°32.25'W is in conflict with counterpart delineations shown on the present survey. Chart the ramps as shown on TP-00247 (1975-1978).

52. The pier charted from a miscellaneous source in latitude 39°44.20'N, longitude 75°32.07'W was not mentioned by the hydrographer and is not shown on the contemporary shoreline map. The pier should be retained in its charted position, but shown as submerged ruins.

53. The submerged piles charted in the vicinity of latitude 39°43.97'N, longitude 75°31.98'W originate with T-8772 (1946-1949) as a rock and pile jetty awash at MHW. TP-00247 (1975-1978) shows this feature as visible at MHW. Chart the feature as shown on the present survey.

54. The pile charted from a miscellaneous source in latitude 39°43.95'N, longitude 75°31.91'W, because of shoreline change, now falls on land. Expunge the charted pile.

55. The jetty-like feature charted from T-8772 (1946-1949) in latitude 39°43.93'N, longitude 75°31.90'W was not mentioned by the hydrographer nor shown on the contemporary shoreline map. A charting resolution is deferred to the chart compiler.

56. The piles, PA, or piling charted from a miscellaneous source in the vicinity of latitude 39°43.45'N, longitude 75°31.87'W, except for the southernmost of the group, are now shown on the present survey nor the contemporary shoreline map. It is noted that these features are identified as piles, PA on chart 12312 and piling on chart 12311. Both charts have the same print date, August 16, 1980. A charting resolution is deferred to the chart compiler.

d. Controlling Depths

1. Charted tabulated controlling depths and present survey depths in Federal Project Channels are superseded by U.S. Army Corps of Engineers surveys subsequent to the date of the survey.

e. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with their charted positions and adequately with their charted positions and adequately mark the features intended, except for lighted black

bell buoy "5D" which was located about 100 meters west of the Federal Project Channel limit.

Insufficient field data precluded the smooth plot during office verification of Cherry Island Range Rear Light charted at latitude 39°45'43"N, longitude 75°29'24"W. Also, New Castle Flats Upper and Lower Dolphin Lights (privately maintained) are stated in the field records to have not been in place during the survey. The position of these lights have been transferred from TP-00247 to the present survey. These lights are included in the 1982 and current 1985 U.S. Coast Guard Light List.

The above mentioned aids to navigation are deferred to the chart compiler for a charting resolution.

Because of ice conditions, floating aids are generally seasonally repositioned. The U.S. Coast Guard should be requested to furnish present positions of these aids for charting. (See also page 7 of the Descriptive Report, item N.)

f. Landmarks

A note on a form 76-40 inserted in this Descriptive Report states that landmarks were checked and found to be adequately charted. However, no form 76-40 documenting these findings was submitted with the present survey. Landmark positions may be obtained from form 76-40 inserted in the Descriptive Reports of the contemporary shoreline maps covering the area of the present survey.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the project instructions, except as noted in sections 4 and 7 of this report.

9. ADDITIONAL FIELD WORK

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

for Leroy G. Cram
R. L. Keene
Cartographic Technician
Verification of Field Data

for George K. Myers
Frank Saulsbury
Cartographer
Standards Section (N/CG242)
Evaluation and Analysis
Hydrographic Surveys Branch

Leroy G. Cram
Leroy G. Cram
Supervisory Cartographic Technician
Verification Check

Inspection Report
H-10042

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey complies with National Ocean Service (NOS) requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected

George K. Myers
Chief, Standards Section (N/CG242)
Hydrographic Surveys Branch

Approved

Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

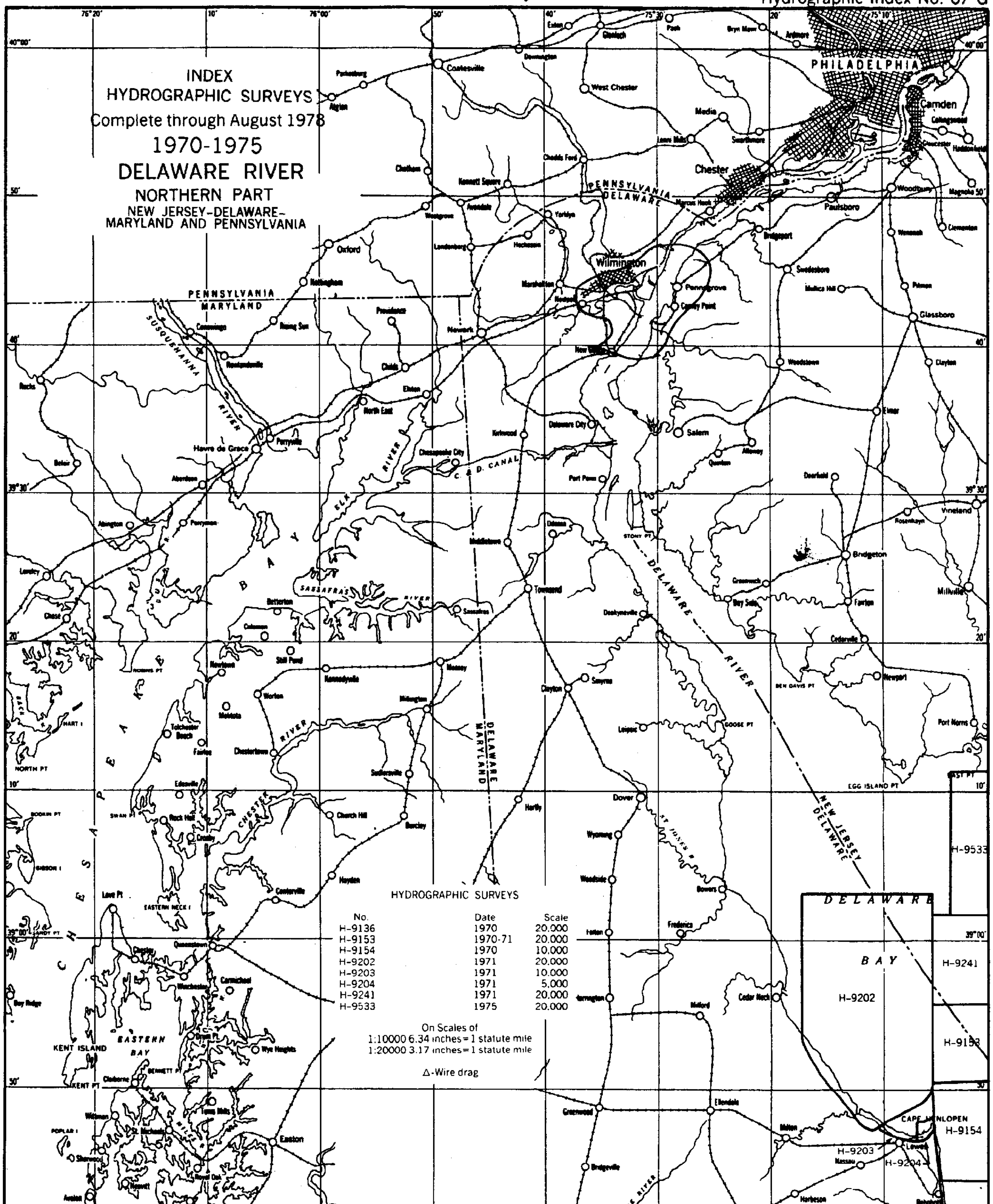
H-10042

Diagrams 294-2 & 295-2

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey

Rockville, Maryland

Hydrographic Index No. 67 G



No.	Date	Scale
H-9136	1970	20,000
H-9153	1970-71	20,000
H-9154	1970	10,000
H-9202	1971	20,000
H-9203	1971	10,000
H-9204	1971	5,000
H-9241	1971	20,000
H-9533	1975	20,000

A-4346-1(15)

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10042

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
12312	8-3-90	John Pierce	~~Full Part Before~~ PART After Marine Center Approval Signed Via Christina River
			Drawing No. 51 sdgs & depth curves not applied. Awaiting
			datum correction from tides.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
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			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED. Appl'd to Stds. 10-20-86