

TP 00247

TP-00247

NOAA FORM 76-35	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Type of Survey Shoreline Mapping	
Job No. CM-7707	Map No. TP-00247
Classification No. III	Edition No. 1
LOCALITY	
State Delaware-New Jersey	
General Locality Delaware River	
Locality Christina River	
19 75 TO 19	
REGISTRY IN ARCHIVES	
DATE	

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-762-901

1234 (294)

SUMMARY CM-7707
MAPS TP-00246 THRU TP-00256

This summary covers the remaining eleven maps in this project as indicated above. Field edit for these maps was canceled November 16, 1978. They are final reviewed and registered as Class III.

This area was originally scheduled for landmark and aid location under CM-7508. The job was completed in March 1977. All the information obtained for that project was applied to the compiled maps in CM-7707. The forms 76-40 for landmarks and aids is part of each Descriptive Report. However, they are not furnished to charts with this project. Duplicate forms were furnished with job CM-7508 in April 1977.

The purpose of this project is to furnish a base for new hydrographic surveys and nautical chart updating.

The manuscripts were compiled using the Wild B-8 Stereoplotter with 1:20,000 natural color photography taken in 1975.

It was decided to use the New Jersey State Plane Grid as the major grid in this portion of the project except for TP-00249, TP-00251, TP-00253, and TP-00255 which ^{ALSO} has the Delaware State Plane Grid as the secondary grid.

Final Review was done in the Rockville, Maryland Office in July and August 1979. Neither the bridging nor compilation photography was available at the time of final review.

NOAA FORM 76-36A (3-72) U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED	
DESCRIPTIVE REPORT - DATA RECORD		SURVEY TP. <u>00247</u> MAP EDITION NO. <u>1</u> MAP CLASS <u>III</u> JOB <u>CM PR 7707</u>	
PHOTOGRAMMETRIC OFFICE Photogrammetry Division Rockville, MD		LAST PRECEDING MAP EDITION TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	
OFFICER-IN-CHARGE Cdr. James Collins		JOB <u>PH</u> MAP CLASS _____ SURVEY DATES: 19__ TO 19__	

I. INSTRUCTIONS DATED	
1. OFFICE	2. FIELD
Instructions-AEROTRIANGULATION (CM-7508) 2/4/76 Instructions-OFFICE-CM-7707 3/18/77	Instructions-FIELD (CM-7508) 3/4/75 Instructions-FIELD (CM-7508) Supplement I - 7/11/75

II. DATUMS	
1. HORIZONTAL: ☒ 1927 NORTH AMERICAN 2. VERTICAL: ☐ MEAN HIGH-WATER ☒ MEAN LOW-WATER ☐ MEAN LOWER LOW-WATER ☐ MEAN SEA LEVEL	OTHER (Specify) OTHER (Specify) National Geodetic Vertical Datum of 1929
3. MAP PROJECTION Transverse Mercator Projection	4. GRID(S) STATE <u>New Jersey</u> ZONE _____ STATE _____ ZONE _____
5. SCALE 1:10,000	STATE _____ ZONE _____

III. HISTORY OF OFFICE OPERATIONS		
OPERATIONS	NAME	DATE
1. AEROTRIANGULATION BY R. Kelly		10/15/76
METHOD: Analytic LANDMARKS AND AIDS BY D. Norman		10/15/76
2. CONTROL AND BRIDGE POINTS PLOTTED BY H. Jones		1/24/78
METHOD: Coradomat CHECKED BY NA		
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY B. Baldwin		8/31/78
COMPILATION CHECKED BY L. Harrod		8/31/78
INSTRUMENT: Wild B-8 CONTOURS BY NA		
SCALE: 1:10,000 CHECKED BY NA		
4. MANUSCRIPT DELINEATION PLANIMETRY BY B. Baldwin		9/7/78
CHECKED BY L. Harrod		9/7/78
METHOD: Smooth Drafting CONTOURS BY NA		
CHECKED BY NA		
SCALE: 1:10,000 HYDRO SUPPORT DATA BY NA		
CHECKED BY NA		
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY NA		
6. APPLICATION OF FIELD EDIT DATA BY Field edit canceled		11/16/78
CHECKED BY		
7. COMPILATION SECTION REVIEW BY G. Fromm		3/9/79
8. FINAL REVIEW BY F. R. Watts		7/27/79
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY G. Fromm		4/9/79
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY F. R. Watts		8/1/79
11. MAP REGISTERED - COASTAL SURVEY SECTION BY E. A. DAUGHERTY		NOV 1979

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

COMPILATION SOURCES

TP-00247

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-10 (B) & (Z) Cameras Focal lengths=152.74mm(B) & 153.14mm (Z)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) <u>COLOR</u> (P) PANCHROMATIC (I) <u>INFRARED</u>		ZONE Eastern	☒ STANDARD
☒ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☐ TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 75th	☐ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
75 B(C) 4777-4780	8/28/75	922-930	1:20,000	+1.81 ft. MLW	
75 B(C) 4750-4754	8/28/75	905-914	1:20,000	+1.94 ft. MLW	
78Z(I) 4650R-4651R	6/29/78	1235-1240	1:30,000	+1.11 ft. MLW	

REMARKS

The above photography was ratioed to 1:10,000 scale.

2. SOURCE OF MEAN HIGH-WATER LINE:

The source of the mean high water line is the photography listed under Item 1. Refer to paragraph 35 of the Compilation Report bound with this Descriptive Report.

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

The source of the mean low water line is the photography listed under Item 1. Refer to paragraph 35 of the Compilation Report bound with this Descriptive Report.

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 TP-00246	EAST TP-00248	SOUTH TP-00249 & TP-00250	WEST No Contemporary Survey
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REMARKS

HISTORY OF FIELD OPERATIONS

TP-00247

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R.S. Tibbetts	1975-1976
2. HORIZONTAL CONTROL	RECOVERED BY R.S. Tibbetts	Aug 1975
	ESTABLISHED BY NA	
	PRE-MARKED OR IDENTIFIED BY NA	
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 R. S. Tibbetts	Nov. 1976
	LOCATED (Field Methods) BY R. S. Tibbetts	Nov. 1976
	IDENTIFIED BY R. S. Tibbetts	Nov. 1976
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	☐ COMPLETE	
	☐ SPECIFIC NAMES ONLY	
	☒ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY NA	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
All field operations were performed under Job CM-7508			

3. PHOTO NUMBERS (Clarification of details)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

Refer to 76-40 listings bound with this Descriptive Report

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)

All field records are on file under Job CM-7508

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

RECORD OF SURVEY USE

TP-00247

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation Completed	11/14/78	Class III map		
Final Review Completed	8/1/79	Field Edit Canceled Class III Map	10/3/79	

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

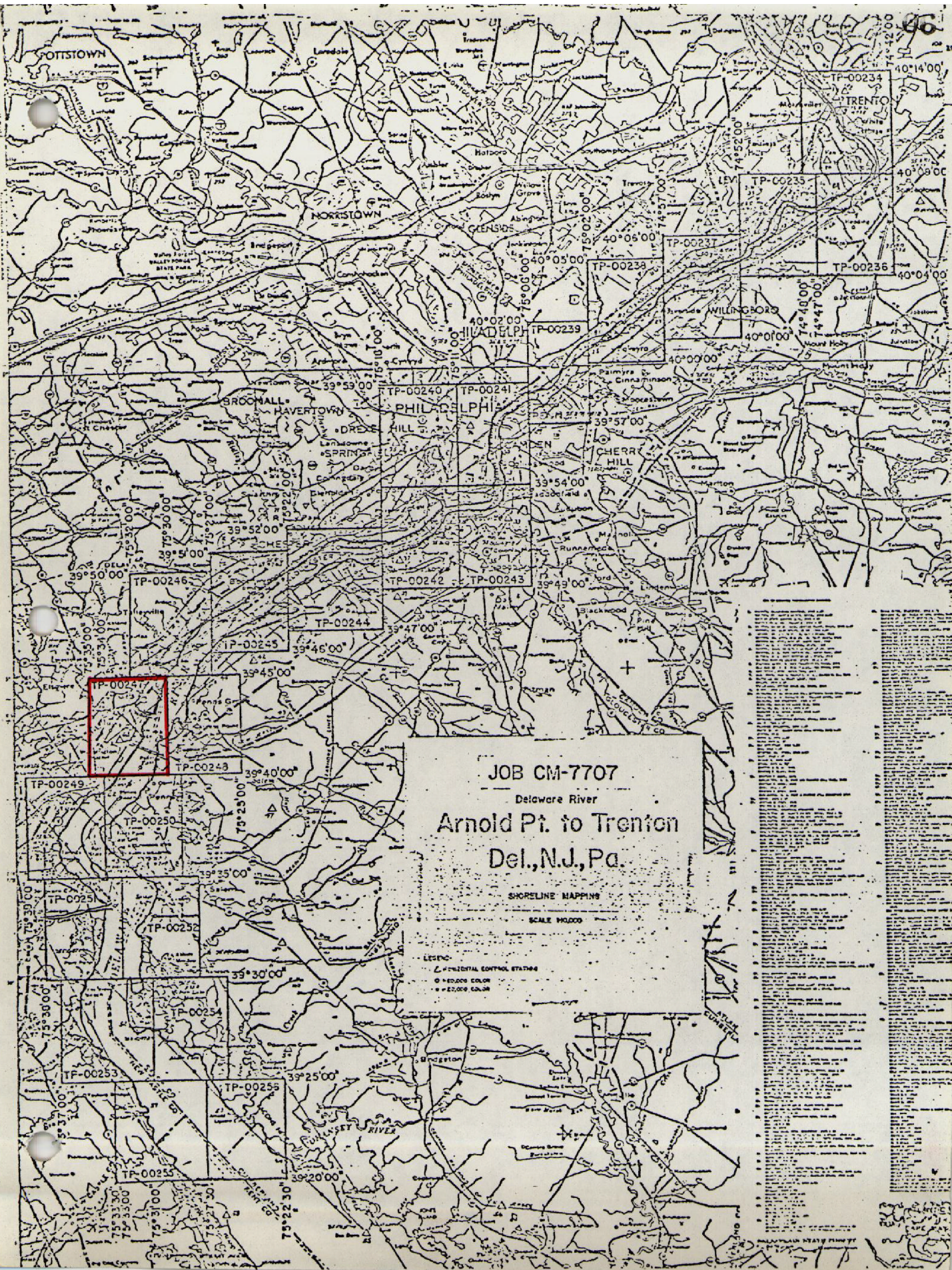
1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
 3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

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 ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

NOAA FORM 76-36D



FIELD INSPECTION

There was no field inspection performed under Job CM-7707. Field work prior to compilation was accomplished under Job CM-7508. This field work consisted of the recovery and identification of horizontal control and the locating or photoidentifying of landmarks, non-floating aids, and supplement objects.

Photogrammetric Plot Report
Delaware River
Arnold Point to Trenton, Delaware, New Jersey
Job CM-78057508
October 15, 1976

21. Area Covered

This report covers Delaware River from Arnold Point to Trenton, Delaware, New Jersey.

22. Method

Nineteen strips of photography were bridged by analytic aerotriangulation methods and adjusted to ground on the New Jersey State Plane Coordinate System. Four strips of 1:60,000 photography were bridged to establish control for the bridging of 1:20,000 photography. Fifteen strips of 1:20,000 were bridged to determine positions of field identified landmarks, aids to navigation, and supplemental objects. This data was processed on 76-40 forms. Overlay sheets of these positions were plotted on the Coradomat using the same scale of published nautical charts, 12311 (C&GS 294), 12312 (C&GS 295), 12313 (C&GS 280) and inset, 12314 (C&GS 296), and 12277 (C&GS 570) eastern half only, west to longitude 38'.

Overlay sheets, 76-40 forms, and output cards of the 76-40 program were forwarded to the Special Projects Section for final preparation, which on ~~completion~~ ^{completion} will be routed to the Marine Chart Division.

23. Adequacy of Control

The horizontal control provided was adequate except for Navy, 1925 paneled station which did not hold in the adjustment. No apparent reason was determined and the station was dropped from the adjustment.

24. Supplemental Data

Local shoreline and U.S. Geological Survey quadrangles were used to provide elevations for vertical adjustments of bridges.

25. Photography

RC-8 and RC-10 color positives were adequate as to coverage, overlay, and definition.

Submitted by:

Robert B. Kelly
R. B. Kelly

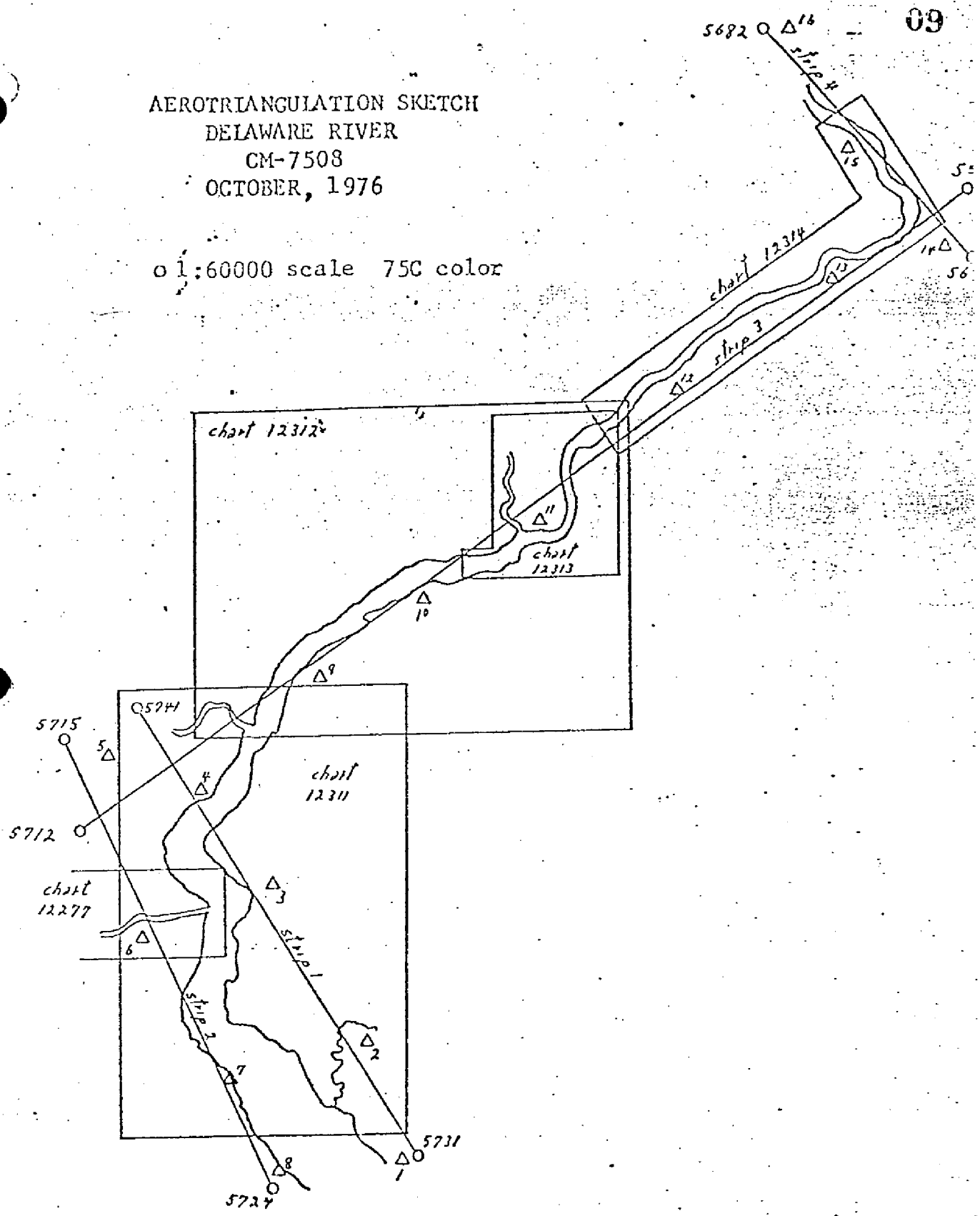
Approved and Forwarded:

John D. Perrow Jr.

J. D. Perrow, Jr.

AEROTRIANGULATION SKETCH
DELAWARE RIVER
CM-7508
OCTOBER, 1976

01:60000 scale 75C color



fit to control
(feet)

strip 1

1 WELLS, 1975	(0.5, 0.3)
2 WILLIS, 1933	(0.6, 0.5)
3 SALEM, 1933	(0.9, 1.5)
4 NEW CASTLE BELLANCA AIRPORT SQUAT W.T., 1933	(0.2, 4.5)
5 CHRIS 2, 1962	(0.8, 2.8)

strip 2

5 CHRIS 2, 1962	(0.1, 0.3)
6 CARROW, 1933	(0.0, 0.8)
7 DELAWARE (USE) 1932	(0.3, 1.0)
8 BOMBAY (USE) 1933	(0.2, 0.5)

strip 3

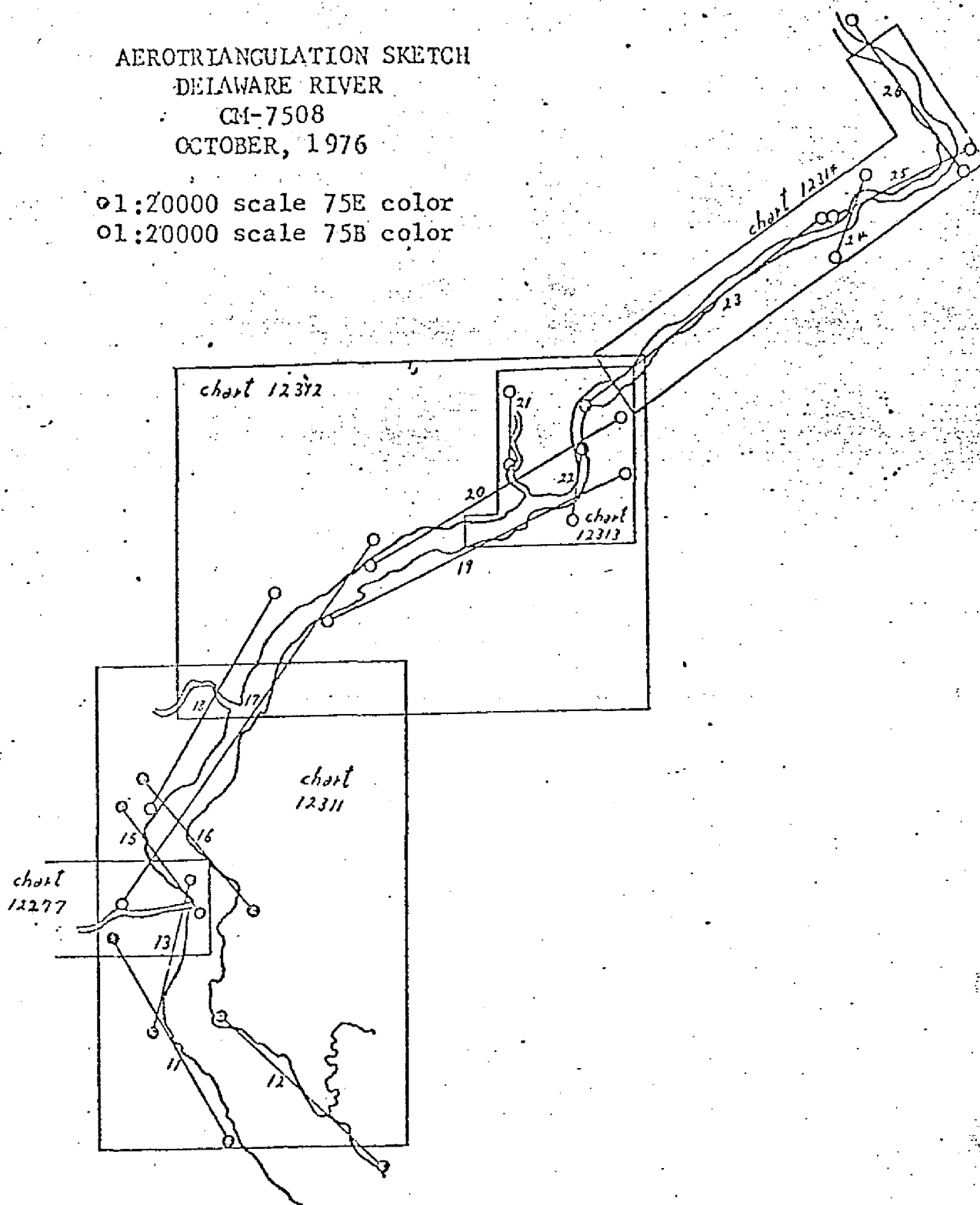
14 FAIRVIEW, 1933	(0.3, 0.9)
13 STAND RM, 1933	(0.2, 0.8)
12 PALMYRA RIVERTON-PALMYRA WATER CO. STANDPIPE, 1933	(1.7, 1.8)
11 PHILA NAVY YARD POWER PLANT WATER TANK, 1933	(1.5, 1.4)
10 GIBBSTOWN MUNICIPAL WATER TANK, 1933	(1.3, 0.9)
9 DEPOT, 1933	(2.2, 0.3)
5 CHRIS 2, 1962	(0.6, 0.2)

strip 4

16 COAT HILL, 1876	(0.0, 0.0)
15 YARDLEY MUNICIPAL STANDPIPE, 1933	(0.0, 0.0)
14 FAIRVIEW, 1933	(0.0, 0.0)

AEROTRIANGULATION SKETCH
 DELAWARE RIVER
 CM-7508
 OCTOBER, 1976

ol:20000 scale 75E color
 ol:20000 scale 75B color



INDEX TO 1:20,000 PHOTOGRAPHS
DELAWARE RIVER
CM-7508

STRIP 11A 75E(C) 8679-8681
" 11B 75E(C) 8684-8686
" 11C 75E(C) 8689-8691

STRIP 12A 75E(C) 8713-8715
" 12B 75E(C) 8719-8721
" 12C 75E(C) 8722-8725

STRIP 13 75E(C) 8777-8784

STRIP 15 75E(C) 8735-8741

STRIP 16A 75E(C) 8746-8748
" 16B 75E(C) 8753-8755

STRIP 17A 75B(C) 4742-4745
" 17B 75B(C) 4746-4763

STRIP 18 75B(C) 4772-4784

STRIP 19A 75B(C) 4792-4795
" 19B 75B(C) 4797-4809

STRIP 20A 75B(C) 4812-4814
" 20B 75B(C) 4818-4830

STRIP 21 75B(C) 4843-4846

STRIP 22 75B(C) 4879-4882

STRIP 23 75B(C) 4894-4907

STRIP 24A 75B(C) 4942-4944
" 24B 75B(C) 4946-4948

STRIP 25 75B(C) 4911-4920

STRIP 26 75B(C) 4925-4937

Photogrammetric Plot Report
Delaware River
Arnold Pt. to Trenton, New Jersey
CM-7707
November 17, 1977

Project CM-7707 is a continuation of CM-7508. Briefly, in CM-7508, positions of landmarks, aids to navigation, and supplemental objects were determined by photogrammetric methods. In CM-7707, shoreline maps are to be compiled. The photography and control are the same for both projects. Additional photos were bridged for CM-7707 to give complete shoreline coverage.

21. Area Covered

The area covered is the Delaware River from Arnold Point, near the mouth of the Cohansey River to Trenton, New Jersey. This area is covered by 23 1:10,000 scale sheets. They are numbered TP-00234 thru TP-00256.

22. Method

Twenty strips of photography were bridged by analytic aerotriangulation methods and adjusted to ground on the New Jersey State Plane Coordinate system. Four strips of 1:60,000 scale photography were bridged to control sixteen strips of 1:20,000 scale photography. (see attached aerotriangulation sketch for photos).

23. Adequacy of Control

The horizontal control was adequate. However, the panel for Navy, 1925 would not fit in the adjustment. No reason could be determined and the station was dropped from the adjustment.

24. Supplemental Data

USGS topographic quadrangles were used to provide vertical control requirements for strip adjustments.

25. Photography

The photography was adequate.

Submitted by,

Don O. Norman

Don O. Norman

Approved and forwarded:

John D. Perrow, Jr.

John D. Perrow, Jr., Chief,
Aerotriangulation Section

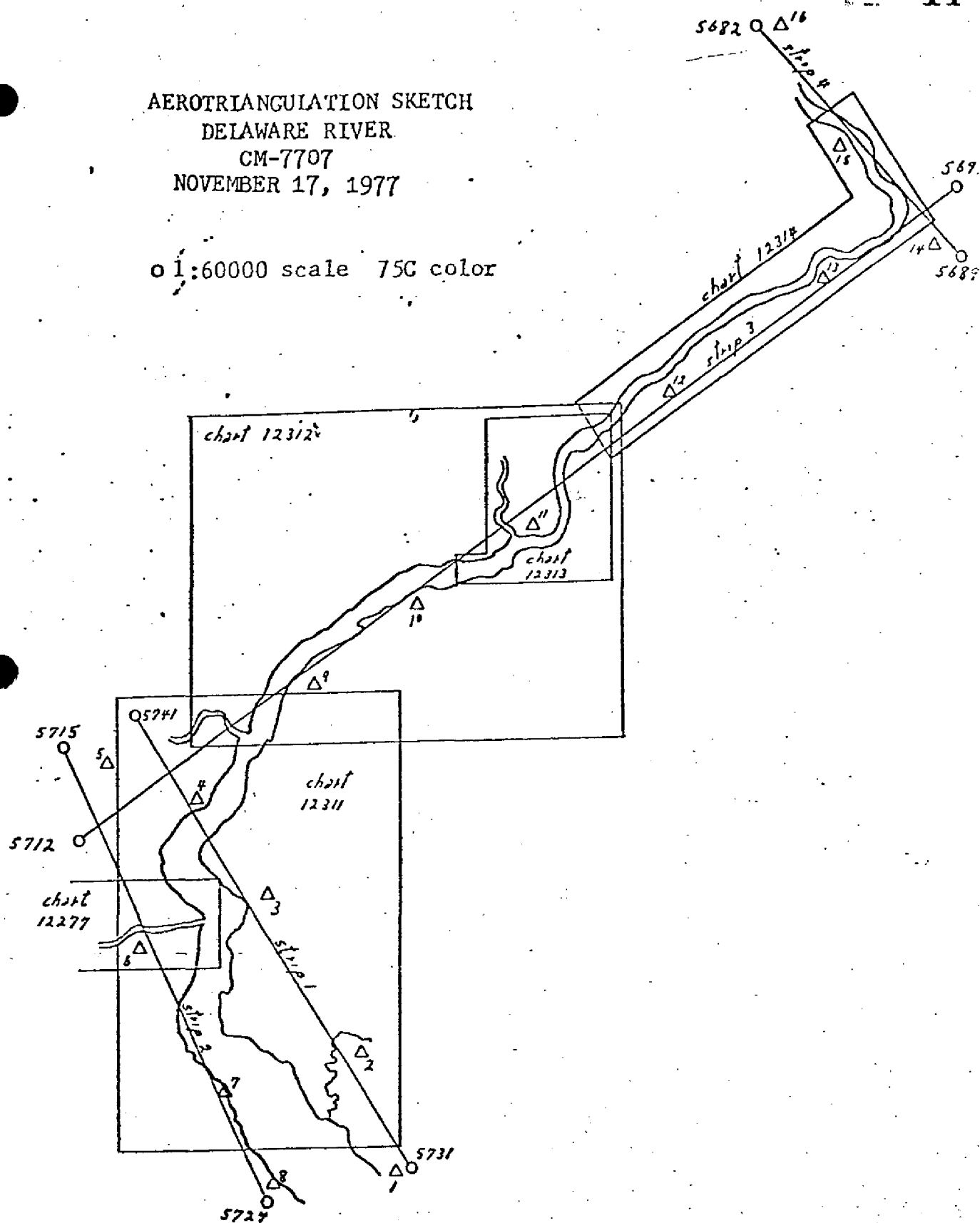
AEROTRIANGULATION SKETCH

DELAWARE RIVER

CM-7707

NOVEMBER 17, 1977

1:60000 scale 75C color



fit to control
(feet)

strip 1

1 WELLS, 1975	(0.5, 0.3)
2 WILLIS, 1933	(0.6, 0.5)
3 SALEM, 1933	(0.9, 1.5)
4 NEW CASTLE BELLANCA AIRPORT SQUAT W.T., 1933	(0.2, 4.5)
5 CHRIS 2, 1962	(0.8, 2.8)

strip 2

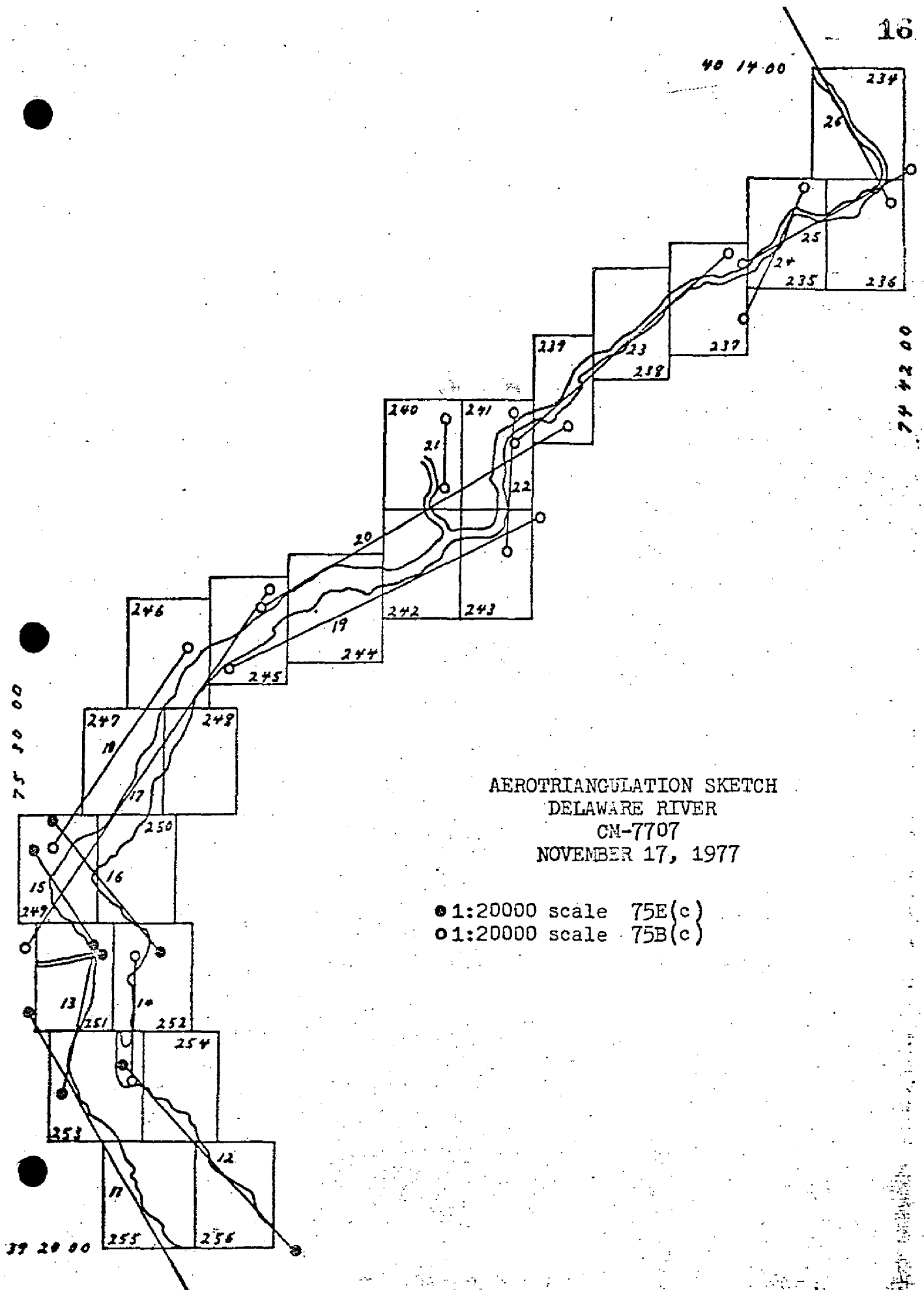
5 CHRIS 2, 1962	(0.1, 0.3)
6 CARROW, 1933	(0.0, 0.8)
7 DELAWARE (USE) 1932	(0.3, 1.0)
8 BOMBAY (USE) 1933	(0.2, 0.5)

strip 3

14 FAIRVIEW, 1933	(0.3, 0.9)
13 STAND RM1, 1933	(0.2, 0.8)
12 PALMYRA RIVERTON-PALMYRA WATER CO. STANDPIPE, 1933	(1.7, 1.8)
11 PHILA NAVY YARD POWER PLANT WATER TANK, 1933	(1.5, 1.4)
10 GIBBSTOWN MUNICIPAL WATER TANK, 1933	(1.3, 0.9)
9 DEPOT, 1933	(2.2, 0.3)
5 CHRIS 2, 1962	(0.6, 0.2)

strip 4

16 GOAT HILL, 1876	(0.0, 0.0)
15 YARDLEY MUNICIPAL STANDPIPE, 1933	(0.0, 0.0)
14 FAIRVIEW, 1933	(0.0, 0.0)



INDEX TO 1,20,000 PHOTOGRAPHS
DELAWARE RIVER
CM-7707

STRIP 11	75E(C)	8674-8691
STRIP 12A	75E(C)	8713-8721
STRIP 12B	75E(C)	8722-8725
STRIP 13	75E(C)	8777-8784
STRIP 14	75B(C)	4730-4736
STRIP 15	75E(C)	8735-8741
STRIP 16A	75E(C)	8746-8751
STRIP 16B	75E(C)	8753-8755
STRIP 17A	75B(C)	4742-4745
STRIP 17B	75B(C)	4746-4763
STRIP 18	75B(C)	4772-4784
STRIP 19A	75B(C)	4792-4795
STRIP 19B	75B(C)	4797-4809
STRIP 20A	75B(C)	4812-4814
STRIP 20B	75B(C)	4818-4830
STRIP 21	75B(C)	4843-4846
STRIP 22	75B(C)	4879-4882
STRIP 23	75B(C)	4894-4907
STRIP 24A	75B(C)	4942-4944
STRIP 24B	75B(C)	4946-4948
STRIP 25	75B(C)	4911-4920
STRIP 26	75B(C)	4925-4937

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRI-ANGULATION POINT NUMBER	GEODETTIC DATUM		COORDINATES IN FEET STATE ZONE	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE		REMARKS
					1927	1927		φ	λ	
TP-00247	CM-7707	Bellevue Rear Range	Del. Vol. I			X=		φ	39-43-12.70	
		Lt. 1933	G.P. - Pg. 57			Y=		λ	75-31-05.63	
		Wilmington Marine	Del. Vol. I			X=		φ	39-43-06.10	
		Terminal Water Tank 1933	G.P. - Pg. 58	778141		Y=		λ	75-31-40.06	
		Wilmington Del. Floor	Del. Vol. I			X=		φ	39-43-34.32	
		Product Water Tank 1933	G.P. - Pg. 57	778140		Y=		λ	75-32-08.56	
		Wilmington Atlas Powder	Del. Vol. II			X=		φ	39-41-36.01	
		CO North Water Tank 1958	G.P. - Pg. 54	781400		Y=		λ	75-32-30.50	
		Deepwater Operating Co.	N.J. Vol. I			X=		φ	39-40-51.40	
		Squat Black Water Tank 1933	G.P. - Pg. 122	752400		Y=		λ	75-30-31.66	
		New Castle Municipal	Del. Vol. I			X=		φ	39-40-13.83	
		Standpipe 1933	G.P. - Pg. 60	781141		Y=		λ	75-33-42.39	
						X=		φ		
						Y=		λ		
						X=		φ		
						Y=		λ		
						X=		φ		
						Y=		λ		
						X=		φ		
						Y=		λ		
						X=		φ		
						Y=		λ		
COMPUTED BY					DATE	COMPUTATION CHECKED BY				DATE
LISTED BY					DATE	LISTING CHECKED BY				DATE
HAND PLOTTING BY					DATE	HAND PLOTTING CHECKED BY				DATE

Compilation Report

TP-00247

Field and Aerotriangulation work used to complete this map was performed under Job CM-7508 (Del.River). Field operations consisted of aerial photography, premarking of control, and the location or photoidentifying of landmarks and aids. During bridging operations positions were determined for the field identified objects and those located by photogrammetric field methods. A duplicate copy of the Photogrammetric Plot Report for Job CM-7508 is bound with this Descriptive Report. Field records and reports are on file in the National Archives under CM-7508.

31. Delineation

This map was compiled on the B-8 stereoplotter using 1:20,000 scale natural color photography. Only limited natural color photography was available east of longitude 75-51-30 between latitudes 39-42-00 and 39-44-30. This area was completed and/or updated by graphic compilation using ratioed prints of 1978 black-and-white infrared photography.

32. Control

Refer to the Photogrammetric Plot Reports bound with this Descriptive Report.

The identification, density, and placement of horizontal and vertical control was adequate.

33. Supplemental Data - None34. Contours and Drainage

All drainage is from office interpretation of the color and infrared photography. No contours are shown.

35. Shoreline and Alongshore Details

The mean high and mean low water lines were compiled by office interpretation of the color and infrared photography. See above paragraph 31.

Alongshore and foreshore features were delineated by office interpretation of the same photography.

There was no preliminary field inspection of the shoreline.

36. Offshore Detail

No unusual problems were encountered in compiling details offshore.

37. Landmarks and Aids

Positions of landmarks and nonfloating aids were determined under Job CM-7508. Refer to the Photogrammetric Plot Report (CM-7508) submitted with this Descriptive Report.

Landmarks were Field inspected to determine their values.

Refer to the 76-40 listing prepared for the date and method of location of each object.

38. Control for Future Surveys

No Form 524 was submitted.

39. Junctions

Refer to Form 76-36B, Item 5, of the Descriptive Report.

40. Horizontal and Vertical Accuracy - No comment

41 thru 45. Inapplicable

46. Comparison with Existing Maps

A comparison was made with the following USGS quadrangle(s):

Penns Grove, NJ-Del., 1:24,000 scale, 1967 Edition
Wilmington South, Del.-NJ., 1:24,000 scale, 1967 Edition

No significant differences were noted.

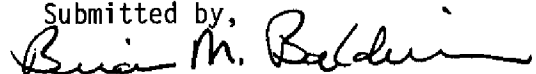
47. Comparison with Nautical Charts

A comparison was made with the following charts:

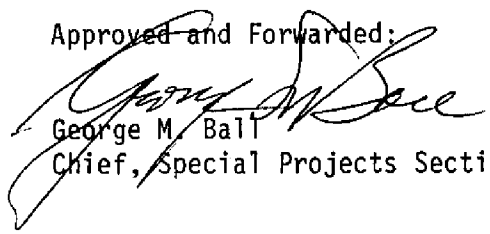
12311 (formerly C&GS 294) 1:40,000 scale, 26th Edition dated 7/30/77
12312 (formerly C&GS 295) 1:40,000 scale, 33rd Edition dated 7/9/77

Items to be Applied to Nautical Charts Immediately - None

Items to be Carried Forward - None

Submitted by,

B. Baldwin

Approved and Forwarded:


George M. Ball
Chief, Special Projects Section

Final Review Report
CM-7707
Shoreline Survey TP-00247

61.. General Statement

Field edit was canceled November 1978 consequently this map is registered as Class III. All landmarks and aids were located in the field for Job CM-7508 which covers this same area. The compilation for that project was canceled December 1975, and all landmarks and aid information has been applied to this project.

The forms 76-40 are not furnished to charts with this job. Duplicate forms were furnished April 1977, with Job CM-7508.

62. thru 64. Inapplicable

65. Comparison with Nautical Charts

This map was compared with the following:

Chart 12311, Pub. July 1977, 26th Edition - 1:40,000 scale
Chart 12312, Pub. July 1977, 33rd Edition - 1:40,000 scale

66. Adequacy of Results and Future Surveys

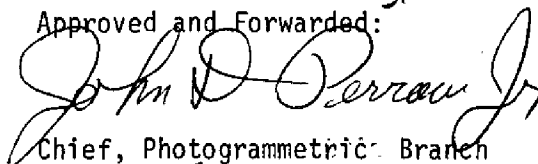
This map meets the National Standards of Map Accuracy and complies with Bureau requirements.

Submitted by,

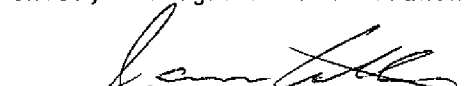


F. R. Watts

Approved and Forwarded: ^{haw}



Chief, Photogrammetric Branch



Chief, Photogrammetry Division

November 1, 1978

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7707 (Delaware River, PA., DEL., N.Y.)

TP 00247

Brandywine Creek

Cherry Island

Christina River

Church Landing

Churchtown

Conrail (RR)

Deepwater Point

Delaware River

Lobdell Canal

Pigeon Point

Travis Cove

Wilmington

Approved by:


Charles E. Harrington, C3x8
Chief Geographer

SVY	TP-00247	* NONFLOATING AIDS FOR CHARTS	* RPT UNIT	CMD ROCKVILLE, MD.	* PAGE 1 OF 5	
JOB	CM-7707	* DEL. RIVER	* STATE	DEL. N.J.		
PRJ	DTM NA 1927	* TO BE REVISED	* LOCALITY	DELAWARE RIVER	* ORIGINATING ACTIVITY	
DTM	NA 1927		* DATE	02/13/78	* COMPILATION	
* THE FOLLOWING OBJECTS HAVE NOT BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS						
DESCRIPTION	RECORD REASON FOR DELETION	POSITION	CMD	METHOD AND DATE		
NAME	PUT TRIANGULATION NAMES IN ()	LATITUDE	DM	ALTEK	OF LOCATION	* CHARTS
		LONGITUDE	DP	DGTZD	OFFICE	* FIELD
						* AFFECTED
* MAIN CHANNEL						
* FRONT	* DEEPWATER POINT RANGE	* 39 40 45.35	1398.6	NOT *	P-5	* 12311
* LIGHT		* 75 31 03.37	80.3	DGTZD*	11/26/75	* 75BC4751
* REAR	* DEEPWATER POINT RANGE	* 00 00 00.00	0.0	NOT *	* UNVERIFIED*	
* LIGHT		* 00 00 00.00	0.0	DGTZD*		
* LIGHT	* NEW CASTLE FLATS UPPER	* 39 41 24.38	751.9	NOT *	P-5	* 12311
* DOLPHIN LT		* 75 31 34.80	829.2	DGTZD*	11/24/75	* 75BC4751
* LIGHT	* NEW CASTLE FLATS LOWER	* 39 41 23.97	739.3	NOT *	P-5	* 12311
* DOLPHIN LT		* 75 31 35.04	834.9	DGTZD*	11/24/75	* 75BC4751
* CHRISTINA RIVER						
* -RANGE		* 39 43 21.50	663.1	NOT *	P-5	* 12311
* F LT		* 75 31 58.02	1381.9	DGTZD*	11/24/75	* 12312
* -RANGE		* 39 43 24.75	763.3	NOT *	P-5	* 12311
* R LT		* 75 32 07.88	187.7	DGTZD*	11/24/75	* 12312
* LIGHT	* CHRISTINA NORTH DIKE LT	* 39 43 08.43	260.0	NOT *	P-5	* 12311
		* 75 30 38.48	916.5	DGTZD*	11/24/75	* 12312
* LT 1	* SOUTH JETTY LT 1	* 00 00 00.00	0.0	NOT *	75BC4754	
		* 00 00 00.00	0.0	DGTZD*	* UNVERIFIED*	

TYPE OF ACTION	NAMES OF RESPONSIBLE PERSONNEL	ORIGINATOR
POSITIONS DETERMINED	R. TIBBETTS R. WELLS	FIELD REPRESENTATIVE
AND/OR VERIFIED BY	D. NORMAN G. FROMM	OFFICE COMPILER
FIELD AND OFFICE	NOT DIGITIZED	DIGITIZER
ACTIVITIES	G. FROMM	DATA PROCESSER

TP-00247 * SVY * RPT UNIT CMD ROCKVILLE, MD. * PAGE 2 OF 5
CM-7707 * JOB * STATE DEL. N.J. *
DEL. RIVER * PRJ * LOCALITY DELAWARE RIVER * ORIGINATING ACTIVITY *
NA 1927 * DTM * DATE 02/13/78 * COMPILATION *
THE FOLLOWING OBJECTS HAVE NOT BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS
DESCRIPTION * POSITION CMD * METHOD AND DATE *
RECORD REASON FOR DELETION * LATITUDE DM ALTEK * OF LOCATION * CHARTS *
NAME * PUT TRIANGULATION NAMES IN () * LONGITUDE DP DGTZD * OFFICE * FIELD * AFFECTED *

MAIN CHANNEL * * * *
FRONT * BELLEVUE RANGE * 39 44 06.91 213.1 NOT * P-5 * 12311 *
LIGHT * * 75 30 15.55 370.3 DGTZD * * 11/25/75 * 12312 *
REAR * (BELLEVUE REAR RANGE LT 1933) * 39 43 12.70 391.7 NOT * TRIANG REC * 12311 *
LIGHT * * 75 31 05.63 134.1 DGTZD * * 11/24/75 * 12312 *
LIGHT * DEEPWATER POINT WEIR LT * 39 41 56.65 1747.1 NOT * P-5 * 12311 *
* * 75 30 30.23 720.2 DGTZD * * 11/26/75 * *
* * * * 75BC4753 * * * *

THE FOLLOWING AIDS WERE NOT IN PLACE AT TIME OF
FIELD INSPECTION.

EDGEMOOR OUTFALL LIGHT * 00 00 00.00 0.0 NOT * * 12311 *
* * 00 00 00.00 0.0 DGTZD * * 11/25/75 * 12312 *
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TYPE OF ACTION * NAMES OF RESPONSIBLE PERSONNEL * ORIGINATOR *
* * * * * * * *
POSITIONS DETERMINED R. TIBBETTS R. WELLS *
AND/OR VERIFIED BY D. NORMAN G. FROMM *
FIELD AND OFFICE NOT DIGITIZED *
ACTIVITIES G. FROMM * DATA PROCESSER *

* SVY	TP-00247	*	LANDMARKS FOR CHARTS	* RPT UNIT	CMD ROCKVILLE, MD.	*	PAGE	4	OF	5	*
* JOB	CM-7707	*	TO BE REVISED	* STATE	DEL. N.J.	*					*
* PRJ	DEL.RIVER	*		* LOCALITY	DELAWARE RIVER	*					*
* DTM	NA 1927	*		* DATE	02/13/78	*					*
* THE FOLLOWING OBJECTS HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS *											
* CHARTING*	DESCRIPTION	*		* POSITION	CMD *		METHOD AND DATE				*
* NAME *	RECORD REASON FOR DELETION	*		* LATITUDE	DM		OF LOCATION				*
	* PUT TRIANGULATION NAMES IN () *			* LONGITUDE	DP		OFFICE	*	FIELD	* AFFECTED*	
* STACK * DELMARVA POWERHOUSE STACK * 39 44 15.78 486.7 NOT * * P-5 * 12311 *											
				* 75 30 12.44 296.2 DGTZD*			* 11/25/75	*		* 12312 *	
							75BC4777				
* RADIO	* WTUX---	1290KHZ		* 39 44 02.78 85.7 NOT *			* P-5	*		* 12311 *	
* TOWER				* 75 31 43.95 1046.6 DGTZD*			* 11/25/75	*		* 12312 *	
* TANK	* (WILMINGTON DEL FLOOR PRODUCT			* 39 43 34.32 1058.5 NOT *			75BC4777				
	* WATER TANK 1933)			* 75 32 08.56 203.9 DGTZD*			* TRIANG REC*			* 12311 *	
* STACK	* ICI US INC STACK			* 39 41 36.99 1140.8 NOT *			* P-5	*		* 12311 *	
				* 75 32 27.81 662.6 DGTZD*			* 11/24/75	*		* 12312 *	
* TANK	* (WILMINGTON ATLAS POWDER CO			* 39 41 36.01 1110.6 NOT *			75BC4781				
	* NORTH WATER TANK 1958)			* 75 32 30.50 726.7 DGTZD*			* TRIANG REC*			* 12311 *	
* TANK	* ICI US INC TANK			* 39 41 28.51 879.3 NOT *			* P-5	*		* 12311 *	
				* 75 32 35.79 852.8 DGTZD*			* 11/20/75	*			
* TANK	* DUPONT CHEM PLANT CHAMBERS			* 39 41 14.64 451.5 NOT *			75BC4781				
	* WORKS TANK			* 75 30 22.10 526.6 DGTZD*			* P-5	*		* 12311 *	
* TANK	* (DEEPWATER OPERATING CO SQUAT			* 39 40 51.40 1585.2 NOT *			* 11/26/75	*			
	* BLK WATER TANK 1933)			* 75 30 31.66 754.5 DGTZD*			75BC4752				
* TANK	* CARPENTER TANK			* 39 40 11.88 366.4 NOT *			* TRIANG REC*			* 12311 *	
				* 75 33 19.18 457.2 DGTZD*			* P-5	*		* 12311 *	
* STAND-	* (NEW CASTLE MUNI STDPIPE 1933)			* 39 40 13.83 426.5 NOT *			* 11/24/75	*			
* PIPE				* 75 33 42.39 1010.4 DGTZD*			75BC4751				
* PHOTO FIELD PARTY 62											
* R. TIBBETTS R. WELLS											
* D. NORMAN G. FROMM											
* NOT DIGITIZED											
* G. FROMM											
* DATA PROCESSER											

* TYPE OF ACTION	*	NAMES OF RESPONSIBLE PERSONNEL	*	ORIGINATOR	*
* OBJECTS INSPECTED FROM SEAWARD *					
* POSITIONS DETERMINED					
* AND/OR VERIFIED BY					
* FIELD AND OFFICE					
* ACTIVITIES					

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TYPE OF ACTION	NAMES OF RESPONSIBLE PERSONNEL	ORIGINATOR				
OBJECTS INSPECTED FROM SEAWARD	PHOTO FIELD PARTY 62	PHOTO FIELD PARTY				
POSITIONS DETERMINED	R. TIBBETTS R. WELLS	FIELD REPRESENTATIVE				
AND/OR VERIFIED BY	D. NORMAN G. FROMM	OFFICE COMPILER				
FIELD AND OFFICE	NOT DIGITIZED	DIGITIZER				
ACTIVITIES	G. FROMM	DATA PROCESSOR				

CM-7707

Delaware River

TP-Sheets 00246 thru 00256

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List of USGS Quad Coverage

" " Chart Coverage

Tide Data

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2 Project Diagrams with flight lines indicated

Compilation Report

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Delaware River

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CM-7508

Delaware River
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