9942

Diagram No. 295-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey .... Hydrographic

Field No. HSB-10-1-81

Office No. H-9942

LOCALITY

State .... New Jersey & Pennsylvania

General Locality .... Delaware & Schuylkill Rivers

Locality .... Billingsport to Horseshoe Shoal

19 81

CHIEF OF PARTY
LCDR G.W. Jamerson

LIBRARY & ARCHIVES

DATE .... December 23, 1985

Area / Chts
12313
12312 } "TO SIGN OF ... SEE ... OF APPLICATION TO CHARTS"

☆U.S. GOV. PRINTING OFFICE: 1980—766-230

INDEX

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

HYDROGRAPHIC TITLE SHEET

H-9942

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-10-1-81

State ~~Pennsylvania and~~ New Jersey *and Pennsylvania*

General locality Delaware ~~River~~ *and Schuylkill Rivers*

Locality ~~Westville to~~ Billingsport~~, N. J.~~ *to Horseshoe Shoal*

Scale 1:10,000 Date of survey *22May-28July; 25Aug-28 Aug* ~~22 May-28 August~~ 1981

Instructions dated 22 August 1979 Project No. OPR-D218-HSB-80

Vessel NOAA Launch 1283

Chief of party LCDR George W. Jamerson

Surveyed by LTJG Federico R. Diaz

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

Graphic record scaled by CB, FD, DE, MM, RS, WZ

Graphic record checked by CB, FD, DE, MM, RS, WZ

Protracted by N/A Automated plot by Field Sheet PDP 8/e AMC, Xynetics 1201

Verification by AMC Verification Branch *R.R.Hill*

Soundings in ~~fathoms~~ feet at ~~MLW~~ ~~[redacted]~~ *MLLW*

REMARKS: All times coordinated Universal Time-Carl Bush, Fred Diaz, David Elliott, Mark McMann, Robert Snow, Wally Zvikas

STANDARDS CK'D 12-27-85

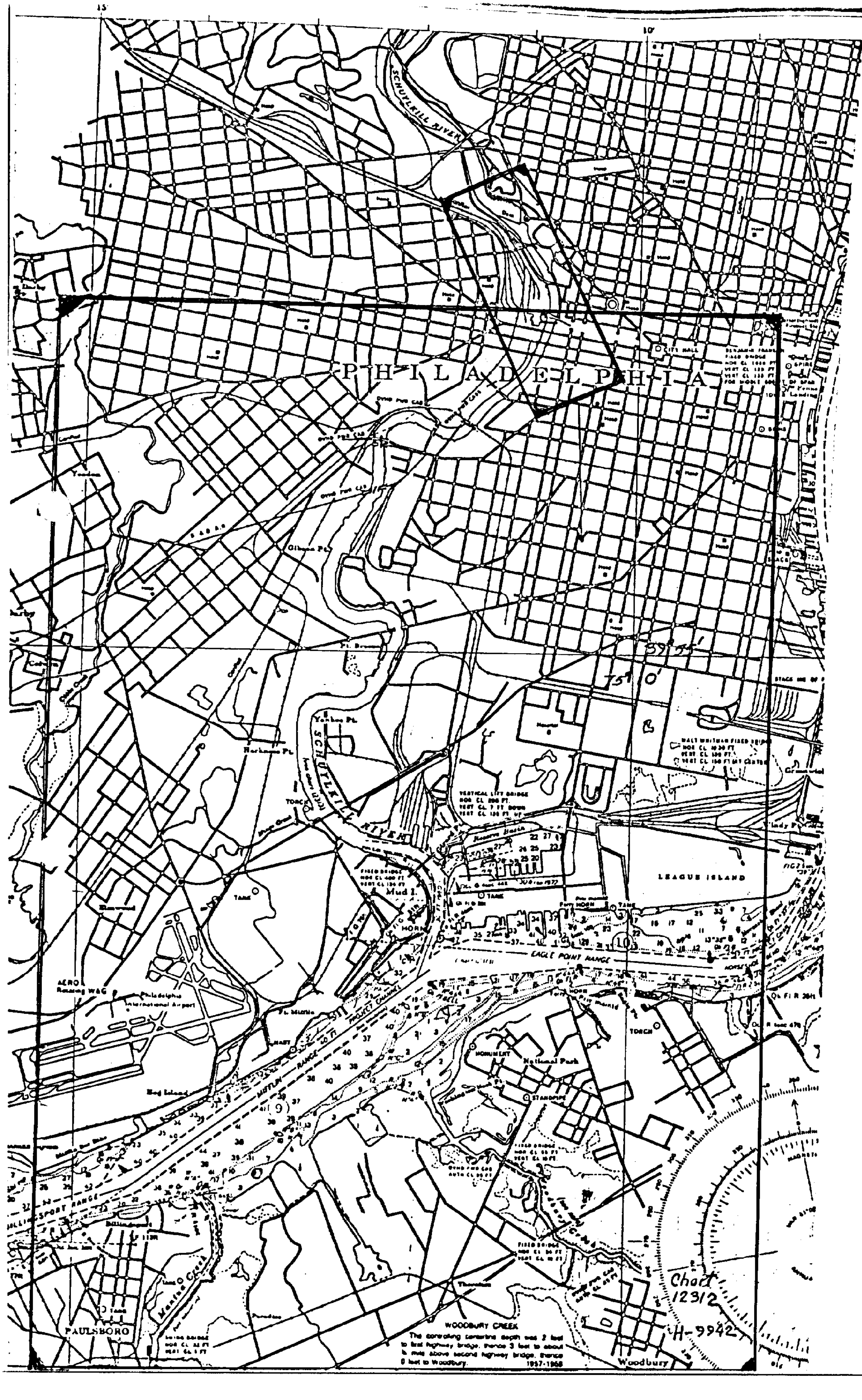
Chy

Awois/Surf M&M 4/28/86

(1.)

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

☆ U.S. GPO: 1974-0-768-081/1207


PHILADELPHIA
SCHUYLKILL RIVER
CITY HALL
LEAGUE ISLAND
EAGLE POINT RANGE
MIFFLIN RANGE
Mud I.
Hog Island
National Park
PAULSBORO
WOODBURY CREEK
Woodbury
39°55'
75°10'
Chart 12312
H-9942

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9942
HSB-10-1-81

Scale 1:10,000
Chief of Party: Lt. Cdr. George W. Jamerson
Officer-in-Charge: LT (jg) Federico R. Diaz

A. PROJECT

This survey was accomplished under Project Instructions OPR-D218-HSB-80, dated 22 August 1979, and amended by:

Change No. 1, 19 Sept. 1979
Change No. 2, 17 Mar. 1980
Change No. 3, 28 Aug. 1980
Change No. 4, 31 Mar. 1981
Change No. 5, 30 Apr. 1981
Change No. 6, 19 May 1981

B. AREA SURVEYED

The area surveyed was the Delaware River and certain adjacent rivers and creeks (including the Schuylkill River) from ~~Westville to~~ Billingsport, NJ to Horseshoe Shoal and bounded by the following approx. points:

Latitude 39°51'00"N, Longitude 75°09'00"W
North to Latitude 39°58'00" Down river to Longitude 75°14'30"

This survey was conducted from 22 May 1981 to 28 July 1981 (J.D. 142 to 209) inclusive and 25 August 1981 to 28 August 1981 to J.D. 237 to J.D. 240.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launch #1283 (EDP #1283). All survey records are annotated with the vessel number 1283.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon fathometer equipment was used during the survey:

J. D. 142-195	Recorder	Model	#719-B
		Serial	#5581
J. D. 197-240	Recorder	Model	#719-B
		Serial	#6211

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 Launch #1283 were run on 19 May 1981 and 24 July 1981 at 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. On J. D. 180, HFP #3 replaced the 85 H.P. motor on Launch #1283 with a 115 H.P. motor.

Velocity and instrument corrections were determined by barcheck. Barchecks were taken twice daily, weather and sea conditions permitting. The length of the line on the bar ~~were~~ as checked on J.D. 139 and J.D. 209. The results of this inspection showed that no corrections were 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 plotted on the smooth field sheets while crosslines developments, splits, bottom samples, 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 NGS or were established by photo party #61 in 1978 (stations 101-105, 107-109) 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.

Less than third order standards were used to locate hydrographic signal station 106, ~~#6~~ a Corps of Engineers Triangulation Disk stamped "Rear 1966" which was recovered and used by HFP #3. Hydrographic Survey Branch Survey Support Section recovered "Rear 1966" and cut it in on 31 August 1981.

Photogrammetric methods were used to locate signals 110-130. These stations are located along the Schuylkill River and were established by HFP#3 and AMC Photogrammetric Branch in October 1980.

G. HYDROGRAPHIC POSITION CONTROL

The method used to control this survey was Range-Azimuth. The equipment used to control this survey was a Wild T-1 s/n 13017, Del Norte Master 78-185 (J.D. 142-189) Del Norte Master 78-278 (J.D. 189-209), Del Norte Remote 74-248 (J.D. 142-248 (J.D. 142-209), Del Norte Trisponder (DMU) s/n 395 (J.D. 142-239). Del Norte Master 72-1068 (J.D. 240), Del Norte Remote 76-251 (J.D. 240). Problems encountered with the use of this equipment were on J. D. 189 Del Norte Master 78-185 malfunctioned and was immediately replaced by master 78-278. On J.D. 239

Del Norte Master 78-278 and Remote 74-248 were replaced by Master 72-1068 and Remote 76-251. The control equipment was calibrated twice daily between control stations 107 and 108. This distance was computed with program RK-407. A baseline calibration was conducted every 2 weeks of use. Del Norte corrections were applied by corrector tapes to the field sheets and will be applied during smooth plotting at AMC.

H. SHORELINE

Shoreline detail for this survey was obtained from class III photo manuscripts (TP00240, TP00241, TP00242, TP00243) dated August 1975, Chart #12313, blown up to the scale of the survey, 33rd edition dated 13 September 1980.

Shoreline corrrections were necessary at:

1) Latitude 39°52'09", Longitude 75°13'10" Pier extended (see field sheet against Vicinity of TP00242). Fuel pier was joined & extended, also catwalk was added. These three revisions are shown in red ink on the smooth sheet.

2) Latitude 39°51'14", Longitude 75°13'39.9" Pier under construction (Position #1744). Shown on the smooth sheet with a dashed black line & described.

3) Latitude 39°53'~~02~~32", Longitude 75°10'54" Piers A, B, & C of Naval Reserve basin being torn down. & D according to note on field sheet. Compiler, please check to see if these piers are completely removed when making revisions for the next chart edition.

Photogrammetric locations of rocks and other salient features from the manuscript were checked by hydrographic Range/AZ means with the following results and recommendations:

1) Latitude 39°57'58.697", Longitude 75°11'09.545" Position #97 and 98-exposed rocks remain as charted. Do not concur. Chart the bare rks in this area as shown on TP-00240 (1975), chart the rks awash as shown on the present survey.

2) Latitude 39°52'44.969", Longitude 75°09'59.346"-Position #1064-pile of rocks; should be charted at above position. This is not on TP-00243 (1975). Chart as shown on the present survey.

3) Latitude 39°52'44.020", Longitude 75°09'55.119"-Position #1613-offshore end of pilings marking outfall. Remain as charted. Do not concur, chart as shown on the present survey.

4) Latitude 39°52'44.932", Longitude 75°10'04.465"-Position #1614-offshore end of pier ruins remain as charted. Do not concur, revise offshore limits, chart as shown on TP-00243 (1975).

5) Latitude 39°52'47.511", Longitude 75°12'08.396"-Position #1519-offshore end of wooden breakwater-remain as charted. concur - should be labeled on chart if space permits.

6) Latitude 39°52'40.564", Longitude 75°12'18.383"-Pos#1522-offshore end of wooden breakwater-remain as charted. concur - should be labeled on chart if space permits.

7) Latitude 39°51'26.209", Longitude 75°13'05.126"-Position 1508-obstruction-dredge pipe awash-remain as charted. Do not concur. The dredge pipe is not now charted but should be charted & labeled as shown on the pres. survey.

8) Latitude 39°51'14.619", Longitude 75°13'35.210"-Position #1507-offshore end of pipeline with double row of pilings marking it. Remain as charted. Do not concur. Position & delineation is in conflict. chart the item as shown on TP-00242 (1975) and label a suitable identification.

9) Latitude 39°52'05.977", Longitude 75°13'16.777" upriver end of ~~Wharf~~ pier ruins (position # 1540). Latitude 39°51'54.563", Longitude 75°13'42.039"-down river end of ~~Wharf~~ ruins (position #1541), remain as charted, or chart as foul area as shown on the present survey.

10) Latitude 39°52'42.077", Longitude 75°10'35.380"-Offshore end of ~~pier~~ ruins, broken ~~and~~ rocks (position #1615), should be charted. concur

11) Latitude 39°53'32.225", Longitude 75°11'59.175", position #567-pier ruins remain as charted. concur

12) Latitude 39°56'34", Longitude 75°12'12"-Overhead power cables. Delete from chart. concur

I. CROSSLINES

Crosslines constitude 20% of the mainscheme hydrography. ~~100% of the crossings agree within 1 feet.~~ No soundings are in disagreement at crossing by more than 2 feet. The reasons for the disagreement of sounding at crossline is due to wind generated tides differing from predicted tides. Crossings are in agreement on the smooth sheet.

J. JUNCTIONS

This survey junctions with the following surveys:

1. H-9886 to the east

95% of these junction soundings agree within one (1) feet when compared with the current survey and none of the junction soundings are in disagreement by more than two (2) feet. The reason for this disagreement is believed to be wind generated tides differing from predicted tides. Survey H-9886 was completed by HFP #3 in October 1980, and is being verified by AMC Verification Branch.
Also junctions H-9964 (1981) on the west.

The hydrographer recommends that in the junction areas, the soundings from the present survey be charted. See Evaluation Report for junctional information.

K. COMPARISON WITH PRIOR SURVEYS

This survey was previously covered by the following surveys:

1. H-1114a (1871), 1:5000 scale
2. H-1432b (1878), 1:4800 scale
3. H-1490a (1881), 1:5000 scale
4. H-1490b (1881), 1:5000 scale
5. H-1943 (1889), 1:4800 scale
6. H-1944 (1889), 1:4800 scale

Comparison showed that significant changes have been made due to dredging to maintain the ship channel, and to mine sand and gravel. Strong currents have deepened areas near dredged channels. Numerous shoreline changes have occurred

due to land fill and erosion. Becasue of the age of the surveys, the comparison was of little value other than historical interest. concur

Where discrepancies exist, it is recommended that the soundings from the present survey supersede the prior surveys' soundings. Sdgs charted from misc. sources, recommended for retention, are addressed in the Evaluation Report.

L. COMPARISON WITH THE CHART #12313, 33rd Ed, 13 Sept 1980

The following presurvey review items were investigated during this survey:

charted in lat. 39°52'41.0"N, long. 75°12'13"W
PSR #56 was searched for visually for one hour on J.D. 190 at low tide. The visible wreck, PA originated from a 1975 USCG Auxiliary report (CL 1193/75). Nothing was observed.

NC insm 4/86 V/HP

A conversation with George Hitner (Project Engineer) (215) 365-1892, Fort Mifflin, U. S. Army COE Station, claimed that PSR #56 was pulled clear in late summer 1968 because it was too close to the main channel and posed a danger to navigation. The hydrographer recommends that the visible wreck symbol be removed from the chart. concur

charted in lat. 39°56'37.5"N, long. 75°12'22"W
PSR #57 was searched for one hour on J.D. 163 (Position #658-664) chain drag, and one hour on J.D. 187 (position #1605). The charted dangerous sunken wreck has no historical records available. On J. D. 163, the drag got hung up on bottom debris and had to be cut ~~the drag~~ loose. AD.P. (position #664) was taken before the cut took place. We returned at low water on J.D. 187 to observe a wooden barge in ruins exposed 1½'. G.P. of the ruins is Latitude 39°56'26.899", Longitude 75°12'21.110". Hydrographer recommends wreck symbol ~~remain as~~ be charted at above position, as shown on the present survey.

Pubd V/HP Insm 4/86

charted in lat. 39°57'23.5"N, long. 75°10'47.0"W
PSR #58 was searched for one hour on J. D. 163 (Position #640-657 chain drag). The sunken wreck originated from COE (NM 21/65). The COE had no information regarding the wreck. A chain drag was performed over the charted area, no hangs were observed. The hydrographer recommends that the submerged wreck symbol be removed from the chart. concur

NC insm 4/86 V/HP

charted in lat. 39°51'57.5"N, long 75°13'27.0"W
PSR #59 was searched for one hour on J.D. 191 and one hour on J.D. 208. The charted "wreck PA" has no historical records available. The U.S. Army COE had no information on the wreck. An extensive fatho search was performed on J. D. 191 (position #1749-1765); nothing was observed. A chain drag was performed on J.D. 208 (position #1921-1945) over the charted area; no hangs were observed. The hydrographer recommends the submerged wreck PA symbol be removed from the chart. The subm dang. wk PA is considered disproved. Expunge wk from chart.

NC insm V/HP 4/86

charted in lat. 39°51.01'N, long. 75°13.72'W
PSR #60 was searched for one hour on J.D. 208. No historical records are available. A visual inspection at low water and an uncontrolled fatho search was performed over the charted area along the shoreline.. The non-dangerous wreck was observed baring at low tide beside a dock with many barges tied up to it. Due to the lack of good horizontal control within Mantua Creek, a detached position was not accessable. The hydrographer recommends that the non-dangerous wreck symbol remain as charted. See additional items discussed under Section P. of this report.

Observed Insm 4/86

Recommend that a stranded wk symbol labeled PA be charted in the same position as the non-dangerous submerged wk. now charted. Revise the charted subm wk symbol to a stranded wk symbol and label PA.

M. ADEQUACY OF SURVEY

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

All floating and fixed aids to navigation in the survey area were located and comparisons between their charted, Light List (Vol. I, 1981), and surveyed positions and descriptions were made. All aids were found to adequately serve the apparent purpose for which they were established with the following exceptions: Anchorage *white area #9* buoy N "D" was discontinued. Its position was replaced by Buoy N "C", position for N "C" was replaced by Buoy N "B", and position for N "B" was replaced by Buoy N "A". The original charted position for N "A" was discontinued. Refer to positions 1586-1588, Vol. 6, Page 57 for specific latitudes and longitudes. USCG District, 3rd notified HFP #3 of this change of buoy positions by phone conversation on 26 June 1981. *See Evaluation Report "Aids to Navigation"*

Cable and bridge clearances were checked and found to be accurately charted. *Exceptions are noted in section 7.f of the Evaluation Report.*

O. STATISTICS

Number of positions	2137
Nautical miles of sounding line	99.3
Nautical miles of crossline	19.5
Nautical miles of development	34.6
Total miles of hydrography	153.4
Number of bottom samples	49
Number of barchecks	54

P. MISCELLANEOUS

Piers at U. S. Army COE, Fort Mifflin station were not accessible for sounding due to vessels being berthed in them. Latitude 39°52'30", Longitude 75°12'35". *(Cof E dock)*

A centerline survey was run in Mantua Creek (Refer to change #5, section 4.17.3, project instructions OPR-D218-HSB-80) from Parkers landing to Mantua, N.J. There were no recent shoreline manuscripts available for comparison. The portion of the creek was not smooth plotted nor will it be verified at AMC. The field records, sounding volume and fathogram is included with survey H-9942, vol. 8, pages 28-38. This junction with COE survey of December 1976, which is included with survey records. See Coast Pilot Report, page 49, of this report for changes in controlling depths. *See also Evaluation Report section 7.c.4*

Position 2029, 2042, 2051, 2058, 2059, 2068, 2079, 2094 are leadline depths. Refer to Vol. 8 J.D. 237, 238, 240, for specific latitudes and longitudes. ✓

The Schuylkill River was surveyed from J.D. 142-163, 1981. (Refer to change #5, section 4.17, Project Instructions OPR-D218-HSB-80). Soundings in channel section 1-38 junctioned and were compared to the most recent USA COE surveys dated 24-27 April, 1980 and 2-14 April, 1981. Comparison was excellent 95% of the survey soundings agree within 1 foot with COE surveys. 50 meter spacing arcs were conducted from the Bridge terminating Channel 38 to the Fairmont Dam. Survey depths were 3-8 feet deeper in some parts of the Upper Schuylkill River, when compared to the Chart. Hydrographer recommends that survey soundings supersede all charted depths. *An exception is noted in the Evaluation Report, section 7.a. paragraph 5*

No soundings were done within the U.S. Naval Shipyard at Latitude 39°53'00", Longitude 075°11'00" and at Latitude 39°53'40", Longitude 075°11'15" (refer to change #3, Project Instructions OPR-D218-HSB-80). Survey H-9942 junctioned with NOS blue print numbers ~~surveys~~ 109807, 109808, and 109809. A single checkline crossing each survey was required and done in accordance with change #3. Comparison was excellent, 95% of the survey soundings agree within 1-2 ft. The remaining voids in the western part of the reserve basin were not accessible for soundings due to vessels being berthed in them. ✓

A privately maintained buoy, charted at Latitude 39°51'13", Longitude 75°13'57", is no longer in existance. Hydrographer recommends buoy be deleted from the chart. This survey was compared as the survey progressed with Chart 12313, 33rd edition and Chart 12312, edition 36 August 16/80, blown up to the scale of the survey. The following changes in the chart were detected: Comparison with the chart is good except in the Upper Schuylkill River where discrepancies of 3-8 feet were observed. 90% of the survey soundings agree within 2 to 3 feet with the chart. *concur* *Buoy is also addressed in Evaluation Rep Section 7.d.7*

Charted wreck at 39°52'09"N, 75°13'09"W was the tug boat "Elias" which sank in 1974 and was pulled clear in late 1975 when Arco Oil began construction of a pier extension at the above position. This information was furnished by Mr. Burt Johnson (Terminal Supervisor) at the Arco Oil pipeline, Phila, PA (215) 365-6688. The hydrographer recommends that the ~~subm.~~ wreck symbol be deleted from the chart. *concur* *stranded* ✓ APP'd

A ~~subm.~~ Dolphin at 39°53'02"N, 75°11'43"W, 75m west of Buoy C "1" at the mouth of the U. S. Naval Reserve Basin was searched for one hour on J.D. 187 (Position #1593-1605) nothing was observed. The hydrographer recommends the ~~subm.~~ Dolphin symbol be deleted from the chart. A chain drag was not performed due to heavy traffic. *Do not concur, chart a subm dol at this location.* ✓ APP'd

Dashed circle item:
Latitude 39°52'57", Longitude 75°09'56", a 13' depth is charted. Splits of the mainscheme were done over the charted area. No evidence of a 13' depth was observed. The hydrographer recommends the survey depths supercede the charted depth. *30 meter line spacing is considered inadequate to disprove the 13 ft. depth The 13' sdg charted from a misc. source should be retained as charted.* ✓ OK

Latitude 39°53'10, Longitude 75°09'09", 4' depth is charted. In 10-11 ft. of water splits of the mainscheme were done. No evidence of 4' depth was observed. *(Dashed circle item* *25 meter development is considered inadequate to disprove the 4 ft. sdg. charted from a misc source. Retain the 4 ft. sdg. as charted.* ✓

A depth of 9' was observed at the same position. Hydrographer recommends the 4' depth be deleted and 9' depth take its position on the chart. Do not concur. See preceeding p

Dashed circle item
Latitude 39°52'47", Longitude 75°10'51" an 18' depth is charted in 25' of water. Splits of the mainscheme were done (Position #2079) an 18' was observed at the same geographic position. The hydrographer recommends the 18' depth remain as charted. L.D. of 17 ft found near Cht the 17 f L.D. 93 shou on the pres. surv

Dashed circle item
Latitude 39°52'45", Longitude 75°11'01" a 17' depth is charted in 30-35' of water. Splits of the mainscheme were done. (No evidence of 17 ft. depth was observed. Hydrographer recommends the 17' depth be deleted. Do not concur, 25-30 meter devel. is V. inadequate to disprove the 17' sdg chtd from a misc. source. Retain the 17' sdg as charted

Woodbury Creek was surveyed on J. D. 197 (Position #1856-1869) to determine the controlling depth to the first bridge. There were no contempory surveys or shoreline manuscripts beyond the first bridge 0.8 nm avove the mouth. Woodbury Creek has a controling depth of 7 feet from the entrance to the first bridge. Do not concur, see Evaluatio Report, section 7.C.(3).

2 A cove at Latitude 39°51'42", Longitude 75°12'18" has charted depths of 0' to 1' where as survey depths show 16-17 ft. within the center of the cove. Hydrographer recommends that survey depths supercede charted depths. concur

A stone pile charted at Latitude 39°53'00", Longitude 075°11'42" exists as rip rap 15m NE of light "2". A D. P. (Position #1517) Latitude 39°53'00.450", Longitude 75°11'42.150", was taken on the exposed rocks and light. Hydrographer recommends that Rock Pile remain as charted. Do not concur, charted rip rap syboliization is all that is necessary. Delete the label "stone pile".

Q. RECOMMENDATIONS

See Sections J, K, L, 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	4/18/75
RK212	Visual Station Table Load	4/01/74
RK216	Range-azimuth Non-real time plot	2/05/76
RK300	Utility computations	2/05/76
RK330	Reformat and Data Check	5/04/76
RK407	Geodetic Inverse/Direct Computation	9/25/78
AM500	Predicted Tide Generator	11/10/72
AM602	Elinore-line oriented editor	5/20/75

S. REFERENCE TO REPORTS

Descriptive Report H-9842, 1979, 1:10,000
Descriptive Report H-9886, 1980, 1:10,000
Control Report for OPR0D218, dated 22 August 1979.

Respectfully submitted,

Robert Lewis

Lt. (jg) Federico R. Diaz, NOAA
OIC, HFP-3

SIGNAL TAPE LISTING

OPR-D218
H-9942 (HSB-10-1-81)

101	4	39	53	25984	075	08	00906	250	0003	000000	Pusey 1978*
102	6	39	52	40343	075	08	46132	250	0014	000000	Horseshoe Rng Ft Lt 1978*
103	1	39	53	11790	075	09	59491	250	0003	000000	Navy 1925*
104	1	39	53	03218	075	10	44993	250	0003	000000	Crane 1972**
105	2	39	53	09021	075	11	37347	250	0003	000000	Drydock 1978*
106	4	39	53	25562	075	11	38016	250	0003	000000	Rear 1966**
107	0	39	52	27704	075	12	33999	250	0003	000000	Fort RM 2 1925-1978*
108	6	39	51	11115	075	14	03303	250	0003	000000	61-22-NJ 1978*
109	2	39	51	21031	075	15	20252	250	0001	000000	Bar 1978*
110	5	39	53	36569	075	11	12297	254	0003	000000	PP 1
111	7	39	53	38335	075	10	47420	254	0003	000000	PP 2
112	1	39	53	37361	075	11	50726	254	0003	000000	PP 3
113	0	39	53	40769	075	12	03963	254	0003	000000	PP 4
114	2	39	53	43188	075	12	22082	254	0003	000000	PP 5
115	6	39	53	35041	075	12	12081	254	0002	000000	PP 6
116	5	39	53	50494	075	12	47397	254	0002	000000	PP 7
117	3	39	54	19181	075	13	00737	254	0003	000000	PP 8
118	0	39	54	39104	075	12	56074	254	0003	000000	PP 9
119	4	39	54	39942	075	12	20714	254	0003	000000	PP 10
120	4	39	55	06881	075	12	05371	254	0003	000000	PP 11
121	2	39	55	17801	075	12	13475	254	0003	000000	PP 12
122	2	39	55	17175	075	12	30303	254	0003	000000	PP 13
123	3	39	55	36774	075	12	47978	254	0003	000000	PP 14
124	4	39	56	08563	075	12	22318	254	0004	000000	PP 15
125	0	39	56	35430	075	12	18604	254	0005	000000	PP 16
126	1	39	56	36753	075	11	52546	254	0010	000000	PP 17
127	6	39	56	30066	075	11	47687	254	0003	000000	PP 18
128	4	39	56	35693	075	11	29735	254	0004	000000	PP 19
129	4	39	56	57634	075	10	58835	254	0004	000000	PP 20
130	4	39	57	33958	075	10	45975	254	0003	000000	PP 21
131	4	39	53	19474	075	11	19330	243	0000	000000	IPATAN
132	4	39	53	37173	075	11	50307	243	0000	000000	LT
133	4	39	53	54092	075	12	55407	243	0000	000000	IPBIWR
134	4	39	54	08581	075	12	44582	139	0000	000000	SWSTAL - SW Stack **
135	4	39	54	32579	075	12	46875	243	0000	000000	IPCSTA
136	4	39	56	08331	075	12	17542	243	0000	000000	IPDIOW
137	4	39	56	32673	075	11	24148	243	0000	000000	IPESTA
138	4	39	56	40373	075	11	15119	243	0000	000000	IPFTAN
139	4	39	57	11933	075	10	40778	243	0000	000000	IPGTAN

* Control located by Photo Party 61 - Recovered 1981 (traverse -3rd Order)
** NGS published - recovered 1981
stations 110-133 & 135-139- Photo Points- G.P.s provided by CAM52.

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
	HSB/HFP-3	Pennsylvania	Delaware River	9/10/81

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-9942	North American 1927

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	Schuylkill River Jetty Light 2 ✓ L.L. 2293 ✓	39 53	00.56 17.3	75 11	42.20 1002.7	D.P. pos #1517, T sheet pos shown on 55 NL	Existence Verified (Not field located)	12312 12313
FRONT LIGHT	Schuylkill River Range Front Lt. ✓ (Schuylkill R. Ent Front Range) L.L. 2291 ✓	39 53	19.70 607.6	75 11	37.30 886.2		Triang Rec 8/31/81	12312 12313
REAR LIGHT	Schuylkill River Range Rear Lt ✓ L.L. 2292 ✓	39 53	25.80 795.7	75 11	34.31 815.2		Existence Verified (Not field located)	12312 12313
HORN	Schuylkill River Entrance Fog Signal ✓ L.L. 2294 ✓	39 53	03.12 96.2	75 11	49.70 1180.9		Existence Verified (Not field located)	12312 12313
FRONT LIGHT	Eagle Point Range Front Lt. ✓ (West Horseshoe Front Range) ✓ L.L. 2299 ✓	39 52	58.86 1815.3	75 12	13.52 321.3		Triang Rec 8/31/81	12312 12313
REAR LIGHT	Eagle Point Range Rear Lt. ✓ (West Horseshoe Rear Range) ✓ L.L. 2300 ✓	39 52	59.86 1846.2	75 12	32.44 770.8		Triang Rec 8/31/81	12312 12313
LIGHT	Navy Yard Pier Lt. ✓ L.L. 2295.81 ✓	39 53	01.72 53.0	75 10	44.27 1051.9		Existence Verified (Not field located)	12312 12313
HORN	Navy Yard Ferry Fog Signal ✓ L.L. 2296 ✓	39 53	13.62 420.1	75 10	29.83 708.8		Existence Verified (Not field located)	12312 12313
	L-1296(85)							

(39)

✓

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. Diaz, LTJG, NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. Diaz, LTJG, NOAA	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)	STATE	LOCALITY	DATE
	HSB/HSP-3	New Jersey	Delaware River	9/10/81

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
OPF-D218		H-9942	North American 1927

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	Mantua Creek Lower Jetty Light 2 L.L. 2284	39 51	10.29 317.4	75 13	53.67 1275.8	nc	Existence Verified (not field located)	12312
LIGHT	Mantua Creek Upper Jetty Light 1 L.L. 2285	39 51	12.45 384.0	75 13	49.31 1172.2	nc	Existence Verified (not field located)	12312
HORN	National Park Ferry Fog Signal L.L. 2297	39 52	41.01 1264.8	75 10	33.40 793.7	nc	Existence Verified (not field located)	12312 12313
FRONT LIGHT →	Horseshoe Range Front Lt. also called Horseshoe East Range Front Lt. L.L. 2304 L-1296(85)	39 52	40.34	75 08	46.13		F-2-6-L 9/13/78	12312 12313

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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:1975-0-565-080/1155

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)	STATE	LOCALITY	DATE
	HSB/HFP-3	New Jersey	Delaware River	9/10/81

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-9942	North American 1927

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
REAR LIGHT	Horseshoe Range Rear Light also called Horseshoe East Range Rear Light L.L. 2305	39 52	23.92 737.7	75 08	56.47 1342.0	hc	F-V-VIS	12312 12313

(14)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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

[redacted] LANDMARKS 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): HSB/HFP-3
STATE: Pennsylvania
LOCALITY: Delaware River
DATE: 9/10/81

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-9942
DATUM: North American 1927

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
MAST	Atlantic Richfield Mast (east of two)	39 52	13.98 431.2	75 13	00.58 13.8	hc	Existence Verified (not field located)	12312 12313
MAST	Atlantic Richfield Mast (west of two) →	39 52	07.69	75 13	11.94	L-1296(85)	F-3-6-L 9/10/81	12312
TANK	Treatment Plant Tank 1981 →	39 53	15.999	75 13	34.379	L-1296(85)	F-3-6-L 9/10/81	12312 12313
TANK	Mammoth Tank	39 53	19.47 600.5	75 11	19.35 459.7	hc	Existence Verified (not field located)	12312 12313
TANK	(Philadelphia USN Shipyard Tank)	39 53	42.46	75 11	30.17		Triang Rec 8/31/81	12312 12313
TANK	(Philadelphia Navy Yd Power Tank)	39 53	14.51 447.5	75 10	07.93 188.4		Triang Rec 8/31/81	12312 12313
TORCH	Gulf Torch	39 53	54.10 1668.5	75 12	55.40 1316.1	hc	Existence Verified (not field located)	12312 12313
STACK	Phila Gulf Refining Co. Stack	39 54	09.58 295.5	75 12	44.58 1059.0	hc	Existence Verified (not field located)	12312
STACK	Gulf North Stack	39 54	32.60 1005.4	75 12	46.88 1113.5	hc	Existence Verified (not field located)	12312
TOWER	Tower	39 56	08.00 246.7	75 12	17.30 410.8	hc	Existence Verified (not field located)	12312

L-1296(85)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY XX ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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

[redacted] LANDMARKS 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
HSB/HFP-3	Pennsylvania	Delaware River	9/10/81

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-9942	North American 1927

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
STACK	Philadelphia PRR Power Stack ✓	39 57	30.48 940.1	75 11	07.43 176.4		Triang Rec 8/30/81	12312 12313
STACK ✓	Philadelphia Electric Co Largest Stack ✓	39 56	31.39 968.1	75 11	17.09 405.7	nc	Existence Verified (not field located)	12312 12313
	L-1296(85)							
	nc							

(43)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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

[redacted] LANDMARKS 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
HSB/HFP-3	New Jersey	Delaware River	9/10/81

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-9942	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	LONGITUDE ° ′	LONGITUDE // D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
STAND PIPE	National Park Mun Standpipe ✓	39 51	55.77 1720.1	75 10	52.90 1257.3		Triang Rec 8/31/81	12312 12313
MONUMENT	National Park Revolution MONUSE ✓	39 52	16.53 509.8	75 11	23.14 549.9		Triang Rec 8/31/81	12312 12313
TORCH	Lower Texas Torch ✓	39 52	25.83 796.5	75 09	43.72 1039.0	hc	Existence Verified (not field located)	12312 12313
	L-1296(85							

(44)

✓

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY XX ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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 OR LANDMARKS 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)

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

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
HSB/HFP-3	Pennsylvania	Delaware River	9/10/81

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-D218		H-9942	North American 1927

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	Ore Pier Lt - Light is no longer in Light List. Light was not in place at ~~time of visit. 8/31/81~~ ✓	39 53	37.17 1146.4	75 11	50.31 1195.3	not shown on 1980 ed.		12312 12313
TOWER	Breezy Point East Trans Tower Tower has been removed. ✓	39 55	03.13 96.5	75 12	03.22 76.5			12313
TOWER	Breezy Point West Trans Tower Tower has been removed. ✓	39 55	02.79 86.0	75 12	14.19 337.0			12313
STACK	Philadelphia Electric Co. Stack	39 56	31.73 978.6	75 11	22.93 544.4			12313

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	F.R. DIAZ, LTJG, NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	F.R. DIAZ, LTJG, NOAA	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

Form Approved. OMB No. 41-R2455

NOAA FORM 77-6
(10-72)

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

COAST PILOT REPORT

PLEASE MAIL TO:

Director
National Ocean Survey
National Oceanic and Atmospheric Administration
ATTENTION: C324
Rockville, Maryland 20852

This record of your experience and observations when coasting, entering port, and/or following inside channels will be used to correct, amplify, or confirm the description now given in the Coast Pilot.

Please use additional sheets if more space is needed.

Additional report forms will be provided upon receipt of each report.

GEOGRAPHIC LOCATION

ANCHORAGE #10 ; DELAWARE RIVER

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
39°53' 05"	75° 10' 07"	12313, 12312	3, 7-80

VESSEL	MASTER/COMMANDING OFFICER
NOAA LAUNCH # 1287	LT. (JG) FEDERICO R. DIAZ
DATE OF OBSERVATION	OBSERVER
JULY 1981	ERD

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED YES	CHARTED NO	LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE (Include approximate latitude and longitude if necessary to identify on chart)	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

USCOMM-DC 4694-P73

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL.	GOOD	FAIR	POOR	COMMENT
HOLDING QUALITY					
PROTECTION OFFERED					
ACCESSABILITY					

RECOMMENDED FOR VESSELS:

LENGTH	DRAFT
____ TO ____ FT.	____ TO ____ FT.

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)
3	18	119	[redacted]

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: *(Circle one)*

ANCHORAGE #10 HAS A CONTROLLING DEPTH OF 21 FT. WITH DARK FINE BROWN SAND BOTTOM.

NOAA FORM 77-6 (10-72)

USCOMM-DC 4694-P73

Form Approved. OMB No. 41-R2455

NOAA FORM 77-6
(10-72)

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

COAST PILOT REPORT

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National Oceanic and Atmospheric Administration
ATTENTION: C324
Rockville, Maryland 20852

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GEOGRAPHIC LOCATION

ANCHORAGE #9 ; DELAWARE RIVER

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
39°52'00"	075° 12' 45"	12313, 12312	3, 7-80

VESSEL	MASTER/COMMANDING OFFICER
NOAA LAUNCH #1283	LT.(JG) FEDERICO R. DIAZ
DATE OF OBSERVATION: JULY 1981	OBSERVER: FRD

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED YES	CHARTED NO	LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE (Include approximate latitude and longitude if necessary to identify on chart)	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

USCOMM-DC 4694-P73

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL	GOOD	FAIR	POOR	COMMENT
HOLDING QUALITY					
PROTECTION OFFERED					
ACCESSABILITY					

RECOMMENDED FOR VESSELS:

LENGTH	DRAFT
____ TO ____ FT.	____ TO ____ FT.

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)
3	18	118	18-19

READ: STRIKE OUT: INSERT AFTER: (Circle one)

ANCHORAGE #9 HAS A CONTROLLING DEPTH OF 39 FT. WITH A COARSE GREY AND BROWN SAND BOTTOM. THE ANCHORAGE BUOYS HAVE ALL SWITCHED POSITION. THE POSITION FOR BUOY W "A" WAS DISCONTINUED. BUOY W "D" WAS DISCONTINUED. THE POSITION FOR "D" WAS TAKEN BY "C", POSITION FOR "C" WAS REPLACED BY "B", AND THE POSITION FOR "B" WAS REPLACED BY "A". ORIGINAL POSITION FOR "A" WAS DISCONTINUED.

Form Approved. OMB No. 41-R2455

NOAA FORM 77-6
(10-72)

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

COAST PILOT REPORT

PLEASE MAIL TO:

Director
National Ocean Survey
National Oceanic and Atmospheric Administration
ATTENTION: C324
Rockville, Maryland 20852

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GEOGRAPHIC LOCATION

DELAWARE RIVER ; WOODBURY CREEK

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
39°51'45"	075°11'45"	12313, 12312	3, 7-80

VESSEL	MASTER/COMMANDING OFFICER
NOAA LAUNCH #1283	LT(JG) FEDERICO R. DIAZ
DATE OF OBSERVATION	OBSERVER
JULY 1981	FRD

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED		LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION
	YES	NO			

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE (Include approximate latitude and longitude if necessary to identify on chart)	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

USCOMM-DC 4694-P73

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL	GOOD	FAIR	POOR	COMMENT
HOLDING QUALITY					
PROTECTION OFFERED					
ACCESSABILITY					

RECOMMENDED FOR VESSELS:

LENGTH	DRAFT
____ TO ____ FT.	____ TO ____ FT.

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)
3	18	118	51-52

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: (Circle one) CONTROLLING DEPTH 15 7 FT. FROM THE ENTRANCE TO THE FIRST BRIDGE 0.8 ~~NM~~ ABOVE THE MOUTH.

Do not concur- the single line of sdgs shown on the smooth sheet indicate a controlling depth of 2 ft.

Form Approved. OMB No. 41-R2455

NOAA FORM 77-6
(10-72)

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

COAST PILOT REPORT

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ATTENTION: C324
Rockville, Maryland 20852

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GEOGRAPHIC LOCATION DELAWARE RIVER
MANTUA CREEK, N.J.

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
39°51'00"	75°13'45"	12312, 12313	3, 7-80

VESSEL	MASTER/COMMANDING OFFICER
NOAA LAUNCH #1283	LTJG FEDERICO R. DIAZ

DATE OF OBSERVATION	OBSERVER
JULY 1981	FRD

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED		LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION
	YES	NO			

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE (Include approximate latitude and longitude if necessary to identify on chart)	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

USCOMM-DC 4694-P73

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL	GOOD	FAIR	POOR	COMMENT
HOLDING QUALITY					
PROTECTION OFFERED					
ACCESSABILITY					

RECOMMENDED FOR VESSELS:

LENGTH	DRAFT
____ TO ____ FT.	____ TO ____ FT

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)
3	18	118	55-60

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: *(Circle one)*

MANTUA CREEK HAS A CONTROLLING DEPTH OF 14.1 FT. FROM THE ENTRANCE TO THE FIRST RAILROAD BRIDGE. THENCE TO FRIARS LANDING 7 FT. CONTROLLING DEPTH. THENCE FROM FRIARS LANDING TO MANTUA, N.J., CONTROLLING DEPTH OF 0 FT.

(No collaborating hydrography is available)

Form Approved. OMB No. 41-R2455

NOAA FORM 77-6
(10-72)

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

COAST PILOT REPORT

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ATTENTION: C324
Rockville, Maryland 20852

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GEOGRAPHIC LOCATION

SCHUYLKILL RIVER, DELAWARE RIVER

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
39°55'00"	075° 12' 13" W	12312, 12313	3/7-20

VESSEL	MASTER/COMMANDING OFFICER
NOAA LAUNCH #1283	LTJG F. R. DIAZ
DATE OF OBSERVATION: 9 JULY 1987	OBSERVER: FRD

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED YES	CHARTED NO	LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE (Include approximate latitude and longitude if necessary to identify on chart)	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

USCOMM-DC 4694-P73

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL.	GOOD	FAIR	POOR	COMMENT	RECOMMENDED FOR VESSELS: LENGTH	DRAFT
HOLDING QUALITY							
PROTECTION OFFERED							
ACCESSABILITY						____ TO ____ FT.	____ TO ____ FT.

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)
3	18	122	60-65

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: (Circle one) SCHUYLKILL RIVER HAS A CONTROLLING CENTERLINE DEPTH OF 34 FT. TO PASSYUNK AVE BRIDGE, 3.1 MILES ABOVE THE MOUTH, THENCE 23 FT. TO GIBSON POINT, 4 MILES ABOVE THE MOUTH, AND THENCE 14 FT. TO UNIVERSITY AVENUE BRIDGE, 5.3 MILES ABOVE THE MOUTH.

APPROVAL SHEET
SURVEY H-9942 (HSB-10-1-81)

The hydrographic records transmitted with this report are complete and adequate to supersede prior surveys for charting with no additional field work recommended.

Direct daily supervision was not given by me during the field work.

Approved and forwarded,

Geo. W. Jamerson

George W. Jamerson
Lt. Cdr. NOAA
Chief, Hydrographic Surveys Branch

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

September 30, 1981

To: Chief, Tidal Datum Branch, OA/C233

From: George W. Jamerson, Lt. Cdr.
Chief, Hydrographic Surveys Branch

Subject: Request for Tide Data

Please furnish smooth tide correctors and zoning information to Atlantic Marine Center, Processing Division, CAM3, for survey H-9942 (HSB-10-1-81) OPR-D218 for J.D. 142-210, 1981.

Field tide reduction of soundings was based on predicted tides from Philadelphia, Pennsylvania with no correctors.

Smooth tide correctors should be obtained from tide stations 854-5530, 853-8552, 854-3925, 854-5120, 853-8568, 853-8512, and Mantua Creek Tide Staffs 853-8489 and 853-8489B.

The times of hydrography include two hours before and after actual on line times.

J.D.	Begin (GMT)	End (GMT)
142	1153	1629
146	1400	2100
147	1225	2102
152	1254	2116
154	1300	1728
155	1412	2058
156	1307	2046
159	1209	1637
161	1510	2020
162	1105	1938
163	1155	2048
167	1411	2006
168	1141	2111
169	1200	2047

Subj: Request for Tide Data

J.D.	Begin (GMT)	End (GMT)
170	1106	2036
174	1117	2048
175	1217	1937
176	1116	1756
181	1135	1845
182	1049	1658
187	1258	2035
189	1205	2058
190	1205	2007
191	1233	1915
195	1109	1645
197	1115	1528
202	1213	1718
204	1110	1702
208	1340	1808
209	1211	1652
237	1228	1743
238	1213	1653
240	141600	191215

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from Phila, PA with no correction. All times of both predicted and recorded tides from the HFP #3 gages are GMT.

Standard Fischer/Porter ADR Tide gages and Tide staffs were installed, operated and observed at the following locations during the periods indicated.

Site	Location	Period
Billingsport, NJ #853-8552	39°51.0' 75°15.0'	5/21/81 in ------- out
Penrose Ave. Bridge, PA #854-3925	39°53.9' 75°12.7'	5/15/81 in 7/07/81 out
Market St. Bridge, PA #854-5120	39°57.3' 75°10.8'	5/15/81 in 8/20/81 out
Mantua Creek #853-8512 (White Bridge)	39°50.1' 75°14.3'	7/07/81 in 7/29/81 out
Woodbury Creek #853-8568	39°51.5' 75°11.0'	7/15/81 in 7/20/81 out
Mantua Creek #853-8489 (Staff) A	39°47.7' 75°12.2'	7/27/81 in 7/29/81 out
Mantua Creek #853-8489 (Staff) B	39°47.7' 75°10.4'	7/27/81 in 7/29/81 out

U.S. DEPARTMENT OF COMMERCE
November 2, 1981 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: ~~Pacific~~ Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 853-8552 Billingsport, NJ
854-3925 Penrose Ave. Bridge, PA
854-5120 Market St. Bridge, PA

Period: May 22 - August 28, 1981

HYDROGRAPHIC SHEET: H-9942

OPR: D218

Locality: Delaware and Schuykill River, Pennsylvania

Plane of reference (mean lower low water): 853-8552 = 2.96 ft.
854-3925 = 2.60 ft.
854-5120 = 0.82 ft.

Height of Mean High Water above Plane of Reference is 853-8552 = 5.79 ft.
854-3925 = 5.97 ft.
854-5120 = 6.10 ft.

REMARKS: Recommended Zoning:

1. In the Delaware River, zone direct on 853-8552 Billingsport, New Jersey.

2. In the Schuykill River:

   a. From the mouth of the Schuykill River at latitude 39°53.0' north to 39°56.0', zone direct on 854-3925 Penrose Ave. Bridge, Pennsylvania.

   b. North of 39°56.0', zone direct on 854-5120 Market St. Bridge, Pennsylvania.

Chief, Datums and Information Branch

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-9942

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	
NEW JERSEY (title) ✓										1
PENNSYLVANIA (title) ✓										2
DELAWARE RIVER (title) ✓										3
SCHUYKILL RIVER ✓										4
PHILADELPHIA ✓										5
GIBSON POINT ✓										6
POINT BREEZE ✓										7
HARKNESS POINT ✓										8
YANKEE POINT ✓										9
GIRARD POINT ✓										10
RESERVE BASIN ✓										11
LEAGUE ISLAND ✓										12
HORSESHOE SHOAL ✓										13
EAGLE POINT ✓										14
WASHINGTON NECK POINT ✓										15
WOODBURY CREEK ✓										16
MANTUA CREEK ✓										17
LODGE POINT ✓										18
BILLINGSPORT ✓										19
HOG ISLAND ✓										20
FORT MIFFLIN ✓ (cultural)					Approved:					21
MUD ISLAND ✓										22
NATIONAL PARK ✓ (locality)					Charles E. Harrington					23
RED BANK ✓ (locality)					Chief Geographer - N/CG2x5					24
FAIRMOUNT DAM ✓ (cultural)					JUL 26 1984					25

NOAA FORM 76-155 SUPERSEDES C&GS 197

0.2

U.S. DEPARTMENT OF COMMERCE
November 2, 1981 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: ~~Pacific~~ Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 853-8552 Billingsport, NJ
854-3925 Penrose Ave. Bridge, PA
854-5120 Market St. Bridge, PA

Period: May 22 - August 28, 1981

HYDROGRAPHIC SHEET: H-9942

OPR: D218

Locality: Delaware and Schuykill River, Pennsylvania

Plane of reference (mean lower low water): 853-8552 = 2.96 ft.
854-3925 = 2.60 ft.
854-5120 = 0.82 ft.

Height of Mean High Water above Plane of Reference is 853-8552 = 5.79 ft.
854-3925 = 5.97 ft.
854-5120 = 6.10 ft.

REMARKS: Recommended Zoning:

1. In the Delaware River, zone direct on 853-8552 Billingsport, New Jersey.

2. In the Schuykill River:

   a. From the mouth of the Schuykill River at latitude 39°53.0' north to 39°56.0', zone direct on 854-3925 Penrose Ave. Bridge, Pennsylvania.

   b. North of 39°56.0', zone direct on 854-5120 Market St. Bridge, Pennsylvania.

Chief, Datums and Information Branch

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: H-9942 FIELD NO.: HSB-10-1-81

New Jersey and Pennsylvania, Delaware and Schuylkill Rivers, Billingsport to Horseshoe Shoal

SURVEYED: May 22-July 28, August 25-August 28, 1981

SCALE: 1:10,000 PROJECT NO.: OPR-D218-HSB-80

SOUNDINGS: Raytheon 719B Echo Sounder and Lead Line CONTROL: Del Norte/Theodolite (Range/Azimuth)

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

Surveyed by ..... F. R. Diaz
..... C. F. Bush
..... D. B. Elliott
..... M. J. McMann
..... R. S. Snow
..... W. Zvikas

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

1. INTRODUCTION

a. No unusual problems were encountered during office processing.

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

2. CONTROL AND SHORELINE

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

b. Shoreline is from final reviewed Class III photogrammetric shoreline maps TP-00240, TP-00241, TP-00242, and TP-00243 of 1975. A revision of TP-00242 shoreline by the hydrographer in the vicinity of latitude 39°51.02'N, longitude 75°14.62'W is shown in dashed red ink on the smooth sheet.

3. HYDROGRAPHY

a. Soundings at crossings are in good agreement.

b. The development of bottom configuration and its delineation by the depth curves are adequate with the following exceptions:

(1) Berthed vessels and the removal of piers in the Reserve Basin in latitude 59°53.55'N, longitude 75°11.00'W prevented complete bottom coverage of this area.

(2) Portions of the Schuylkill River are developed only with lines parallel to the channel axis so that some inshore areas are unsurveyed.

(3) Inadequate development of the entrance to Woodbury Creek in latitude 59°52.00'N, longitude 75°11.87'W compromised the acquisition of entrance depths and the delineation of the 6-, 12-, and 18-foot depth curves.

c. The development of shoals is generally adequate to determine that least depths have been acquired and that shoal configurations can be adequately delineated by the depth curves. Two exceptions are addressed in Section 7, "Comparison with Chart" in the Evaluation Report.

4. CONDITION OF SURVEY

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

a. Confirmation of disproval of the present existence of features on the shoreline maps was occasionally overlooked.

b. Verification or disproval of charted features such as piers, piles, and ruins was frequently overlooked. These items, when not appearing on the contemporary shoreline maps, were generally ignored during the survey and are individually addressed in Section 7, "Comparison with Chart" in this report.

c. 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.

d. Some position numbers were duplicated.

e. Presurvey Review items were not identified with their geographic positions when addressed in the Descriptive Report. Geographic positions were appended during office processing.

5. JUNCTIONS

H-9886 (1980) on the east
H-9964 (1981) on the west

The junction with H-9886 (1980) will be addressed in the evaluation of that survey. The junction with H-9964 (1981) is adequate.

6. COMPARISON WITH PRIOR SURVEYS

a. H-1114a (1871)
H-1432b (1878)
H-1490A (1881)
H-1490b (1881)
H-1943 (2889)
H-1944 (1889)

These surveys are dated prior to several changes resulting from Federal Channel Projects, numerous alongshore construction projects, and dredging to mine sand and gravel in the area. The numerous drastic changes due to man-made causes preclude an adequate comparison with the present survey. The present survey is adequate to supersede the prior surveys within the common area.

b. T-8748A (1946-1949) 1:10,000
T-8748B (1946-1949) 1:10,000
T-8748C (1946-1949) 1:20,000
T-8769a (1946-1949) 1:10,000
T-8769b (1946-1949) 1:10,000

These photogrammetric shoreline maps cover the area common to the present survey and are subsequent to the prior hydrographic surveys. Charted items originating with these surveys are specifically addressed in section 7, "Comparison with Chart" in this report. A few items on the present survey have been brought forward from the prior T-sheets.

7. COMPARISON WITH CHART 12313 (33rd Edition, September 13, 1980)

a. Hydrography

Charted hydrography originates with miscellaneous sources, including U.S. Corps of Engineers surveys.

Charted depths in the Schuylkill River have generally deepened. Depths upriver of the project channel have deepened 1 to 12 feet. Depths in the remainder of the river have generally undergone changes of plus or minus 1 to 2 feet. Isolated changes of as much as 8 feet deeper are noted.

Depths in the Reserve Basin are in general agreement. A few 1- to 2-foot differences are noted, with the present depths deeper than the charted depths.

Charted depths in the Delaware River shoreward of the project channel have undergone considerable change due to cultural and natural causes. Changes of plus or minus 1 to 5 feet are common, with some isolated differences of as much as plus 16 feet and minus 9 feet.

The 5-foot depth, charted from a miscellaneous source in latitude 39°57.40'N, longitude 75°10.78'W, was not disproved on the present survey and should be retained as charted.

The 8-foot depth, charted from a miscellaneous source in latitude 39°51.80'N, longitude 75°12.81'W, was not disproved on the present survey and should be retained as charted.

With the exception of the 5- and 8-foot depths, addressed above, charted soundings are superseded by present survey depths.

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

(1) The double line ruins charted in latitude 39°51.62'N, longitude 75°14.50'W originated on T-8769b (1946-49) as three barges aground. Probably the barges were not seen on subsequent aerial photographs and were then shown on the chart as ruins. The hydrographer made no mention of these ruins, nor are they shown on the contemporary shoreline map. If any ruins remain, they now fall shoreward of the mean low water line, are considered to have no charting significance, and should be deleted on the next chart edition.

(2) The configuration of the ruins charted from T-8769b (1946-49) in latitude 39°51.68'N, longitude 75°14.40'W and the ruins shown on the present survey are in conflict. Chart the configuration of the ruins as shown on the present survey.

(3) The pier charted from T-8769b (1946-49) in latitude 39°51.70'N, longitude 75°14.35'W is not shown on the contemporary shoreline map nor on the present survey. If any ruins remain, they are considered to have no charting value. Expunge the charted pier.

(4) The pipeline charted from T-8769b (1946-49) in latitude 39°51.68'N, longitude 75°14.31'W is not shown on the contemporary shoreline map nor on the present survey. The pipeline is considered to be no longer in existence. Expunge the charted pipeline.

(5) The catwalk charted from T-8769b (1946-49) in latitude 39°52.12'N, longitude 75°13.23'W is not shown on the contemporary shoreline map nor on the present survey. The catwalk is considered to be no longer in existence. Expunge the charted catwalk.

(6) The dolphin charted from T-8769b (1946-49) in latitude 39°52.22'N, longitude 75°13.03'W is not shown on the contemporary shoreline map nor on the present survey. If any ruins remain, they are considered insignificant, with no charting value. Expunge the charted dolphin.

(7) The locations of the catwalk and dolphin charted from a miscellaneous source in latitude 59°52.29'N, longitude 75°12.91'W are in conflict with counterpart features on the present survey. Chart the items as shown on the present survey.

(8) The piers and pile symbols charted from a miscellaneous source in latitude 39°52.48'N, longitude 75°12.68'W are not shown on the contemporary shoreline map nor on the present survey. Expunge the charted items and chart the ruins in this areas as shown on the present survey.

(9) The location and delineation of the sewer charted from a miscellaneous source in latitude 39°51.20'N, longitude 75°13.58'W are in conflict with the counterpart feature on the present survey. Chart the sewer outfall as shown on the present survey.

(10) The dolphins, charted from miscellaneous sources in latitude 39°51.25'N, longitude 75°13.61'W and latitude 39°51.22'N, longitude 75°13.79'W respectively, are not shown on the contemporary shoreline map nor on the present survey. If the chart compiler has no information to the contrary, the two charted dolphins should be charted as submerged dolphins.

(11) The sewer charted from a miscellaneous source in latitude 39°51.15'N, longitude 75°13.94'W is not shown on the contemporary shoreline map nor on the present survey. The charted white and orange nun buoy marking the sewer outfall has been removed and possibly the sewer outfall has also been removed. A charting resolution is deferred to the chart compiler.

(12) The dolphin charted from a miscellaneous source in latitude 39°51.13'N, longitude 75°14.30'W is not shown on the contemporary shoreline map nor on the present survey. The dolphin was probably removed when the nearby pier was enlarged. A charting resolution is deferred to the chart compiler.

(13) Marsh areas are mistakenly labeled in slanted lettering on the contemporary shoreline maps. Vertical type for the term, Marsh, as printed on the chart is correct.

(14) The pier charted from a miscellaneous source in latitude 39°52.67'N, longitude 75°09.70'W is not shown on the contemporary shoreline map nor on the present survey. If any ruins remain, they are considered to have no charting value. Expunge the charted pier.

(15) The submerged sections of the seaplane ramps charted from T-8748A (1946-49) in latitude 39°53.26'N, longitude 75°09.21'W and latitude 39°53.21'N, longitude 75°09.88'W respectively, are longer than their counterpart lengths on TP-00243 (1975). Chart as shown on the present survey.

(16) Charted dry docks numbered 1 through 5, in the vicinity of latitude 39°53.20'N, longitude 75°11.00'W, although not shown on the smooth sheet, should be charted as shown on the contemporary shoreline maps.

(17) The dolphin charted from T-8748A (1946-49) in latitude 59°53.12'N, longitude 75°11.14'W is not shown on the contemporary shoreline map nor on the present survey. Unless the chart compiler has information to the contrary, the dolphin should be charted as submerged.

(18) The submerged dolphins charted from a miscellaneous source in latitude 59°53.11'N, longitude 75°11.18'W are not shown on the contemporary shoreline map nor on the present survey. Unless the chart compiler has information to the contrary, the submerged dolphins should be retained as charted.

(19) The sunken rock and rock awash charted from a miscellaneous source in latitude 39°53.03'N, longitude 75°11.69'W are considered to symbolize the base of the jetty that occupies this area. These symbols are considered unnecessary and should be expunged from the chart. Also the note "Stone pile" identifies riprap around the lighted aid and is considered redundant. Chart this area as shown on the present survey.

(20) The marine railways charted from a miscellaneous source in latitude 39°53.58'N, longitude 75°11.28'W are not shown on the contemporary shoreline map and this area is unsurveyed on the present survey. The marine railways should be retained as charted unless the compiler has information to the contrary.

(21) The ruins charted in latitude 59°53.73'N, longitude 75°12.39'W originate with a solid line feature shown on T-8748A (1946-49) and are not shown on the contemporary shoreline map nor on the present survey. If the chart compiler has no information to the contrary, the ruins should be retained as charted.

(22) The pier charted from a miscellaneous source in latitude 39°53.80'N, longitude 75°12.55'W is not shown on the contemporary shoreline map nor on the present survey. Unless the chart compiler has information to the contrary, submerged pier ruins should be charted.

(23) The positions of two piers charted from a miscellaneous source in latitude 39°53.85'N, longitude 75°12.60'W are in conflict with counterpart piers shown on TP-00242 (1975). Chart the piers as shown on TP-00242 (1975).

(24) The position of the outfall charted from a miscellaneous source in latitude 39°53.92'N, longitude 75°12.71'W is in conflict with its counterpart position shown on TP-00242 (1975). Chart the outfall as shown on TP-00242 (1975).

(25) The T-shaped pier charted from a miscellaneous source in latitude 39°54.02'N, longitude 75°12.80'W is shown on TP-00240 (1975) as a straight double line pier. It appears that the charted pier has been rebuilt in its present configuration. Chart the pier as shown on TP-00240 (1975).

(26) The pier charted from a miscellaneous source in latitude 39°54.61'N, longitude 75°12.43'W is now in ruins and should be charted as shown on TP-00240 (1975).

(27) The submerged obstruction charted from a miscellaneous source in latitude 39°55.22'N, longitude 75°12.11'W is shown on TP-00240 (1975) as a visible obstruction. Recommend charting the obstruction with a dashed rectangle and labeling "obstruction" in vertical letters.

(28) The positions of the two dolphins charted from a miscellaneous source in latitude 39°55.29'N, longitude 75°12.29'W are in conflict with the positions of dolphins shown in this area on TP-00240 (1975). Chart the dolphins as shown on TP-00240 (1975), unless the chart compiler has information to the contrary.

(29) The position of the dolphin charted from a miscellaneous source in latitude 39°55.29'N, longitude 75°12.51'W is in conflict with its counterpart position on TP-00240 (1975). Chart the dolphin as shown on TP-00240 (1975), unless the chart compiler has information to the contrary.

(30) The submerged obstruction charted from a miscellaneous source in latitude 39°55.68'N, longitude 75°12.65'W is shown as a visible obstruction on TP-00240 (1975). Unless the chart compiler has information to the contrary, the obstruction should be charted as shown on TP-00240 (1975).

(31) The straight line pier charted from T-8748A (1946-49) in latitude 39°55.81'N, longitude 75°12.52'W is shown on TP-00240 (1975) as a pier with a box ending. Chart the pier as shown on TP-00240 (1975), unless the chart compiler has information to the contrary.

(32) The pier charted from T-8748B (1946-49) in latitude 39°56.50'N, longitude 75°11.82'W is now in ruins and should be charted as shown on TP-00240 (1975).

(33) The positions of the two dolphins and pier charted from a miscellaneous source in latitude 39°56.52'N, longitude 75°11.56'W are in conflict with counterpart features on TP-00240 (1975). Chart the dolphins and pier as shown on TP-00240 (1975).

(34) The dolphin charted from a miscellaneous source in latitude 39°56.24'N, longitude 75°12.37'W is not shown on the contemporary shoreline map nor on the present survey. A charting resolution, concerning the charting of a submerged dolphin here, is deferred to the chart compiler.

(35) Two piers charted from T-8748A (1946-49) and three dolphins charted from a miscellaneous source are in conflict with counterpart information shown in latitude 39°55.59'N, longitude 75°12.80'W on TP-00240 (1975). Chart the features as shown on TP-00240 (1975), unless the chart compiler has information to the contrary.

(36) The feature charted from a miscellaneous source in latitude 39°54.97'N, longitude 75°12.28'W is not shown on the contemporary shoreline map nor on the present survey. A charting resolution is deferred to the chart compiler.

(37) The pier ruins charted from a miscellaneous source in latitude 39°54.79'N, longitude 75°12.40'W are shown on TP-00240 (1975) as a pier in good condition. Chart the pier as shown on TP-00240 (1975), unless the chart compiler has information to the contrary.

(38) The delineation of the wood bulkhead, with water behind it, centered in latitude 39°53.77'N, longitude 75°12.71'W and charted from T-8748A (1946-49) is in conflict with the delineation of the bulkhead shown on TP-00242 (1975). Apparently the bulkhead has been rebuilt. Chart the shoreline area as shown on TP-00242 (1975).

(39) The feature charted from a miscellaneous source in latitude 39°53.63'N, longitude 75°12.44'W is not shown on the contemporary shoreline map nor on the present survey. A charting resolution is deferred to the chart compiler.

(40) The pier ruins charted from T-8748A (1946-49) in latitude 39°52.61'N, longitude 75°12.46'W are not shown on the contemporary shoreline map nor on the present survey. If any ruins remain, they are considered to have no charting significance. Expunge the charted pier ruins.

(41) The obstruction mistakenly symbolized on TP-00242 (1975) in latitude 39°52.57'N, longitude 75°12.46'W was not addressed by the hydrographer. The solid line shown on TP-00242 (1975) symbolizes a visible feature, the slanted type label symbolizes a feature uncovering at MLLW. An office determination was made to show the feature as uncovering at MLLW. Chart the obstruction as shown on the smooth sheet.

(42) Several bridge abutments were located on the present survey but few were shown on the smooth sheet because of scale limitations. If the user has a need for this information it can be found in the survey records.

(43) The stranded wreck symbol plotted in latitude 39°51.73'N, longitude 75°12.38'W is symbolized on the smooth sheet as it is depicted on the field sheet. The descriptions of these two barges on the field sheet, echogram, and in the sounding volume (position 1729) simply state, "Center of two steel barges 150 ft. long 20 ft. wide." No elevations are furnished nor were these barges described as wrecks. These alleged wrecks should be verified at an opportune time. Recommend that the chart compiler append "reported 1981" to the wreck symbol when charting.

(44) The islet charted from a miscellaneous source in latitude 39°51.36'N, longitude 75°13.24'W and also shown in a different configuration on TP-00242 (1975) has eroded so that the area is now covered at MHW. Expunge the charted islet and chart depths in this area as shown on the present survey.

c. Controlling Depths

(1) Schuylkill River

The table of controlling depths is based on U.S. Corps of Engineers surveys of April 1980. Present depths shoaler than those listed in the tabulation follow:

Channel No.	Present Depths (ft)	Location in Channel
2	17	edge of right outside quarter
4	28	edge of right outside quarter
5	29	right outside quarter
7	32	left outside quarter
8	10	left outside quarter
9	31	left outside quarter
17	33	center

Channel No.	Present Depths (ft)	Location in Channel
17	25	right outside quarter
18	27	right outside quarter
20	27	right outside quarter
23	27	edge of left outside quarter
24	29	edge of left outside quarter
28	16	right outside quarter
29	12	left outside quarter
32	13	right outside quarter
33	8	right outside quarter
34	7	edge of right outside quarter

Controlling depth notes, charted from miscellaneous sources and found to be invalid by present survey depths, follow:

Controlling Depth Note	Immediate Vicinity Latitude (N)	Longitude (W)	Present Survey Depth
30 FT rep 1972	39°53.53'N	75°11.03'W	21 feet on edge
30 FT 1978	39°53.52'N	75°11.15'W	28 feet
30 FT 1978	39°53.64'N	75°11.30'W	29 feet
30 FT 1978	39°53.55'N	75°11.60'W	28 feet

Retain the controlling depth note "30 FT 1980" charted in latitude 39°54.60'N, longitude 75°13.00'W since this area is unsurveyed on the present survey.

Present survey depths confirm the controlling depth note "30 FT 1978" charted in latitude 39°53.59'N, longitude 75°12.00'W. Update the charted note to 1981.

(2) Delaware River

The charted 37-foot project channel noted in latitude 39°53.00'N, longitude 75°08.75'W has shoaled 1 to 4 feet to present survey depths of 33 to 36 feet in the vicinity of latitude 39°52.90'N, longitude 75°09.10'W.

The controlling depth note "38 ft rep 1979" and the area delineation is charted from a miscellaneous source in the vicinity of latitude 39°52.2'N, longitude 75°13.0'W. This area has shoaled to 29 feet along its inshore edge.

Present survey depths, as shoal as 24 feet, supersede the note "40 ft rep 1971" charted in latitude 39°51.29'N, longitude 75°13.70'W. It is recommended that the charted note and delimiting lines be expunged. Chart depths as shown on the present survey.

There are no conflicts with charted tabulated controlling depths in the remaining Delaware River channels.

(3) Woodbury Creek

While Woodbury Creek may have a controlling depth of 7 feet as the hydrographer alleges in the Descriptive Report, the single line of soundings on the present survey indicate a controlling depth of 2 feet from the creek's entrance to the first highway bridge. Hydrographic development of the entrance to the creek as well as the creek itself is inadequate to determine controlling depths.

(4) Mantua Creek

The hydrographer states in the Descriptive Report that Mantua Creek has a controlling depth of 14.1 feet from the entrance to the first railroad bridge, a controlling depth of 7 feet from the railroad bridge to Friars Landing, and a controlling depth of 0 foot from Friars Landing to Mantua, New Jersey.

The "See Field Sheet" method was used to control a center line of soundings in Mantua Creek. Because no soundings were plotted on the field sheet, no soundings could be plotted on the smooth sheet. See also Section P, "Miscellaneous" in the Descriptive Report for relevant information.

Revise the charted controlling depths as indicated above.

c. Sounding Datum

The sounding datum on the present survey is Mean Lower Low Water. The dotted curves transferred to the present survey from contemporary shoreline maps delineate the approximate Mean Low Water line. The difference between MLLW and MLW is 0.2 foot and is considered to generally have no charting significance. However, since the charted tabulations of controlling depths in channels are listed in feet and tenths of a foot, a plus 0.2 foot correction should be added to charted tabulated depths where applicable. Also, all charted references to Mean Low Water should be revised to Mean Lower Low Water since this is now the datum for charted hydrographic information.

d. Aids to Navigation

The charted aids to navigation were located and adequately mark their intended features with the following exceptions:

(1) Schuylkill River red nun channel buoy No. 14 is located on the present survey in latitude 39°54.18'N, longitude 75°12.89'W, approximately 40 meters northeast of its charted position and does not adequately mark the channel.

(2) Schuylkill River black can channel buoy No. 11 is located on the present survey in latitude 39°53.77'N, longitude 75°12.67'W, approximately 60 meters northwest of its charted position. While the buoy adequately marks the channel, it no longer marks the turn in the channel.

(3) Woodbury Creek red nun entrance buoy No. 2 is located on the present survey in latitude 39°52.06'N, longitude 75°12.03'W, approximately 40 meters northwest of its charted position. While the position of the aid marks an entrance to Woodbury Creek, the aid should be moved closer to shore to adequately mark Woodbury Creek entrance channel.

(4) Woodbury Creek red nun entrance buoy No. 4 is located on the present survey in latitude 39°51.98'N, longitude 75°11.86'W, approximately 60 meters north of its charted position. The buoy's position on the present survey adequately marks the channel entrance. The charted position of the buoy does not adequately mark the entrance channel.

(5) Delaware River Eagle Point red nun buoy No. 46 is located in latitude 39°52.31'N, longitude 75°10.00'W on the present survey, approximately 30 meters into the channel and does not mark the edge of the channel.

(6) Delaware River Horseshoe Shoal lighted buoy No. 35 is located in latitude 39°52.90'N, longitude 75°09.24'W on the present survey, approximately 30 meters northeast of its charted position and does not accurately mark the channel.

(7) The privately maintained white and orange nun buoy, marking a sewer outfall pipe, and charted in latitude 39°51'13"N, longitude 75°13'57"W is no longer in existence. (See page 9, paragraph 4 in the Descriptive Report.) Expunge the charted buoy.

(8) Buoys marking anchorage area No. 9 have been changed.

(a) White nun buoy "D" charted in latitude 39°52.57'N, longitude 75°12.02'W has been relettered "C."

(b) White nun buoy "C," charted in latitude 39°52.18'N, longitude 75°12.25'W, has been relettered "B."

(c) White nun buoy "B," charted in latitude 39°51.64'N, longitude 75°13.14'W, has been relettered "A."

(d) White nun buoy "A," charted in latitude 39°51.24'N, longitude 75°13.86'W, has been removed.

(See item N. "Aids to Navigation" on page 8 of the Descriptive Report.)

Expunge the charted white nun buoy "A" and revise buoy lettering as indicated.

(9) Mantua Creek red nun channel buoy No. 6 was apparently overlooked by the hydrographer since no reference to it is found in the survey records. The buoy is listed in the 1982 U.S. Coast Guard Light List and should be retained as charted.

e. Landmarks

The following charted landmarks are noted on form 76-40, inserted in the Descriptive Report, to be deleted.

(1) Breezy Point East Transmission Tower, charted in latitude 39°55'03.13"N, longitude 75°12'03.22"W, has been removed.

(2) Breezy Point West Transmission Tower, charted in latitude 39°55'02.79'N, longitude 75°12'14.9"W has been removed.

(3) Philadelphia Electric Company Stack charted in latitude 39°56'31.73"N, longitude 75°11'22.93"W.

f. Overhead Cables

(1) The overhead cable charted in latitude 39°56.57'N, longitude 75°12.20'W and crossing the river in two places has been removed. Expunge the charted overhead cable.

(2) The overhead cable charted in latitude 39°56.57'N, longitude 75°11.53'W is not shown on TP-00240 (1975) nor on the present survey. The U.S. Corps of Engineers should be queried regarding the present existence of this overhead cable.

(3) The overhead cable charted in latitude 39°51.47'N, longitude 75°11.09'W is not shown on TP-00242 (1975) nor on the present survey. The U.S. Corps of Engineers should be queried regarding the present existence of this overhead cable.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the project instructions, except as noted in sections 3, 4, and 7 of this report.

9. ADDITIONAL FIELD WORK

This is an adequate basic survey and no additional field work is recommended. However, the questionable wrecks addressed in section 7.b, item 43 of this report should be investigated at an opportune time.

During the evaluation of H-9942, personnel of the Philadelphia Naval Base alleged that charted piers A, B, C, and D in the Reserve Basin had been removed, also that portions of the Reserve Basin had been dredged to 35 feet. This information was conveyed to the Nautical Data Unit for appropriate action in order that the chart accurately reflect current conditions in the area.

Some of the items shown on NOS surveys of the Delaware River as caissons, mooring caissons, dolphins, and/or mooring dolphins have allegedly been removed since 1981. These dolphins/caissons were used to moor barges in the conjunction with the use of U.S. Corps of Engineers hopper dredges. The use of hopper dredges in the area was discontinued about 1981, and therefore these

structures were allegedly removed. A field investigation is recommended, at an opportune time, to ascertain which of these items have been removed. These caissons are considered dolphins and should be labeled as such when charting.

Robert R. Hill
Senior Cartographic Technician
Verification of Field Data

F. P. Saulsbury
Cartographer
Standards Section (N/CG242)
Evaluation and Analysis

Leroy G. Cram
Supervisory Cartographic Technician

Certification of Digital Data
H-9942

The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, sounding and digitized data printouts of the survey have been made.

Certified: 22 July 1985

Robert G. Roberson
Chief, Evaluation and Analysis Group

Inspection Report
H-9942

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

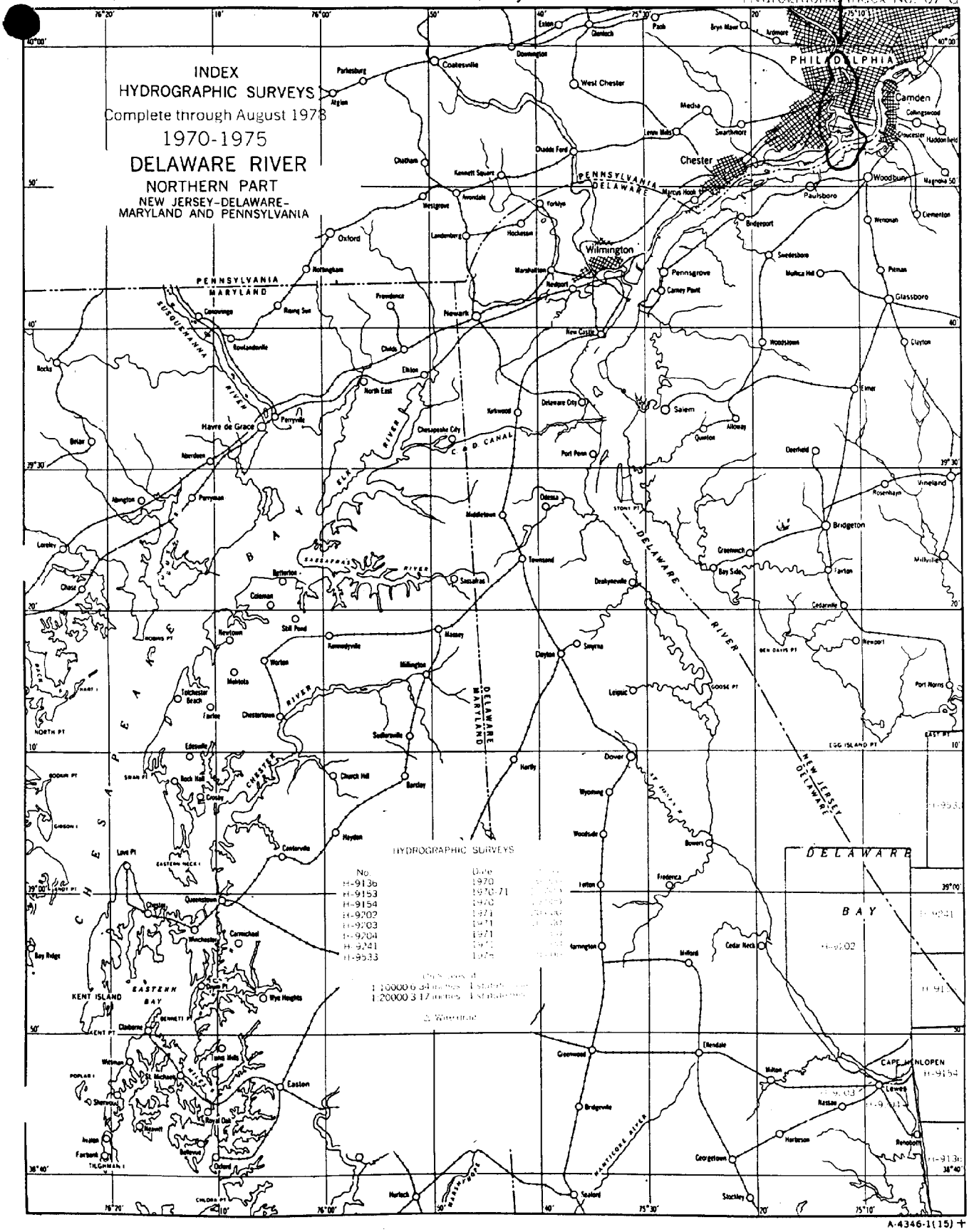
Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Diagram No. 295-2

H-9942

Hydrographic Index No. 67 G



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-9942

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
12313	4-6-85	H. Rodden	~~Full Part Before~~ Adequate After Marine Center Approval Signed Via Adequate Application
			Drawing No. 43
12312	2-22-88	H. Rodden	~~Full Part Before~~ Adequate After Marine Center Approval Signed Via
			Drawing No. 50 Adequate Application
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED