

TP-00054

TP-00054

NOAA FORM 76-35 (3-76)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
THIS MAP EDITION WILL NOT BE FIELD EDITED	
Map No. TP-00054	Edition No. 1
Job No. PH-6905	
Map Classification Class III (FINAL)	
Type of Survey SHORELINE	
LOCALITY	
State DELAWARE	
General Locality DELAWARE BAY	
Locality LITTLE RIVER	
1969 TO 19	
REGISTRY IN ARCHIVES	
DATE	

MAP NOT INSPECTED BY
QUALITY CONTROL OF PHOTOGRAMMETRY DIVISION
PRIOR TO REGISTRATION

10415

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY		SURVEY TP. 00054	
DESCRIPTIVE REPORT - DATA RECORD				<input checked="" type="checkbox"/> ORIGINAL		MAP EDITION NO. (1)	
				<input type="checkbox"/> RESURVEY		MAP CLASS III (FINAL)	
				<input type="checkbox"/> REVISED		JOB PH. 6905	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Division Norfolk, VA				LAST PRECEDING MAP EDITION			
OFFICER-IN-CHARGE Roy K. Matsushige, CDR				TYPE OF SURVEY		JOB PH. _____	
				<input type="checkbox"/> ORIGINAL		MAP CLASS _____	
				<input type="checkbox"/> RESURVEY		SURVEY DATES:	
				<input type="checkbox"/> REVISED		19__ TO 19__	
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation December 10, 1969				Field September 26, 1969			
Compilation May 12, 1970				Amendment I October 7, 1969			
Amendment April 1, 1971							
Memo (Cancel field edit) December 14, 1979							
Memo (Completion Schedule) June 22, 1981							
II. DATUMS							
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN				OTHER (Specify)			
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input checked="" type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL				OTHER (Specify)			
3. MAP PROJECTION Polyconic				4. GRID(S)			
				STATE Delaware		ZONE	
5. SCALE 1:10,000				STATE		ZONE	
III. HISTORY OF OFFICE OPERATIONS							
OPERATIONS				NAME		DATE	
1. AEROTRIANGULATION BY				D. Norman		April 1970	
METHOD: Analytic LANDMARKS AND AIDS BY							
2. CONTROL AND BRIDGE POINTS PLOTTED BY				J. Dempsey		March 1971	
METHOD: Coradomat CHECKED BY				E. Homick		March 1971	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				E. Bichner		August 1971	
COMPILATION CHECKED BY				R. White		August 1971	
INSTRUMENT: Wild B-8				NA			
SCALE: 1:10,000				NA			
4. MANUSCRIPT DELINEATION PLANIMETRY BY				E. Bichner		August 1971	
CHECKED BY				A. L. Shands		Sept. 1971	
METHOD: Smooth Draft				NA			
CHECKED BY				NA			
SCALE: 1:10,000 HYDRO SUPPORT DATA BY				E. Bichner		August 1971	
CHECKED BY				A. L. Shands		Sept. 1971	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY				A. L. Shands		Sept. 1971	
6. APPLICATION OF FIELD EDIT DATA BY				None			
CHECKED BY				None			
7. COMPILATION SECTION REVIEW Class III BY				A. L. Shands		Sept. 1971	
8. FINAL REVIEW Class III BY				L. O. Neterer, Jr.		Sept. 1981	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				L. O. Neterer, Jr.		May 1982	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY							
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				R. B. Vane		Mar 10 1983	

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00054
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-9 "M"

Wild RC-8 "E" - "K"

TYPES OF PHOTOGRAPHY
LEGEND

TIME REFERENCE

TIDE STAGE REFERENCE

☒ PREDICTED TIDES☐ REFERENCE STATION RECORDS☒ TIDE CONTROLLED PHOTOGRAPHY

(C) COLOR

(P) PANCHROMATIC

(I) INFRARED

ZONE

Eastern

☒ STANDARD

MERIDIAN

75th

☐ DAYLIGHT

	NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
x*	69E(C)-3072 thru 3074	24 Oct., 69	11:18	1:40,000	3.2 ft. above MLW
+	69K(I)-4489 thru 4493	23 Oct., 69	13:45	1:20,000	0.5 ft. below MLW
+	69K(I)-4700 thru 4705	26 Oct., 69	11:13	1:20,000	0.0 ft. above MHW
+	69E(C)-2913 thru 2917	23 Oct., 69	13:45	1:20,000	0.6 ft. above MLW

Focal length: E = 152.71 mm, K = 151.77 mm, M = 88.20 mm

REMARKS *Centers do not appear on manuscript.

+Tide coordinated photography.

xBridging photography used in the Wild B-8 stereoplotter.

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high-water line was compiled from the above listed infrared mean high-water photography.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The mean low-water line was compiled from the above listed tide coordinated infrared mean low-water photography.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00052	No Survey	TP-00055 & TP-00056	TP-00053

REMARKS

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TP-00054

HISTORY OF FIELD OPERATIONS.

I. ☒ FIELD INSPECTION OPERATION (Premarking) ☐ FIELD EDIT OPERATION.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	J. Wilson	Oct. 1970
2. HORIZONTAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY NA	
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None	
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY None	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

NA

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

None

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONTP-00054
RECORD OF SURVEY USE

TP-00054

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	August 1971	Class III		
Final Review, Class III	Sept. 1981	Final Class III map No field edit performed		

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

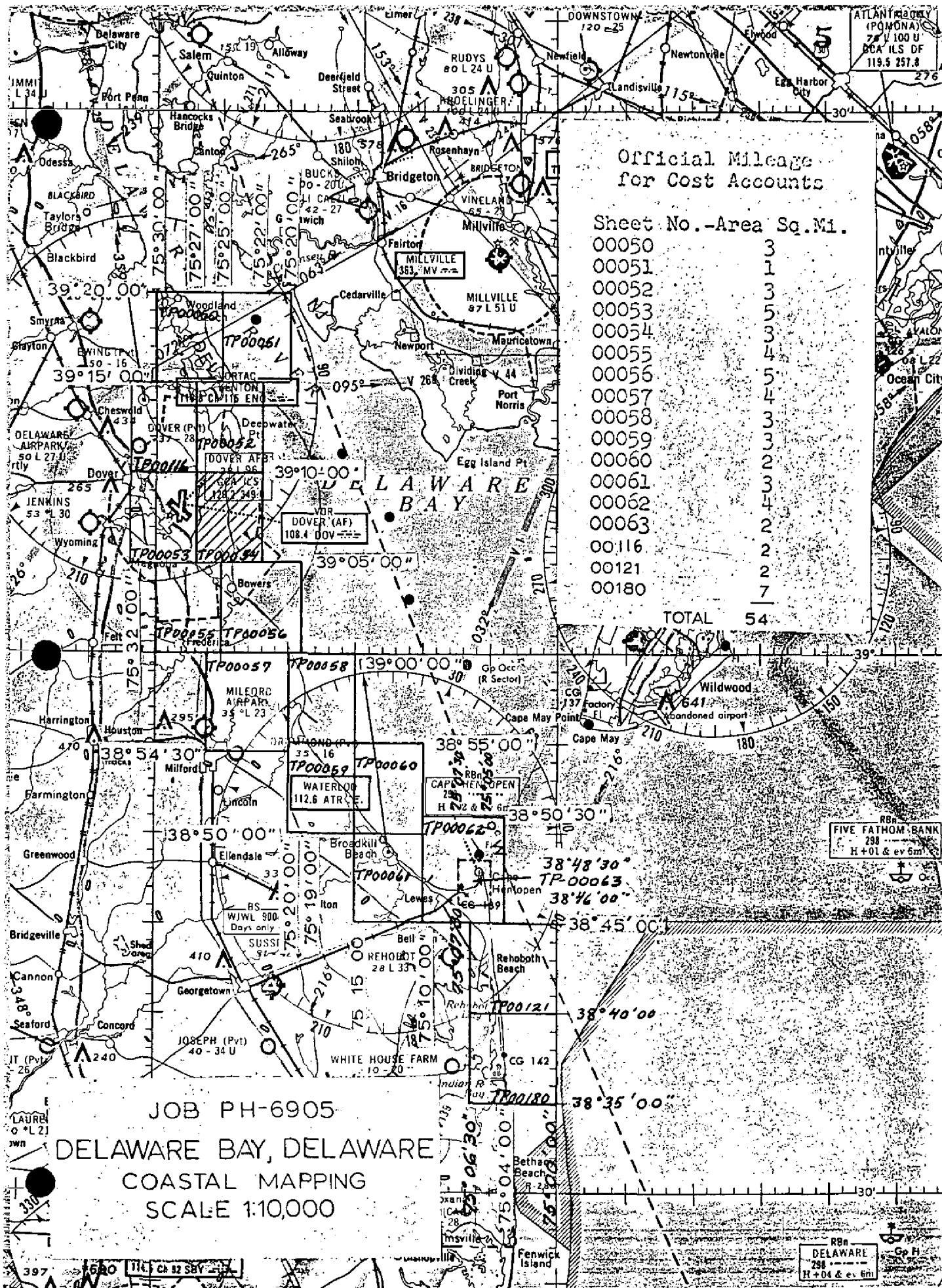
III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS. ⁷⁶⁻⁴⁰ ~~800~~ SUBMITTED BY FIELD PARTIES.
 3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☒ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: Nov 1982

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



Official Mileage
for Cost Accounts

Sheet No. - Area Sq. Mi.	
00050	3
00051	1
00052	3
00053	5
00054	3
00055	4
00056	5
00057	4
00058	3
00059	3
00060	2
00061	3
00062	4
00063	2
00116	2
00121	2
00180	7
TOTAL	54

JOB PH-6905
DELAWARE BAY, DELAWARE
COASTAL MAPPING
SCALE 1:10,000

FIVE FATHOM BANK
298
H + 01 & ev 6m

DELAWARE
298
H + 04 & ev 6m

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORT

TP-00054

This 1:10,000 shoreline manuscript is one of seventeen maps that comprise project PH-6905, Delaware Bay, Delaware. The project encompasses the western part of Delaware Bay from Woodland Beach, latitude 39°20', south to Indian River, latitude 38°35'.

Correspondence, from the Chief of Photogrammetry, dated December 14, 1979, called for the cancellation of field edit on TP-00050 through TP-00058 and TP-00116 and registering these as Class III maps. Map TP-00059 through TP-00063, TP-00121, and TP-00180 were field edited and are to be registered as Class I maps.

No contemporary hydrographic survey was accomplished in the area common to this Class III map.

Field work prior to compilation was accomplished in October 1969; this involved the establishment of horizontal control by premarking methods in order to meet aerotriangulation requirements.

Photographic coverage was provided in October 1969 for aerotriangulation using panchromatic film with the "M" camera at 1:80,000 scale. Compilation photography was color film with the "E" camera at 1:20,000 scale. Tide coordinated infrared high and low water photography was taken using the "K" camera at 1:20,000 scale; the low water infrared photographs were taken in tandem with the hydro support photography.

Analytic aerotriangulation was performed at the Washington Science Center, April 1970.

Compilation was performed at the Atlantic Marine Center, August 1971. No copies of this Class III map were submitted for field edit.

During final review, which was performed at the Atlantic Marine Center in September 1981, it was found that visible aids to navigation which were visible on the [REDACTED] photography are no longer listed nor charted. These aids were removed. Cancellation of field edit requires this map to be registered as a final Class III map compiled from office interpretation of the 1969 photography.

This descriptive report contains all pertinent information used to compile the final Class III map.

The original base manuscript and all pertinent data was forwarded to Washington for final registration.

FIELD INSPECTION

TP-00054

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project.

Photogrammetric Plot Report
PH-6905
Delaware Bay

April 3, 1970

21. Area Covered

The area covered in this project is the southwest shore of Delaware Bay. The manuscripts are TP-50 through TP-62 and TP-116 at 1:10,000 scale and TP-63 at 1:5,000 scale.

22. Method

Two strips of 1:80,000 scale panchromatic photography and one strip of 1:30,000 scale color photography were bridged by analytic aerotriangulation methods. Points were selected on the 1:80,000 scale photography common to the 1:40,000 and 1:20,000 scales to be used for compilation of the 1:10,000 scale manuscripts and as an aid during hydrography. Similarly, the 1:30,000 scale bridging photography was used to control the 1:10,000 scale photography for compilation of the 1:5,000 scale manuscript. Attached are sketches showing strips bridged and legend with fit to control.

23. Adequacy of Control

The horizontal control was adequate. Nevertheless, the following discrepancy should be noted: a substitute station was established for LEWES COAST GUARD LIFE SAVING STATION MAST, 1962 which appears in two strips. A discrepancy of 6.5 degrees in azimuth was found between the two azimuth stations from which angles were turned to the substitute station. When the position was computed using the azimuth from Delaware Breakwater West End Light, 1933 the discrepancy in both strips was approximately 13 feet. When the position was computed using the azimuth from LEWES WEST OIL FACTORY CHIMNEY, 1962 the fit to control was excellent. This latter position is evidently correct. No reason could be found for the discrepancy.

24. Supplemental Data

Elevations were taken from USGS topographic quadrangles to meet the vertical control requirements.

12
-2-

25. Photography

The photography was adequate.

Respectfully submitted,

Don O. Norman

Don O. Norman

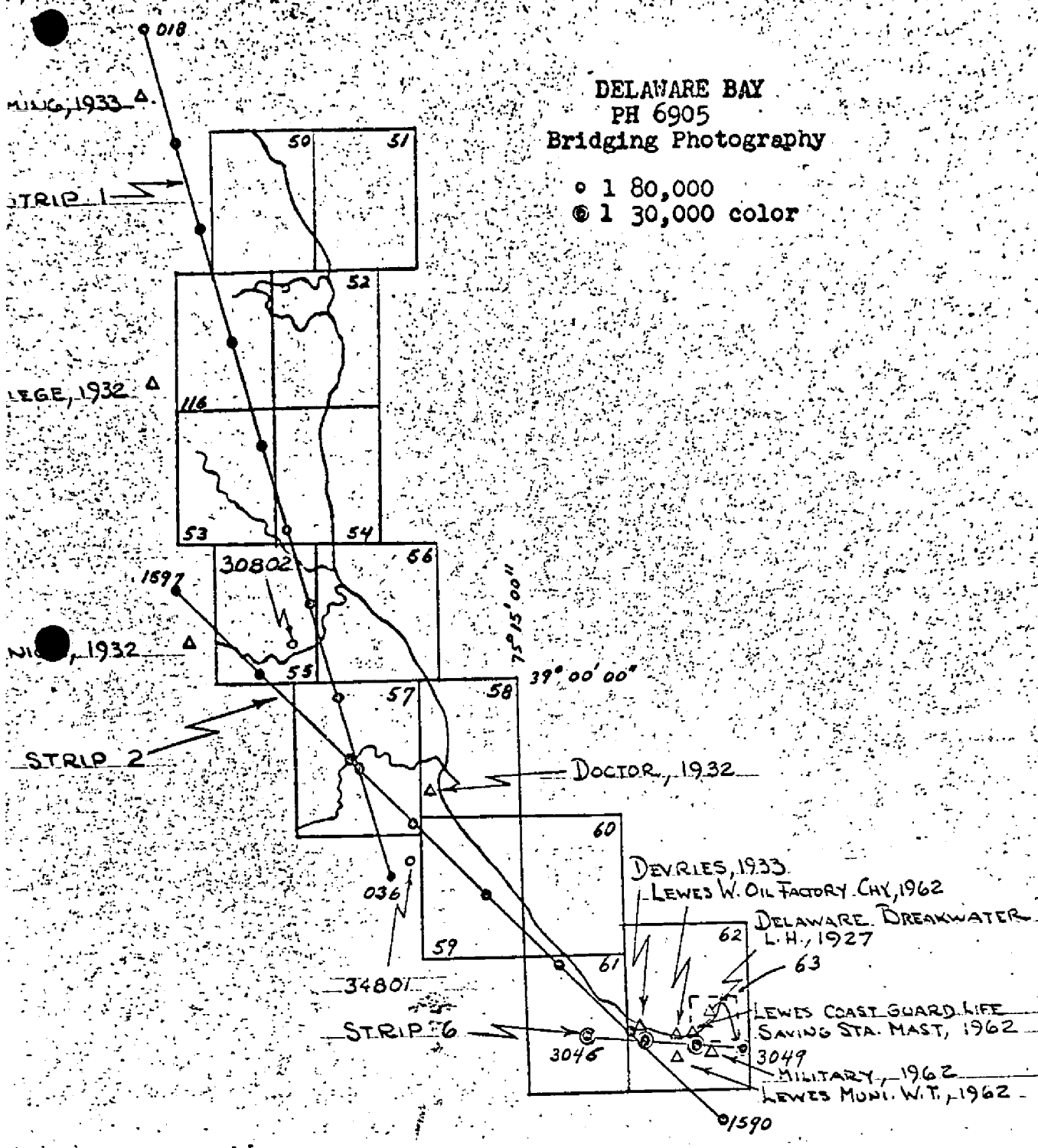
Approved and Forwarded,

Henry P. Eichert

Henry P. Eichert, Chief
Aerotriangulation Section

DELAWARE BAY
PH 6905
Bridging Photography

- 1 80,000
- 1 30,000 color



LEGEND

▲ CONTROL USED IN ADJUSTMENT

CLOSURES OF BRIDGE TO CONTROL SHOWN
IN PARENTHESES

△ CONTROL USED AS CHECK

STRIP 1

- ▲ FLEMING, 1933 SUB. A (-40, +1.06)
- ▲ COLLEGE, 1932 RM2 SUB. A (+2.20, -2.51)
- ▲ 30802 TIE POINT
- △ UNION STA. A (-6.36, +2.28)
- △ DOCTOR, 1932 RM6 (-4.83, +6.75)
- ▲ 34301 TIE POINT (+1.92, -.57)

STRIP 2

- △ MILITARY, 1962 SUB. A (+.56, +1.26)
- ▲ MILITARY, 1962 SUB. B (0.0, 0.0)
- △ LEWES COAST GUARD LIFE SAVING STA. SUB. A (-96, -.77)
- △ DEVRIES, 1962 RM (+1.66, -1.83)
- △ DEVRIES, 1933 (+1.86, +.94)
- ▲ DOCTOR, 1932 RM6 (0.0, 0.0)
- ▲ UNION, 1932 SUB. A (0.0, 0.0)

STRIP 6

- ▲ DEVRIES, 1962 RM (0.0, 0.0)
- △ DEVRIES, 1933 SUB. A (-.02, -.11)
- △ LEWES COAST GUARD LIFE SAVING STA. MAST SUB. A (+1.05, 4.06)
- △ LEWES MUNI. WATER TANK, 1962 (+.75, -1.22)
- △ LEWES W. OIL FACTORY CHY, 1962 (+2.54, +.36)
- ▲ MILITARY, 1962 SUB. A (0.0, 0.0)
- △ MILITARY, 1962 SUB. B (-.81, +.45)
- △ DELAWARE BREAKWATER L.H., 1927 (-.76, +.39)

DESCRIPTIVE REPORT CONTROL RECORD

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

MAP NO.	JOB NO.	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODEIC DATUM		ORIGINATING ACTIVITY		
				STATION NAME	PH-6905	COORDINATES IN FEET STATE _____ ZONE _____	N. A. 1927	GEOGRAPHIC POSITION ϕ LATITUDE λ LONGITUDE
None				X=		ϕ		
				Y=		λ		
				X=		ϕ		
				Y=		λ		
				X=		ϕ		
				Y=		λ		
				X=		ϕ		
				Y=		λ		
				X=		ϕ		
				Y=		λ		
				X=		ϕ		
				Y=		λ		
COMPUTED BY								DATE
LISTED BY								DATE
HAND PLOTTING BY								DATE

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT

TP-00054

31. DELINEATION

The 1:40,000 scale color photography was used in the Wild B-8 stereoplotter to compile inshore detail and to drop detail points to control the 1:20,000 scale high and low water infrared photography. There were three strips of photography taken at 1:20,000 scale. The low-water infrared and the color strips were flown in tandem. The high water infrared was a singular strip. The 1:20,000 photography was ratioed to 1:10,000 scale with the infrared being used to compile the high and low water lines and the color ratios being processed for hydro support.

There was no field inspection prior to compilation.

32. CONTROL

The horizontal control was adequate. See "Photogrammetric Plot Report" dated April 3, 1970.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

Contours are not applicable to this project. Drainage was compiled from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

The mean high-water line and alongshore details were compiled from office interpretation of the photographs using the stereoplotter.

36. OFFSHORE DETAILS

All offshore details were compiled by office interpretation of the photographs.

37. LANDMARKS AND AIDS

Appropriate copies of the 76-40's are submitted with this report.

38. CONTROL FOR FUTURE SURVEYS

None

TP-00054

39. JUNCTIONS

See Form 76-36B, Item #5 of the Descriptive Report.

46. COMPARISON WITH EXISTING MAPS

A comparison has been made with U.S.G.S. quadrangles:

Frederica, Delaware, scale 1:24,000, dated 1956, and Little Creek, Delaware, scale 1:24,000, dated 1956.

47. COMPARISON WITH NAUTICAL CHARTS

A comparison has been made with chart 1218, scale 1:80,000, 16th edition, dated October 25, 1969 (corrected through Notice to Mariners 43-1969).

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

Billy H. Barch

for

Eugene W. Bichner
Cartographic Technician

September 1, 1971

Approved:

Billy H. Barch

for

A. C. Räuck, Jr.
Chief, Coastal Mapping Section

REVIEW REPORT

SHORELINE

TP-00054

61. GENERAL STATEMENT:

See Summary included with this report for final Class III map.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

A comparison was made with U.S.G.S. quadrangles, Frederica, Delaware and Little Creek, Delaware both dated 1956 at 1:24,000 scale.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

No contemporary hydrographic survey was conducted in the area pertaining to this final Class III map.

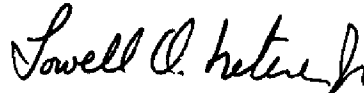
65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with N.O.S. chart 12304, 27th edition, March 28, 1981, 1:80,000 scale.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map complies with the project instructions, and the requirements for the National Standards of Map Accuracy.

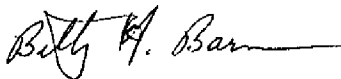
Submitted by:



Lowell O. Neterer, Jr.
Final Review

October 7, 1981

Approved for forwarding:



Billy H. Barnes
Chief, Photogrammetric Branch, AMC

July 28, 1981

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6905 (Delaware Bay, Delaware)

TP-00054

Cattail Gut

Delaware Bay

Kitts Hummock (Ppl)

Lewis Ditch

Little Creek (Ppl)

Little River

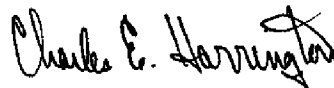
Pickering Beach (Ppl)

Pipe Elm Branch

St. Jones Neck

Sand Ditch

Approved by:



Charles E. Harrington
Chief Geographer, OA/C3x5

Information of Dissemination of Project Material

PH-6905

Delaware Bay

NATIONAL ARCHIVE/FEDERAL RECORD CENTER

Computer Readout
Control Station Identification Cards
Field Edit Ozalids
Field Photographs
NOAA Form 76-41 (Descriptive Report Control Record)

Project Diagrams

Plot Report

Bureau Archives

Descriptive Report

Registered Maps

Reproduction Division

8x Reduction Negative of Each Maps

Office of Staff Geographer

Geographer Names Standard

