

8781

Diag. on Diag. Ch. No. - 284

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Photogrammetric Shoreline

Field No. \_\_\_\_\_ Office No. T-8781  
PH-7(46)C

LOCALITY

State New Jersey

General locality Delaware River

Locality Mad Horse Creek to Dunks Point

1946

CHIEF OF PARTY

Thos. B. Reed

LIBRARY & ARCHIVES

DATE January 26, 1949

B-1870-1 (11)

1828

## DATA RECORD

T-8781

Quadrangle (II):

Project No. (II): Ph7(46)C

Field Office: Camden, N. J.

Chief of Party: E. L. Jones

Compilation Office:  
Baltimore, Maryland

Chief of Party: William F. Deane

Instructions dated (II III):  
25 March 1946, 19 July 1946Copy filed in Descriptive  
Report No. T- (VI)-  
Division of Photogrammetry  
Office Files.Completed survey received in office:  
23 October 1946

Reported to Nautical Chart Section:

Reviewed: 24 May 1948

Applied to chart No.

Date:

Redrafting Completed:

Registered: 16 Aug. 1948

Printed  
Published: Vault copy only.

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): 1.000

Geographic Datum (III): N. A. 1927

Datum Plane (III): M.H.W.  
M.S.L.

Reference Station (III): ARNOLD, 1933, r. 1946

Lat.:

Long.:

Adjusted

39° 23' ~~15.301"~~ ~~471.9(1378.4)~~ ~~19.403"~~ ~~598.4(1251.9)m~~ 75° 25' ~~41.160"~~ ~~44.615"~~ ~~985.0(451.0)~~ ~~1067.7(368.2)m~~

Unadjusted

State Plane Coordinates (VI): NEW JERSEY:-

X = 1,784,779.64 Feet

Y = 202,773.25 Feet

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>75th Meridian Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
D-1526 to D-1535 inclusive	3/1/46	1350	1:10,000	0.3' above M.L.W.
D-1580	3/1/46	1440	1:10,000	0.0 above M.L.W.

Tide from (III): Predicted Tide Tables, Atlantic Ocean, 1946.  
Reference Station -Reedy Point with corrections to Bay Side.  
Mean Range: 5.8'                      Spring Range: 6.6'

Camera: (Kind or source) U. S. Coast and Geodetic Survey single lens camera. Type D. Focal length 12 inches.

Field Inspection by: J. E. Hundley  
M. A. Stewart

date: June - August  
1946

Field Edit by: Donald G. Flippo  
(For overlapping quadrangle T-8756)

date: Feb.-Mar., 1948

Date of Mean High-Water Line Location (III): same as date of photographs supplemented with field data obtained during June, July and August 1946.

Projection and Grids ruled by (III) T.L. Janson

date: 8/16/46

" " " checked by: T.L. Janson

date: 8/16/46

Control plotted by: J. Steinberg

date: 8/30/46

Control checked by: F. J. Tarozza

date: 9/3/46

Radial Plot by: F. J. Tarcza & H. R. Rudolph

date: 9/24/46

Detailed by: Ruth E. Rudolph

date: 9/24 to 10/9/46

Reviewed in compilation office by: Raymond Glaser

date: 10/21 to 10/22/46

Map Manuscript  
Elevations on ~~Field Edit Sheet~~  
checked by: ~~Not applicable~~ Raymond Glaser (For T-8756)

date: Dec. 23, 24, 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 6

Shoreline (More than 200 meters to opposite shore):  $6\frac{1}{2}$  statute miles.

Shoreline (Less than 200 meters to opposite shore): 40 statute miles  
(measured along approximate centerline only.)

Number of Recoverable Topographic Stations established: 3

Number of Temporary Hydrographic Stations located by radial 2  
plot:

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered  
by, (II) Field Party, (III) Compilation Party, or, (VI) the  
Washington Office.

When entering names of personnel on this record give the  
surname and initials (not initials only).

Remarks:

FIELD REPORT

MAP MANUSCRIPT, SURVEY NO. T-8781

See field report for Surveys No. T-8756 and T-8759.



## RADIAL PLOT REPORT

Project Ph-7 (46)C

Surveys Nos. T-8781 & T-8783

1. The layout of the map manuscripts, horizontal ground control, and photographs are shown on the attached sketch.

### PHOTOGRAPHS

2. These were single lens taken with Coast and Geodetic Survey camera No. D contact scale 1:15,000. The radial plot was made at scale of 1:10,000 with ratio prints.

### MANUSCRIPTS

3. 1:10,000 scale polyconic projections and New Jersey State Grids (5000 foot intervals) were ruled on the ruling machine and checked in the Washington Office. In making the radial plot base sheets were joined by matching common grid lines. This plot covers the entire area of Surveys Nos. T-8781 and T-8783.

### GENERAL DESCRIPTION

4. This plot covers an area along the northeastern shore of Delaware Bay from Ben Davis Point northwestward to Mad Horse Creek.
5. The area of this plot is covered by only one flight of single lens photographs except in the northwestern part of Survey No. T-8783 and the extreme southeastern part of Survey No. T-8781, where the area is covered by two flights of photographs. In addition, one lone photograph was taken near the central part of the area of Survey No. T-8781.
6. The distribution of the horizontal control was inadequate for running the radial plot with single lens photographs.

### FIELD INSPECTION

7. The identification of the control was very good with the exception of the identification of substitute station ARNOLD, 1933. However, the field unit was notified of this error and they located a new substitute station which was "held to" in the radial plot.

Respectfully submitted

*Harry R. Rudolph*  
Harry R. Rudolph  
Photogrammetric Engineer

DETAILS OF RADIAL PLOTTING

8. The scale factors for the ratio prints were determined in the Washington Office. The photographs were then ratioed very nearly to exact 1:10,000 scale. The plot was made with celluloid templates in the usual manner.
9. A combined plot was laid for the areas of Surveys Nos. T-8781 and T-8783. The substitute station for triangulation station "ARNOLD 1933" could not be "held to" as identified by the field unit. The compilation office requested the field unit to check the identification of this substitute station or to locate and identify an alternate substitute station for "ARNOLD 1933". The field unit did locate and identify an alternate substitute station. This alternate substitute station was "held to" in the radial plot. Uncontrolled } templates were adjusted for scale between controlled templates in } order to obtain good intersections. Satisfactory results were then obtained by the radial plot.
10. The positions of all photograph centers have been shown on the glossy side of the map manuscripts with 10 millimeter red ink circles accompanied with their respective photograph numbers.

The positions of the pass points have been shown on the glossy side of the map manuscripts with double red ink circles composed of a 3 millimeter circle inscribed within a 5 millimeter circle.

REMARKS

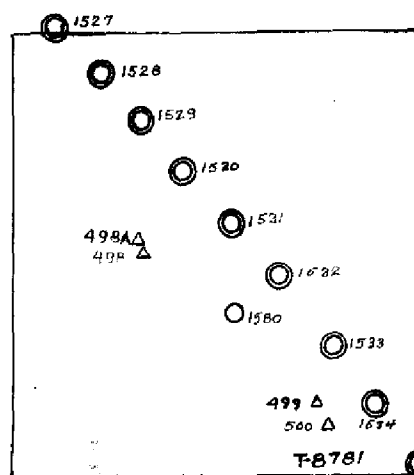
11. An additional flight of photographs, paralleling and overlapping the flight that was taken would have been desirable.
12. A few more identifiable control stations, especially at the southern end of radial plot would also have been desirable.
13. The selection and identification of substitute stations and the identification of the horizontal control stations was very good.

Respectfully submitted  
November 6, 1946.

Approved and forwarded  
November 26, 1946

William F. Deane  
William F. Deane  
Chief of Party, C&G Survey  
Officer in Charge  
Baltimore Photogrammetric Office

Harry H. Rudolph  
Harry H. Rudolph  
Photogrammetric Engineer



~LEGEND~

Note- All horizontal control stations (accompanied with their respective numbers i.e. 499, 6065, 534) are listed on the following page



LIST OF HORIZONTAL CONTROL STATIONS

PROJECT NO. PH-7 (46) C

SURVEYS NOS. T-8781 & T-8783

- 498 ARNOLD, 1933
- 498A ARNOLD (SEXTANT) (USE), 1933
- a 499 DUNKS, 1933
- 500 DUNKS, (SEXTANT) (USE), 1933
- 536 COHANSEY RIVE , REAR RANGE LIGHT, 1933
- 537 COHANSEY RIVER, FRONT RANGE LIGHT, 1933
- 538 NEW COHANSEY LIGHT, 1933
- 539 COHANSEY, 1933
- 540 BEACH, 1933
- c 541 SHIP JOHN SHOAL LIGHT, 1933
- b 542 DAVIS, 1933
- 542 A BEN DAVIS (USE)
- b 542 B BEN DAVIS, 1839 - 1840
- c 6065 MONUMENT NO. 6065 (USC&GS & SS)
- c 6066 MONUMENT NO. 6066 (USC&GS & SS)
- c 6068 MONUMENT No. 6068 (USC&GS & SS)
- c 6069 MONUMENT No. 6069 (USC&GS & SS)
- 6071 MONUMENT NO. 6071 (USC&GS & SS)
  - a. Station destroyed. RM recovered, identified by substitute station.
  - b. No recovery in 1946.
  - c. Falls outside area covered by photography, not used to control the radial plot

All other horizontal control stations were recovered, identified on the field photographs, and used to control the radial plot.

SCALE FACTOR 1.000

FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	FORWARD (BACK)
0	0
10	10
20	20
30	30
40	40
50	50
60	60
70	70
80	80
90	90
100	100
110	110
120	120
130	130
140	140
150	150
160	160
170	170
180	180
190	190
200	200
210	210
220	220
230	230
240	240
250	250
260	260
270	270
280	280
290	290
300	300
310	310
320	320
330	330
340	340
350	350
360	360
370	370
380	380
390	390
400	400
410	410
420	420
430	430
440	440
450	450
460	460
470	470
480	480
490	490
500	500
510	510
520	520
530	530
540	540
550	550
560	560
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610	610
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680	680
690	690
700	700
710	710
720	720
730	730
740	740
750	750
760	760
770	770
780	780
790	790
800	800
810	810
820	820
830	830
840	840
850	850
860	860
870	870
880	880
890	890
900	900
910	910
920	920
930	930
940	940
950	950
960	960
970	970
980	980
990	990
1000	1000

598.4(1251.9)  
1067.7(368.2)

~~171.9(1378.4)~~  
~~985.0(1150.9)~~

178.1(1377.9)

1237.9 (612.4)

1713.5 (136.8)

1713.5 (136.8)  
961.1 (175.2)

1669.9 (180.4)

DATE 9/9/46

M-2388.12

COMPILATION REPORT

MAP MANUSCRIPT - SURVEY NO. T-8780- ✓

26. CONTROL:

See radial plot report for layout of control in this area. A list of control on Form No. M-2388-12, is included with this report.   
 ~~Filed in Division Photogrammetry General Files.~~

27. RADIAL PLOT: Attached

The radial plot is part of a combined plot for Survey Nos. T-8781 and T-8783 made with celluloid templates. The radial plot report was submitted 26 November 1946 to the Washington office.

28. DELINEATION:

The compilation is in accordance with the written instructions pertaining to Project No. PH-7-46 dated 19 July 1946. Filed in Division Photogrammetry Office Files.

The field unit, in attempting to identify what they described as "apparent shoreline - top of low bluff (marsh line)", identified instead the outer limits of mud and/or vegetation as these features appear on the photographs which were taken at, or very near mean low water. Therefore, it was necessary in the compilation office to delineate the outer limits of marsh visible at high water after stereoscopic examination of the office photographs, using as a guide the nine lens photographs, which were taken near high tide. See review report.

29. SUPPLEMENTAL DATA:

None.

30. MEAN HIGH WATER LINE:

The mean high water line has been delineated in accordance with the office interpretation of the photographs. (See No. 28 above).

31. LOW WATER LINE:

Approximately 10% of the mean low water line was identified by the field unit. No attempt was made in the compilation office to identify the remainder of the mean low water line. MLW line shown by dot-dash line on map manuscript.

31A. SHOAL AND REEF LINES:

None visible on the photographs.

32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE:

No comment.

33. WHARVES AND SHORELINE STRUCTURES:

No comment.

34. LANDMARKS AND AIDS TO NAVIGATION:

See field report.

35. HYDROGRAPHIC CONTROL:

2 hydrographic signal sites.

A descriptive list of the hydrographic signal sites has been compiled and is attached to this report. Two additional copies have been furnished for the use of the hydrographic parties.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

None.

37. GEOGRAPHIC NAMES:

Geographic names were taken from a geographic names investigation furnished by the Washington office. The name "Dunks Bar" has been omitted from the map because it could not be identified on the photographs. A list of the names appearing on the map is attached to this report. List approved by L. Heck,  
Geographic Names Section,  
Div. Charts

38. JUNCTIONS:

The junction with Survey No. T-8783 to the southeast has been made and is in agreement. The junction with Survey No. T-8779 to the northwest will be made when that survey is compiled. There are no other junctions with surveys of the same scale. T-8781 is a part of Surveys No's. T-8756 and T-8759.

Junction checked by reviewer.

K.H.M.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

T-8781 has been compared in detail with the United States Army Engineers, Shiloh, N. J., - Del. quadrangle, scale 1:62,500 edition of 1941 and found to be in good agreement.

45. COMPARISON WITH NAUTICAL CHARTS:

T-8781 has been compared in detail with Nautical Chart No. 294, scale 1:40,000, published September 1943 (10th edition) (First Edition 1895) corrected to July 13, 1946.

The following topographic information shown on the map is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript, but are believed to still exist and should be carried forward on the chart:

None.

Low water features are shown only in part and will be completed by the hydrographic party.

Minor changes in cultural and shoreline details shown on this manuscript need no special discussion.

Respectfully submitted:  
16 April 1947

Rich E. Rudolph  
Photogrammetric Aid  
Compilation and Compilation  
Report

Harry R. Rudolph  
Supervisor

Raymond Glaser  
Photogrammetric Aid  
Photogrammetric Office  
Reviewer

Approved and Forwarded  
April 28, 1948

Thos B. Band  
Officer in Charge,  
Baltimore Photogrammetric Office

NOTES  
FOR  
HYDROGRAPHIC PARTIES

DELAWARE RIVER

MAP MANUSCRIPT, SURVEY NO. T-8781

PROJECT NO. PH-7(46)C

The 3 millimeter circles are the positions of the recoverable photo (topographic) stations. The 2 millimeter circles are the positions of the hydrographic signal sites. Two copies of the descriptive list of the hydrographic signal sites have been furnished for your use.

The map has been compared in detail with Nautical Chart No. 294, scale 1:40,000 published September 1943 (10th edition) (First Edition 1895) corrected to July 13, 1946.

The following topographic information shown on the map is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript, but are believed to still exist and should be carried forward on the chart:

None.

Low water features are shown only in part and will be completed by the hydrographic party.

Minor changes in cultural and shoreline details shown on this manuscript need no special discussion.

Respectfully submitted  
16 April 1947

Ruth E. Rudolph  
Photogrammetric Aid

Approved and Forwarded  
April 28, 1948

Thos B. Rud  
Officer in Charge,  
Baltimore Photogrammetric Office

LIST OF DESCRIPTIONS OF HYDROGRAPHIC SIGNAL SITES

<u>Signal No.</u>	<u>Description</u>	<u>Pricked on Photo. No.</u>
1	Station is the northwest corner of building at the end of wooden pier.	46-D-1532
2	Station is the southwest corner of wooden pier.	46-D-1532

Listed by:

Luith E. Rudolph  
Photogrammetric Aid

Checked by:

Harry R. Rudolph  
Photogrammetric Engineer



# GEOGRAPHIC NAMES

- Arnold Point
- Bay Side
- Cherry Tree Creek
- Delaware River Bay
- Dunks Point
- Grandad Meadows\* • Fishing Creek
- Jacobs Creek
- Lower Deep Creek
- Mad Horse Creek
- Malapartis Creek
- Muddy Creek
- Oyster Cove
- Phillips Creek
- Pine Island\*
- Stow Creek
- Stretch Point\*
- Upper Deep Creek

\* = not on manuscript.

Names preceded by • are  
approved. 5/25/48.  
L. Heck.

Division of Photogrammetry  
Review Report of  
Shoreline Map Manuscript T-8781

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.

28. Detailing.— The compilation office had delineated the shoreline on the basis of an office interpretation of the photographs. This shoreline was not in agreement with the shoreline submitted by field inspection.

The shoreline has been redelineated to agree with the apparent shoreline as defined by field inspection. This follows the recommendations of the letter of 30 December 1947 on the subject of shoreline, a copy of which is attached to the descriptive report for the shoreline map manuscript T-8785.

43. Comparison with Previous Surveys:

T-63	1:20,000	1841
T-141	1:10,000	1841
T-155	1:20,000	1842-3
T-1550	1:20,000	1882-3
T-1565	1:20,000	1885

Common features on these surveys are superseded by the map manuscript in all common areas.

44. Comparison with Existing Topographic Surveys:

Vineland, Del.-N.J.	USGS, 1:125,000	1886-96
Shiloh, N.J.-Del.	USGS, 1:62,500	1886-89
Shiloh, N.J.-Del.	USE, 1:62,500	1932-38, 1940

45. Comparison with Nautical Charts:

Chart No. 294	, 1:40,000	11-17-47
Chart No. 1218	, 1:80,000	12-8-47

This map manuscript has not been applied to nautical charts 294 and 1218.

Reviewed by:

  
\_\_\_\_\_  
K. N. Maki  
5-24-48

APPROVED BY:

S. V. Griffith J. R. Edmonson  
Chief, Review Section *R.M.* Chief, Nautical Charts Branch  
Division of Photogrammetry *12/2/48* Division of Charts

K. T. Adams C. F. Green  
Chief, Div. of Photogrammetry Chief, Div. of Coastal *12/2/48*  
Surveys

SURVEY NO. 8781

[illegible]

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.