

# 8761

Diag'd. on Diag. Ch. 1218

Form 504

## U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

### DESCRIPTIVE REPORT

Type of Survey Topographic-Photogrammetric

Field No. \_\_\_\_\_ Office No. T-8761  
Ph-7(46)A

#### LOCALITY

State Delaware

General locality Delaware Bay

Locality Leipsic River to Lewis Ditch

1946

#### CHIEF OF PARTY

Thos. B. Reed

#### LIBRARY & ARCHIVES

DATE June 7, 1948

B-1870-1 (1)

# 8761

## DATA RECORD

T- 8761

Quadrangle (II): Little Creek

Project No. (II): PH-7(46)A

Field Office:  
New Castle, Delaware

Chief of Party: E. L. Jones

Compilation Office:  
Baltimore Photogrammetric OfficeChief of Party:  
Thos. B. ReedInstructions 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: 24 June 1947

Reported to Nautical Chart Section:

Reviewed: 1 April 1948 Applied to chart No. Date:

Redrafting Completed:

Registered: 7 May 1948

Published:

Compilation Scale: 1:20,000

Published Scale: 1:24,000

Scale Factor (III): 1.0000

Geographic Datum (III): N.A. 1927 Datum Plane (III): MSL

Reference Station (III): MAHON 2, 1932

Lat.: 39° 11' 06.298" 194.2 m Long.: 75° 24' 03.144" 75.5m ~~Unadjusted~~ Adjusted

State Plane Coordinates (VI):

Delaware State Grid:

X = 504,476.95 Feet Y = 431,594.04 Feet

New Jersey State Grid:

X = 1,791,876.88 Feet Y = 128,952.38 Feet

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	75th meridian <u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
15565 - 67 incl.	3-21-46	1105	1:20,000	At mean high water
15588-90 incl.	"	1225	1:20,000	0.1' above M.H.W.

Actual tide observations at Atlantic City, N.J. with Tide from (III): corrections to Mahon River to St. Jones River.

Mean Range: 5.6'

Spring Range: 6.5'

Camera: (Kind or source) United States Coast and Geodetic Survey nine lens camera, focal length 8 $\frac{1}{4}$ ". All negatives are on file in the Washington Office.

Field Inspection by: Lieut. Comdr. E. L. Jones

date: April to June 1946

Field Edit by: Donald G. Flippo

Lt. Comdr. R.J. Sipe, chief of Party

date: 12 Aug. to 26 Aug. 1947

Date of Mean High-Water Line Location (III): Same as date of photographs supplemented with field inspection obtained during April, May, and June 1946.

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

date: 8-15-46

" " " checked by: T.L.J.

date: 8-15-46

Control plotted by: Leroy A. Senasack

date: 1-3-47

Control checked by: Frank J. Tarcza

date: 1-6-47

Radial Plot by: Frank J. Tarcza

date: 4-18-47

Detailed by: Ruth E. Rudolph

date: 4-30-to 5-2-47  
5-19 to 6-5-47

Reviewed in compilation office by: J.W.Vonasek

date: 6-16-47

Elevations on <sup>manuscript</sup> ~~Field Edit Sheet~~  
checked by: J.W.Vonasek

date: 6-17-47

STATISTICS (III)

Land Area (Sq. Statute Miles): 44

Shoreline (More than 200 meters to opposite shore):  $9\frac{1}{2}$  statute miles

Shoreline (Less than 200 meters to opposite shore): 52 statute miles  
(approximately)

Number of Recoverable Topographic Stations established:

Thirteen  
Hydrographic signal sites  
Number of ~~Temporary Hydrographic Stations~~ located by radial  
plot: one

Leveling (to control contours) - miles: 51.4

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 Edit Corrections By:  
Gladys S. Nottenburg

Jan. 1948



# ABBREVIATIONS FOR FIELD INSPECTION PHOTOS

Project Ph-7 (46)

10 May 1946

## ROADS

Rd - road  
X - abandoned (delete)  
RR - railroad track  
RR(2) - railroad, 2 tracks

## SHORELINE

MHW - mean highwater  
MLW - mean low water  
M - marsh  
Mud - mud  
S - sand  
Rky - rocky  
Rk - rock  
Dk - dock  
Jet - jetty  
Bkhd - bulkhead

## STREAMS, PONDS

D - large ditch  
DX - small ditch (delete)  
Cr. - creek  
P - pond

## OBSTRUCTIONS TO NAV

Shl - shoal  
Cov - covers  
Wk - wreck  
Subm - submerged  
Dol - dolphin  
Pile - pile

## VEGETATION

Gr - grass  
WH - woods, hard wood  
WS - woods, soft wood  
WM - woods mixed  
B - brush  
SH - scattered hardwood  
SS - scattered softwood  
O - orchard

## BUILDINGS

d - dwelling  
b - barn  
Bo Ho - boat house

## BUILDINGS (con'td)

Ch - church  
C.H. - courthouse  
P.O. - post office  
Sch - school  
R R Sta - railroad station  
Hosp - hospital

## LANDMARKS & AIDS TO NAV:

TK - tank  
TK(ELEV) tank elevated  
Stk - stack  
Bn - beacon  
Lt - light  
Rg - range  
F-Rg - front range  
R Rg - rear range  
Chy - chimney  
Cup - cupola  
S. Pipe - stand pipe  
Gab - gable

## BOUNDARIES

Bdry - boundary  
Cem - cemetery  
F - fence





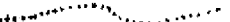
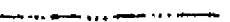
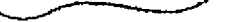
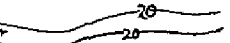
## BRIDGES

Br - bridge  
Culv - culvert  
Cl - clearance  
Hor - horizontal  
Ver - vertical (above MHW)  
Wo - wood  
Conc - concrete

## STATIONS

BM - bench mark  
T Sta - topo station  
S Sta - substitute station  
TBM - tidal bench mark  
(d) - described  
(dm) - described and marked

SYMBOLS  
Project Ph-7 (46)  
29 April 1946

MEAN HIGH WATER LINE (fast line).....	
OFF SHORE EDGE OF MARSH (apparent shoreline).....	
GRASS IN WATER.....	Gr.
IN SHORE LIMITS OF MARSH.....	
MEAN LOW WATER LINE (definite).....	
APPROXIMATE MEAN LOW WATER LINE.....	
INTERMITTANT DRAINAGE.....	
PERENNIAL DRAINAGE.....	
CONTOURS.....	
PLANE TABLE ELEVATIONS FOR CONTOURS.....	X 17 or X 17
FLY LEVEL ELEVATIONS.....	CE 12 59.7
BENCH MARKS, marked and described.....	○ J-16, 1940 (dm)
TOPO STATIONS, natural object, described.....	— F. Sta (dt) BILL, 1946
TOPO STATIONS, marked and described.....	— F. Sta (dm) MINK, 1946
TOPO STATIONS, addition Hydro Control, not named.....	— H Sta "B703
LANDMARKS.....	— Landmark: Stack, black (85' high)
FIXED AIDS TO NAVIGATION, (official light list name).....	— Cherry Pt. Lt. 14
TRIANGULATION STATIONS.....	— A SMITH, 1925
SUBSTITUTE STATIONS.....	— S. Sta. OR S. S. A SMITH, 1925
BOUNDARIES: Refer to U.S.G.S. Bulletin 788 E for symbol, ink in purple or violet ink.	

FIELD INSPECTION REPORT  
T 8761 (39°07.5' / 75°22.5' / 7.5')  
PROJECT Ph-7(46)  
Sub-project A  
Lt. Cmdr. E. L. Jones, Chief of Party

1. Description of the Area:

This quadrangle is located on the western shore of Delaware Bay, east of Dover, in Kent County, Delaware.

About one-sixth of the quadrangle is water; while the remainder is fast land and salt water marsh. Fast land and salt water marsh areas are approximately equal in size.

Drainage is accomplished chiefly by the Leipsic, Dona, Mahon, and Little Rivers; the salt water marsh is partially drained by mosquito control ditches.

Elevations range from sea level to forty feet above M.S.L. in the southwestern portion of the area; and the land, gently sloping, is typical tidewater country.

The quadrangle is completely rural with Little Creek the only village in the area. Agriculture and fishing are the chief means of livelihood for the population.

2. Completeness of Field Inspection:

Field inspection was accomplished by two parties. The contour party was responsible for all interior inspection; while the shoreline party completed shoreline inspection.

Field inspection is believed to be adequate.

No telephone or power transmission lines of cross country or prominent nature were within limits of the quadrangle.

Woods were classified in accordance with paragraph 54 of the instructions for this project, dated 25 March, 1946.

Deletions are shown in green ink.

3. Interpretation of the Photographs:

Open land appears on the photographs from white to a light gray tone.

Woods appear as medium to drab gray with hardwoods a medium gray.

Smooth dark spots in the marsh area are ponds and, as a rule, approximately round in shape. Grass area of the marsh



ranges from light medium to medium gray; while areas under water appear almost black.

Along the shoreline, sandy areas, of course, appear white; medium gray areas just behind the MHWL are low brush and usually very small. Edges of these areas have been utilized extensively by the shoreline party in setting topographic stations, since they are easily identified and helpful in picking stations direct.

#### 4. Horizontal Control:

Horizontal control was recovered and identified according to paragraphs 13-33, inclusive, of the instructions for this project, dated 25 March, 1946.

Work consisted of recovery and identification of control on photographs and was completed in April, 1946, as a training program under the direction of John M. Neal, Photogrammetric Engineer. The trainees were Frederick F. Kaiser, Air Photo. Observer, and Thomas W. Merriken, Jr., Photo. Aid.

The following is a tabulated list of information on horizontal control recovered and stations identified:

STATION	ESTABLISHING AGENCY	RECOVERED	IDENTIF. ON PHOTO	METHOD OF IDENTIF.	QUAD.
*COLLEGE	U.S.C. & G.S.	yes		sub-sta.	8761
DEEPWATER, 1892	"	lost			8761
MAHON, 1896	"	lost			8761
✓ MAHON 2, 1933	"	yes	15589	sub-sta.	8761
✓ MAHON RIVER LT., 1933	"	yes	15589	picked direct	8761

#### 5. Vertical Control:

only two stations within the map manuscript limits.

Work consisted of B.M. recovery, the establishing of new 3rd order levels, and 4th order levels.

Matthew A. Stewart, Engineering Aid, began work on new 3rd order control in this quadrangle April 12, 1946. 8.4 miles of 3rd order levels were run and five 3rd bench marks were set. 3rd order control was completed April 27, 1946.

Elmer L. Williams, Engineering Aid, started B.M. recovery and establishing 4th order control April 8, 1946, and completed the work April 22, 1946.

The 4th order control was established by wye levels. Spot elevations were used for control by the contour party, and are shown on the photographs by a dot in blue ink. The points are numbered consecutively from 10 to 123, inclusive; and each number is preceded by the prefix letters MA.

About 43 miles of 4th order levels were run by fly leveling methods. The maximum error of closure was 1.0 ft. All lines with an error of closure greater than 0.10 ft. were adjusted, prorating the error among the spot elevations established.

The following is a list of Bench Marks in this quadrangle:

BENCH MARK DESIGNATION	IDENTIFIED ON PHOTO NO	QUAD	RECOVERED	USED IN 4TH ORDER CONTROL
*H 3 1931	15590	T 8761	yes	no
✓B 2 1931		w. of quad.	"	"
✓A 2 1931		" "	"	"
—E 3 1931 ✓	15566	T 8761	"	yes
✓D 2 1931	15565	w. of quad.	"	"
✓G 3 1931 ✓	15590	T 8761	"	"
*B /	15590	T 8761	"	no
A / ✓	15590	T 8761	"	"
—F 3 1931 ✓	15590	T 8761	"	yes
/16 PRR		w. of quad.	"	no

THIRD ORDER BENCH MARKS set by M. A. Stewart 1946

—D 14 1946 ✓	15566	T 8761	yes
—E 14 1946 ✓	15566	T 8761	"
—F 14 1946 ✓	15566	T 8761	"
G 14 1946	15566	T 8761	} West of T-8761
H 14 1946	15566	T 8761	

#### 6. Contours and Drainage:

Contouring was started April 9, 1946, and completed May 22, 1946, by Elmer L. Williams, Engineering Aid. The contour interval is 10 feet. Work, done directly on photos. no. 15565, 15566, 15567, and 15590, was held as near the center of the photographs as practical in order to minimize the effects of distortion. Plane table methods were used.

Drainage and form lines were sketched on photographs from time to time during stereoscopic examinations of the photos. Drainage was checked in the field as contouring was done.

Elevations are shown along the west limits of this quadrangle, which is the west limit of the project, at a maximum interval of 600 ft. as per instructions.

Elevations of all critical points are shown, together with elevations of other points deemed advisable by the topographer, for better topographic expression.

7. Mean High Water Line:

Delaware Bay is affected by the tide all along the shoreline of this quadrangle. Shoreline inspection was completed in the last part of April, 1946, by Frederick F. Kaiser, Air Photo. Observer, and Thomas W. Merriken, Jr., Photo. Aid.

The mean high water line as seen from offshore is indicated by a dashed red line at intervals where the line is indistinct on the photographs. At frequent intervals the MEWL was verified by actual measurements from points of detail.

8. Mean Low Water Line:

No special attempt was made to locate the mean low water line. If during shoreline inspection an area was visited at low water, however, the low water line and areas awash were indicated on the photographs.

9. Wharves and Shoreline Structures:

There were several wharves and other shoreline structures in this quadrangle, all of which have been delineated and noted on the photographs in red ink.

10. Detail Off-shore from Mean High Water Line:

Since shoreline inspection was done from a small boat, it was impractical to range far off-shore. In some sections, however, it was too shallow to approach in-shore closer than one to two hundred yards with an outboard motor.

11. Landmarks and Aids to Navigation:

There were no charted landmarks along the shore of this quadrangle.

Five non-floating aids to navigation were identified on the photographs and listed on the accompanying form 567. All aids were checked against the 1945 light list and are in agreement except as follows: Filed in  
Division of Charts

NAME OF AID	NEW DESCRIPTION	1945 DESCRIPTION
Little River FR	white steel post	white wooden post
Little River RR	white steel post	white wooden post
Leipsic River FR	red steel tower with triangular day mark	red post with triangular day mark
Leipsic River RR	white steel tower with triangular slatted day mark	white post with triangular slatted day mark

To determine the azimuth of the Little River and Leipsic River Ranges, a point was established on each range. The point on Leipsic River Range is approximately 3.5 miles northwest of the rear range and is shown on photograph 15588. The point on Little River Range is approximately northwest of the rear range on the road leading from Little Creek, Del. to Port Mahon. (Photograph 15590.)

On each range the point was determined by setting up a theodolite until the instrument was in line with both the front and rear ranges. After line was determined, the point was marked and measurements made to points of detail. In each case, a distance was measured so that a scale factor for that section of the photograph could be determined, if necessary.

These points on range were identified with the same accuracy as a horizontal control station.

## 12. Hydrographic Control:

Hydrographic control was established and identified on photographs by the shoreline party. In addition to existing horizontal control, thirteen recoverable topographic stations and one additional hydrographic control station were identified.

Filed in Division of Photogrammetry General Files.

The following recoverable topographic stations were identified. Form 524 is submitted for each of these stations but form M-2226-12 is not submitted.

STATION	IDENTIFIED ON PHOTO	METHOD OF IDENTIFICATION
HERA	15590	Picked direct
OAKS	15590	" "
JAPA	15590	" "
HATE	15590	" "
VANE	15590	" "
JULY	15589	" "
SAIL	15589	" "
KLUG	15589	" "
BOLT	D 1934	" "
Leipsic River RR	D 1934	" "
Leipsic River FR	D 1934	" "
Little River RR	15590	" "
Little River FR	15590	" "

13. Landing Fields and Aeronautical Aids:

Dover Army Air Base is located partially in this quadrangle; the south quad line divides the base. About two-thirds of the base is in this quad; the remainder is in quad 8762 to the south.

This base is used chiefly by fighter planes, both conventional and jet propelled types. A few light and medium bombers are based here.

Contouring and field inspection of the entire base was done by Elmer L. Williams, Engineering Aid.

A legend for field inspection appears on photograph 15565. All work on the base was done from this photograph.

Some leased land is to be returned in the immediate future, according to local sources. This information should be checked at time of field edit.

14. Roads:

Roads were classified in accordance with paragraph 49 of the instructions for this project with State and Federal Route numbers shown.

15. Bridges:

There was only one bridge over navigable water within limits of the quadrangle, a single-span swing bridge, crossing Little Creek at Little River. Clearance width of 21.0 feet between fenders and 3.0 feet above M.H.W. (estimated on pilling) were measured with a steel tape.

The List of Bridges over Navigable Waters of the United States gives clear width normal to channel as 24 feet and clear height of the lowest point of superstructure above H.W. as 4.5 feet.

Note: The swing mechanism of this bridge is out of order and has not functioned since 15 August, 1946.

16. Buildings:

All obscure buildings were delineated on the photographs in red ink. Public buildings were identified and named. All abandoned buildings and out buildings were deleted.

17. Boundaries:

Boundaries were verified and checked in the field and delineated on the photographs in purple ink.

Boundaries of the strafing range shown on the photograph 15566 are not complete, in that there is no definite eastern boundary. The range extends for an indefinite distance northeastward into the marsh.

18. Geographic Names: 814✓

Geographic names for this quadrangle will be covered in a separate report on Geographic Names, Project Ph-7(46)A, by Lowell I. Bass, Photo. Aid. Approved list attached to this report.


19. Coast Pilot Information:

Coast Pilot information for this quadrangle will be covered in a special report, Project Ph-7(46)A, by George E. Varnadoe, Photogrammetric Engineer. Report not submitted.

Respectfully submitted,

  
Elmer L. Williams,  
Engineering Aid

Approved and Forwarded  
June 28, 1946

  
E. L. Jones,  
Chief of Party

# RADIAL PLOT REPORT

Project No. Ph-7-(46)A

## DELAWARE RIVER

Surveys Nos. T-8761 to T-8764 incl.

### 1. GENERAL DESCRIPTION:

Surveys Nos. T-8761 to T-8764 inclusive (Little Creek, Frederica, Bowers S. E., and Mispillion River  $7\frac{1}{2}$  minute quadrangles respectively) are four of four topographic maps in Project No. Ph-7-(46)-A located on the western side of Delaware Bay in the State of Delaware, and lying between Fowler Beach and Leipsic River. These surveys are to be compiled in accordance with instructions dated 25 March 1946, and 19 July 1946, by graphic photogrammetric methods. The contouring will be compiled from data obtained by planetable methods.

### 2. LAYOUT:

The layout of the maps, horizontal ground control and photograph centers are shown on the attached sketch.

### 3. PHOTOGRAPHS:

U. S. Coast and Geodetic unmounted photographs at a scale of 1:20,000 were used in this radial plot.

### 4. MANUSCRIPTS:

The map manuscripts are all  $7\frac{1}{2}$  minute quadrangles, scale 1:20,000. Polyconic projections, Delaware State Grids and New Jersey State Grids (10,000 foot intervals) for Survey No. T-8761 and Polyconic Projections and Delaware State Grids (10,000 foot intervals) for Surveys Nos. T-8762, T-8763, and T-8764 were ruled with ruling machine and checked in the Washington Office.

### 5. CONTROL:

Fourteen of sixteen existing horizontal control stations were recovered and identified by the field inspection party. No new horizontal control stations were established. Four of the recovered stations fall just outside the area of this plot, but were used in controlling the plot. Nineteen photographs covering the area were used in this plot.

### 6. FIELD INSPECTION:

The field identification of the horizontal control was good except as noted in the following paragraph:



6. FIELD INSPECTION: (cont'd)

SANDY, 1933, was identified by a substitute point. The position of the substitute point could not be computed because no geographic position or azimuth was available for the object used to initial on. However, a new substitute point was identified by personnel of the Baltimore Photogrammetric Office which was plotted and "held" in the radial plot.

In addition, SANDY 1933, was identified in the compilation office from field notes and from its description. The station as identified in the compilation office could be "held" with the new substitute point.

7. SUMMARY:

The selection of substitute stations was good.

The distribution of the control stations was good, however, more control would have been desirable.

The number and distribution of photographs was very good.

DETAILS OF RADIAL PLOTTING

8. The scale of the projection sheets was determined in the Washington Office. The plot was made with celluloid templates.

9. In order to eliminate paper distortion when preparing the templates, the Washington Office constructed a master template made on vinylite. Instructions in its use were given to the personnel of the compilation office by Commander O. S. Reading. The procedure is as follows:

The positions of the photograph center shown on the master template, the fiducial marks in the outer corners of the outer chambers, and all marks in the inner chamber were transferred to each acetate sheet used in making the templates.

Each sheet was then placed over the photograph of which the template was to be made. The center shown on the template was held to the principal point of the photograph. Each chamber of the photograph was then oriented to its corresponding fiducial marks on the template. In those chambers in which the fiducial marks coincided, all radials were traced. The template was then adjusted to the next chamber and the fiducial marks in that chamber were examined. If upon examination the fiducial marks did not coincide, the amount of error was corrected by adjusting the radials between the fiducial marks. This adjustment was continued until the radials had been drawn in all chambers.

10. In order to supplement the horizontal control plotted on the projection sheets, all pass points previously established by radial intersection on Survey No. T-8759, that were common to Survey No. 8761, were transferred to the projection sheet for Survey No. T-8761.

11. By using these transferred pass points a good junction was insured between map manuscript T-8761, in this radial plot and map manuscript No. T-8759, to the north.

12. The positions of all of the horizontal control including the pass points were then transferred from the projections to their respective base grid sheets by carefully matching common Delaware State Grid lines. The base grid sheets were then joined by matching common Delaware State Grid Lines.

13. A combined radial plot was then made for the areas of Surveys Nos. T-8761 to T-8764, inclusive, using the acetate templates previously prepared. All of the horizontal control identified on the office photographs was "held to" either tangentially or better. Satisfactory results were obtained.

14. The projection sheets for Surveys Nos. T-8761 to T-8764 inclusive were then placed over the templates as laid on the base grid sheets, and after matching common Delaware State Grid Lines, the pass points, Photo (Topographic) stations and photograph centers were pricked directly on the projection sheets.

15. The positions of all pass points, Photo (Topographic) stations and photograph centers are within 0.5 mm of their correct geographic positions.

#### REMARKS

16. Sufficient control on the map manuscripts to the north was transferred to the base grid sheets to insure a good junction between this radial plot and the radial plot previously made. Also all control just outside the area of this plot which could be plotted on the projection sheets was used in making the plot.

Respectfully submitted  
28 April 1947

Harry R. Rudolph  
Harry R. Rudolph,  
Supervisor

Approved and forwarded  
12 May 1947

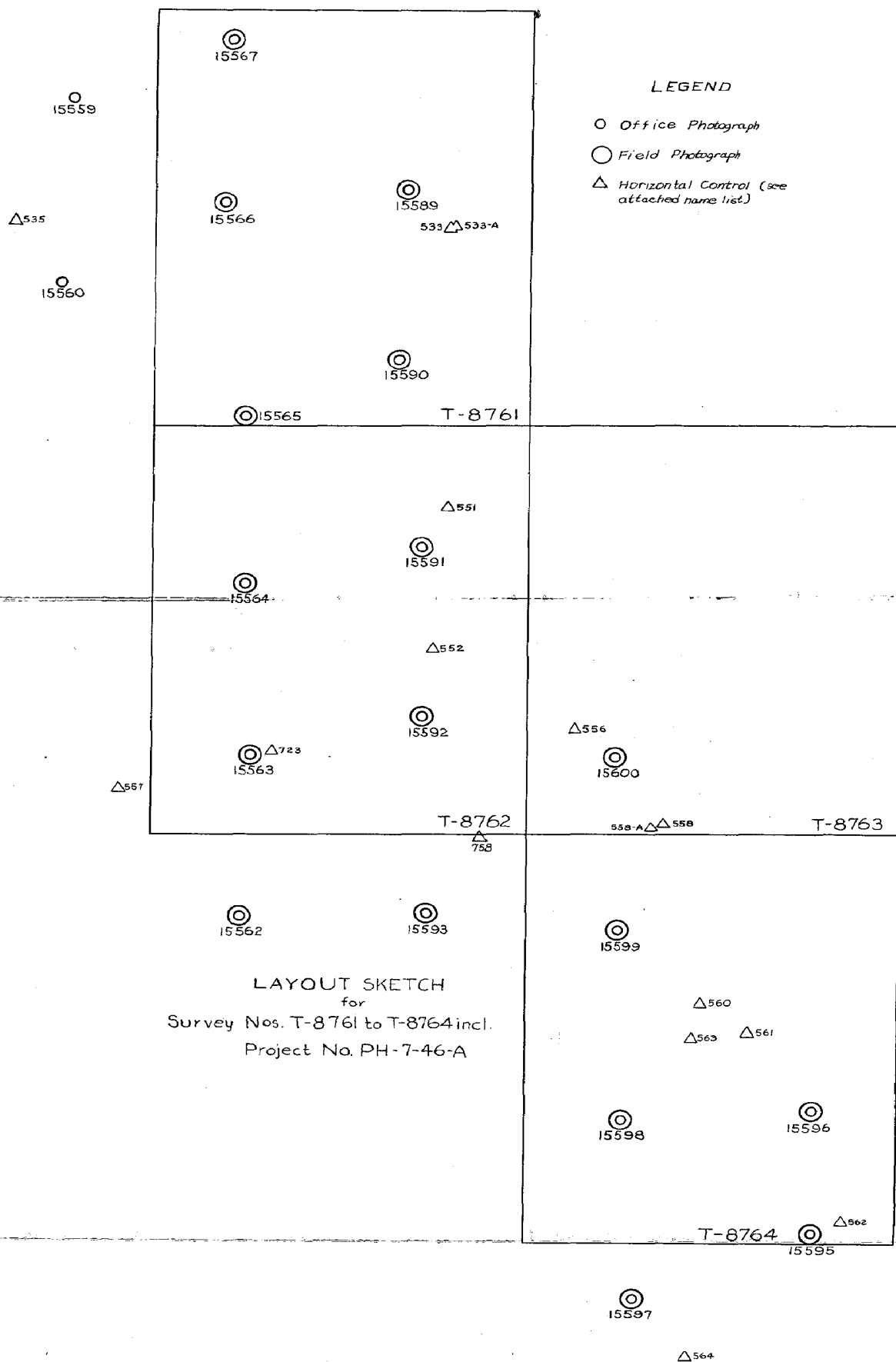
Thos. B. Reed  
Thos. B. Reed,  
Officer-in-Charge,  
Baltimore Photogrammetric Office

# LIST OF HORIZONTAL CONTROL STATIONS

PROJECT No. Ph-7-(46)A

SURVEYS NOS. T-8761 to T-8764

<u>No.</u>	<u>Name of Station</u>	<u>Method of Identification</u>
533	MAHON RIVER LT., 1933	Pricked Direct.
533A	MAHON 2, 1933	2 substitute stations pricked direct.
535	COLLEGE, 1932	2 substitute stations pricked direct.
551	KITTS HUMMOCK, 1933	No recovery.
552	MURDERKILL REAR RANGE LT., 1933	Pricked Direct.
556	SANDY, 1933	Substitute Station.
557	UNION, 1933	2 substitute stations pricked direct.
558	STONE, 1933	No recovery.
558A	STONE 2, 1933	Substitute Station pricked direct.
560	MISPILLION RIVER FLASHING LT., 1933	Pricked direct.
561	MISPILLION RIVER JETTY LT., 1933	Pricked direct.
562	SLAUGHTER, 1933	Substitute station pricked direct.
563	DOCTOR, 1933	Substitute station pricked direct.
564	MARVEL, 1932	Substitute station pricked direct.
723	TT No. 4J, 1926	Pricked direct as vertical control.
758	PRIMARY TRAVERSE STATION NO. 4, 1917	Pricked direct.



COMPILATION REPORT

MAP MANUSCRIPT - SURVEY NO. T-8761

T-8761 (Little Creek Quadrangle) is one of four topographic surveys in Project No. Ph-7(46)A, and is located on the western shore of the Delaware Bay, east of Dover and extends from Leipsic River to Lewis Ditch. These surveys are to be compiled in accordance with instructions dated 25 March 1946 and 19 July 1946 by graphic photogrammetric methods.

Filed in Div. Photogrammetry  
Office Files

26. CONTROL:

See radial plot report for layout of control in this area. A list of the stations on Form No. M-2388-12 is included in this report.

27. RADIAL PLOT:

Refer to the report for combined radial plot for Surveys Nos. T-8761 to T-8764 inclusive, submitted to the Washington Office 12 May 1947. - Filed

Attached in Div. Photogrammetry  
General Files

28. DELINEATION:

The compilation is in accordance with the written instructions pertaining to Project No. Ph-7(46) dated 19 July 1946.

Photographs and field inspection were satisfactory for delineation of the manuscript.

Contours were traced directly from the field photographs.

29. SUPPLEMENTAL DATA:

General map, Bombay Hook National Wildlife Refuge, Kent County, Delaware. Filed in Div. Photogrammetry General Files.

30. MEAN HIGH WATER LINE:

No comment.

31. MEAN LOW WATER LINE:

No mean low water line was identified by the field party and none has been shown on the manuscript.

32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE:

None.

33. WHARVES AND SHORELINE STRUCTURES:

No comment.

34. LANDMARKS AND FIXED AIDS TO NAVIGATION:

Refer to Form 567 included with this report.

Filed in Division of Charts.

35. HYDROGRAPHIC CONTROL:

One hydrographic signal site was located. Its description is lettered on the manuscript. (See heading No. 12 of field report.)

36. LANDING FIELDS AND AERONAUTICAL AIDS:

See heading No. 13 of the field report.

37. DISCREPANCY OVERLAY:

A discrepancy overlay has been prepared.

38. GEOGRAPHIC NAMES:

Geographic names were taken from final name standards dated 9 December 1946 furnished by the Washington Office. Approved list attached to this report.

39. JUNCTIONS:

Junctions with Surveys Nos. T-8762 to the south and with T-8759 to the north have been made and are in agreement.

To the east is an all-water area and along the west is the west limits of the project.

40. BRIDGES:

All bridge information for the area covered by this report as listed in the U. S. Engineers "List of Bridges Over Navigable Waters in the O.S." dated 1 July 1941; was verified in the field; all clearances were carefully measured with a steel tape, and the published descriptions and clearances were found to be correct except for the following discrepancies which were not reported to the Local District Engineer.

(Letter to the local Dist. Eng'r. being prepared by the Review Section)

Swing bridge at Little Creek over Little River

JB 5/6/48

	Measured Clearance	Listed Clearance
Clear width normal to channel	21.0	24
Clear height of lowest point of superstructure in feet	3.0 above M.H.W.	4.5 above H.W.

See also side heading Nb. 15 of field report.

41. BOUNDARIES:

Identification of boundary lines of Little Creek (town) and legal description thereof were not furnished the compilation office. The boundary lines were, therefore, not shown on the map manuscript.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

T-8761 was compared with United States Geological Survey Bowers, Del.-N.J. quadrangle map, edition of 1936, reprinted 1945, scale 1:62,500 and found to be in good agreement, except the contours which are, in general, somewhat in disagreement with the U.S.G.S. quadrangle.

45. COMPARISON WITH NAUTICAL CHARTS:

T-8761 was compared with United States Coast and Geodetic Survey nautical chart No. 1218, published January 1942 (8th edition) (First edition 1913) corrected to 13 July 1946, scale 1:80,000, and found to be in good agreement.

The following topographic information shown on T-8761 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 in part and will be completed by the hydrographic party.

Respectfully submitted:  
6 June 1947

Ruth C. Rudolph  
Photogrammetric Aid  
Compilation and Compilation  
Report

Harry R. Rudolph  
Supervisor

Joseph W. Vonack  
Photogrammetric Engineer  
Photogrammetric Office  
Reviewer

Approved and Forwarded:  
June 1947

Thos B. Baird  
Officer in Charge  
Baltimore Photogrammetric Office

Field Edit Report of Map Manuscript T-876I  
Project Ph-7 (46)  
R.J. Sipe, Chief of Party

The field edit of this quadrangle was accomplished during the period 12 August to 26 August 1947 by Donald G. Flippo, Photogrammetric Aid. All work was done in accordance with the field edit instructions for project Ph-7(46) dated 24 August 1945 and supplemental field instructions.

17. Boundary: Many discrepancies were found in the field inspector's location of the Bombay Hook Wild Life Refuge. A verified copy of this boundary compiled by the Division of Land Acquisition in 1937 has been submitted with Quadrangles T-8758 and T-8759 for correcting the refuge boundary. All other boundary lines in the quadrangle have been verified and Legal descriptions furnished.

18. Geographic Names: In addition to the geographic names shown on the field edit print, the following additions are recommended.

Myrkle Gut and Joe's Hole are to be added. These were recommended by Mr. George Spinner of the Bombay Hook Wild Life Refuge. <sup>See attached list of approved names</sup>

46. Methods: All delineated features such as roads, structures, drainages, and contours were checked either visually by traveling on roads or trails or by planetable methods.

Delineation and some additions were made directly on the field edit sheet. Some additions and corrections were noted on the photographs with a reference to the photograph on the field edit print. A legend to the symbols and to the colored ink used during the field edit is on the field edit print.

47. Adequacy of the Compilation: Some small outbuildings were deleted according to the instructions for this project and several structures were added. Some access roads were shown for adding to the manuscript.

The relative position of compiled detail was found to be entirely satisfactory. With the addition of the field edit data to the manuscript, this map will be complete and accurate.

48. Accuracy Tests: One vertical accuracy test was run in this quadrangle as to instructions on the discrepancy overlay.

The field edit party has made no effort to verify the horizontal accuracy of this map.

49. Review of First Proof: The following named gentleman has expressed his willingness to review the first proof of



this quadrangle.

Mr. Wilbert Rawley  
Leipsic, Delaware

Respectfully submitted

*Donald G. Flippo*

Donald G. Flippo  
Photogrammetric Aid  
18 September, 1947

Division of Photogrammetry  
Review Report of  
Topographic Map Manuscript T-8761

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

41. Boundaries: The Bombay Hook Migratory Waterfowl Refuge boundary is shown on the map manuscript as following the center line of several streams. According to the Federal Register, Volume 2, Number 122, 1937 and the Bureau of Biological Survey General Map of the area the boundary line follows the north bank of the various streams with one exception.

In Boat Gut the boundary follows the center line of the water course from the junction of Muddy Branch to the junction with the Leipsic River. Appropriate notes have been inked on the map manuscript to indicate the position of the boundary. Notes have also been added to the drafting overlay.

43. Comparison with Previous Surveys:

T-63	1:20,000	1841
T-141	1:10,000	1841
T-150	1:20,000	1842
T-1547b	1:20,000	1882-3
T-1548a	1:20,000	1883-4
T-3087	1:20,000	1910
T-3088	1:20,000	1910

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  
Bowers, Del.-N. J., USGS, 1:62,000, 1926, 1933-34

45. Comparison with Nautical Charts:

Chart No. 1218, 1:80,000, 12-8-47

This map manuscript has not been applied to nautical charts.

48. Vertical Accuracy Test: The vertical accuracy test for this quadrangle meets the project specifications. This map complies with the national standard map accuracy requirements.

Reviewed By:

*K. N. Maki*

K. N. Maki  
4-2-48

APPROVED BY:

*S. T. Griffith*

Chief, Review Section  
Division of Photogrammetry

*W. H. Rittenburg*

Chief, Nautical Chart Branch  
Division of Charts

*K. T. Adams*

Chief, Div. of Photogrammetry

*C. K. Green*

Chief, Div. of Coastal Surveys

10-10-52

-- T- 8761

AZ of RANGE:

Location of Pt. on range  
verified on <sup>field</sup> photo.

Az  $\angle$  verified on  
original manuscript  
with 3-arm steel  
protractor. Result =

$124^{\circ} 02'$  (same  $\angle$  as shown)

Cloth back copy has  
distortion and shrinkage  
causing an increase in the  
 $\angle$  reading.

Maki

# GEOGRAPHIC NAMES

- BAY GUT ✓
- BOAT GUT ✓
- BOMBAY HOOK NATIONAL WILDLIFE REFUGE ✓
- CATTAIL GUT ✓
- CEDAR GUT ✓
- DEEPWATER POINT ✓
- DELAWARE BAY ✓
- DEVERS GUT ✓
- DONAS LANDING ✓
- DOVER ARMY AIR BASE ✓
- DRUM GUT ✓
- DUCK CREEK ✕
- EAST WEST CANAL
- FLAT GUT ✓
- GREEN CREEK ✓
- HERRING BRANCH ✓
- INDIAN GUT ✓
- KELLY ISLAND ✓
- KENT ISLAND ✓
- LEIPSIC RIVER ✓
- LEWIS DITCH ✓
- LITTLE BOMBAY HOOK ✓
- LITTLE CREEK ✓ (village)
- LITTLE CREEK LANDING ✓
- LITTLE FORK ✓
- LITTLE RIVER ✓
- LONG POINT ROAD ✓
- MAHON RIVER ✓
- MARSHALL ISLAND ✓
- MORGAN BRANCH ✓
- MUDDY BRANCH ✓
- NEEDHOMS ISLAND ✓
- NORTH SOUTH CANAL ✓
- OLD CREEK ✓
- OLD WOMANS GUT ✓
- PICKERING BRANCH ✓
- PIPE ELM BRANCH ✓
- PORT MAHON ✓
- POSTLES CORNER ✓
- RAGGED ISLAND ✓
- ST. JONES RIVER ✓
- SIMONS RIVER ✓
- TAYLOR GUT ✓
- JOE'S HOLE ✓
- ✓ MYRKLE GUT (have no record of this name) → See Field Edit Report ?
- ✕ Congill Community House ✓
- ✕ Oak Grove Community House ✓
- Friends Meeting House ✓
- White Oak School (colored) ✓
- Spencer Gut
- U.S. No. 113 ✓ Dupont Highway ✓
- State No. 8 ✓
- State No. 9 ✓
- Moors Cemetery ✓

Names preceded by .  
are approved. 3/25/48  
L. Heck

NOTES  
FOR  
HYDROGRAPHIC PARTIES  
DELAWARE RIVER  
MAP MANUSCRIPT, SURVEY NO. T-8761  
PROJECT NO. PH-7(46)

The  $2\frac{1}{2}$  millimeter circles, accompanied with a name and date, are the positions of the recoverable photo (topographic) stations. The hydrographic signal site is indicated by a dot with the description lettered on the manuscript.

T-8761 was compared with United States Coast and Geodetic Survey nautical chart No. 1218, published January 1942 (8th edition) (First edition 1913) corrected to 13 July 1946, scale 1:80,000.

The following topographic information shown on T-8761 is of sufficient importance to warrant immediate application to the chart:

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Respectfully submitted  
6 June 1947

*Ruth E. Rudolph*  
Photogrammetric Aid

Approved and forwarded:

*Thos Baird*  
Officer in Charge  
Baltimore Photogrammetric Office