**U. S. COAST AND GEODETIC SURVEY**
**DEPARTMENT OF COMMERCE**

**DESCRIPTIVE REPORT**

**Type of Survey**: PHOTOGRAMMETRIC SHORELINE

**Field No.**: PH-7(46) C, **Office No.**: T-8774

**LOCALITY**

**State**: NEW JERSEY, DELAWARE

**General locality**: DELAWARE RIVER

**Locality**: GOOSE POND TO NEW CASTLE

**1948**

**CHIEF OF PARTY**
E. L. Jones, Field Office
T. R. Reed, Baltimore Photo, Office

**LIBRARY & ARCHIVES**

**DATE**: October 4, 1951
DATA RECORD

T- 8774

Fields Office:
New Castle, Delaware

Chief of Party:
E. L. Jones

Compilation Office:
Baltimore Photogrammetric Office

Chief of Party:
Thos. B. Reed

Instructions dated (II III):
25 March 1946, 19 July 1946

Completed survey received in office: 4-22-49

Reported to Nautical Chart Section: April 1949

Reviewed: Aug 5, 1949

Redrafting Completed: Aug 5, 1949

Applied to chart No. 294

Date: 2 Feb, 1949 (part 1)

Published:

Registered: 26 July, 1949

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): 1.000

Geographic Datum (III): N.A. 1927

Datum Plane (III): M.H.W

Reference Station (III): FORT MOTT, 1933

Lat.: 39° 36' 13.419" (413.8 m) Long.: 75° 33' 13.810" (329.5 m) Adjusted

State Plane Coordinates (VI):

\[ X = 461,344.16 \text{ (Del)} \]
\[ 1,754,015.01 \text{ (NJ)} \]

\[ Y = 684,110.01 \text{ (Del)} \]
\[ 231,812.51 \text{ (NJ)} \]

Military Grid Zone (VI)
### PHOTOGRAPHS (III)

#### 75th meridian

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>46-D-1464 to 1467 incl.</td>
<td>3/1/46</td>
<td>1205</td>
<td>1:10,000</td>
<td>4.1' above MLW</td>
</tr>
<tr>
<td>46-D-1988</td>
<td>3/12/46</td>
<td>1235</td>
<td>1:10,000</td>
<td>1.4' above MLW</td>
</tr>
<tr>
<td>46-D-1994 to 1996</td>
<td>3/12/46</td>
<td>1255</td>
<td>1:10,000</td>
<td>1.1' above MLW</td>
</tr>
<tr>
<td>46-D-2002 to 2007</td>
<td>3/12/46</td>
<td>1305</td>
<td>1:10,000</td>
<td>1' above MLW</td>
</tr>
<tr>
<td>4c J-2041 to 2048</td>
<td>3/12/46</td>
<td>1345</td>
<td>1:10,000</td>
<td>0.6' above MLW</td>
</tr>
</tbody>
</table>

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**Tide from (III):** Actual tide observations at Philadelphia corrected to 'New Castle to Delaware City'

**Mean Range:**

- Spring Range: 5.7'
- Range: 5.2'

**Camera:** (Kind or source) U. S. Coast and Geodetic Survey single lens camera. Wide angle, type 'D'--Focal length 12''.

**Field Inspection by:** E. L. Jones

- Date: April through September 1946

**Field Edit by:** (Refer to)

- Date: 1948

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**Date of Mean High-Water Line Location (III):**

- Same as date of photographs supplemented with field inspection obtained during April—September 1946.

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

- Date: Sept. 10, 1946

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

- Date: Sept. 10, 1946

**Control plotted by:** Leroy A. Senasack

- Date: Jan. 14, 1947

**Control checked by:** George O. Fellers

- Date: Jan. 14, 1947

**Radial Plot by:** H.R. Rudolph

- Date: Sept. 1947

**Dated by:** Ruth W. Whitson

- Date: 7-28 to 8-27-47
- 9-8 to 10-10-47
- 10-20 to 10-22-47

**Reviewed in compilation office by:** Raymond Glaser

- Date: 10-29 to 11-4-47

**Elevations on Field Edit Sheet checked by:**

- Date:
STATISTICS (III)

Land Area (Sq. Statute Miles): 6

Shoreline (More than 200 meters to opposite shore): 20 statute miles

Shoreline (Less than 200 meters to opposite shore): 33 statute miles (measured along the center line of stream)

Number of Recoverable Topographic Stations established: 4

   photo hydro points
Number of topographic hydrographic stations located by radial plot: 6

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:
PLANIMETRIC AND SHORELINE MAPPING PROJECTS
PH-7 (46)   CS-307 (43)

PH-7 (46) DEL - N.J. - PA., Delaware River
(P) Indicates Planimetric Survey
(S) Indicates Shoreline Survey

CS-307 (43)
MARYLAND, Patuxent River
PLANIMETRIC

76°30'

75°45'
FIELD REPORT
SHORELINE MANUSCRIPT, SURVEY NO. T-8774

The area of this shoreline survey is in the area covered by Topographic Surveys Nos. T-8753 and T-8751. For field data covering Survey No. T-8774, refer to the field reports of the above mentioned topographic surveys.
RADIAL PLOT REPORT
PROJECT NO. PH-7 (46)-C
DELWARE RIVER
SURVEY NO. T - 8774

1. GENERAL DESCRIPTION

Survey No. T-8774 is one of twelve shoreline maps in sub-project No. Ph-7 (46)-C located along the Delaware River between Pea Patch Island and New Castle Delaware. This survey will be compiled in accordance with instructions dated 25 March 1946 and 19 July 1946 by graphic photogrammetric methods. Instructions filed in Div. Photogr. office files.

2. LAYOUT

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

3. PHOTOGRAPHS

The photographs used in this radial plot were taken with the U. S. Coast and Geodetic Survey, wide angle, Type D camera, focal length 12 inches at contact scale of 1:16,000 ratioed to a scale of 1:10,000.

4. MANUSCRIPTS

The projection sheet for this radial plot was ruled with polyconic projections; scale 1:10,000, New Jersey State Grids, and Delaware State Grids (5000 ft. intervals). The projection and grid lines were ruled on acetate with the ruling machine and checked in the Washington Office.

5. CONTROL

Since sufficient previously established horizontal control stations were available, no new stations were established by the field party.

The field party recovered 17 horizontal control stations in the area of this survey, 12 of which were identified.

6. FIELD INSPECTION

The field identification of the horizontal control was very good except as follows:

PEA PATCH ISLAND DIKE, MIDDLE RIVER BEACON, SOUTH END OF DIKE, 1933, Pricked direct, identified as a Non-floating Aid to Navigation. Radially plotted position falls approximately 14 millimeters southwest of geographic position. See form M-2388-12 attached.

FINN, 1934. - The geographic position of the substitute point identi-
6. FIELD INSPECTION (Continued)

fied for this station could not be computed because the object initialed upon
did not have a geographic position; however, Reference Mark 32
was identified in the compilation office from data furnished by the field party and used
to control the photographs.

7. SUMMARY

The selection and identification of substitute stations and the identifi-
cation of control was very good except as mentioned in paragraph No. 6.

The distribution of control was good except in the southwestern portion of
the survey.

The number and distribution of photographs was adequate for delineation;
however, an additional flight in the northwestern portion of the survey would
have been desirable to strengthen the radial plot.

DETAILS OF RADIAL PLOTTING

8. The scale of the projection sheet was determined in the Washington Office.
Since the horizontal control was adequately distributed, it was decided
the plot could be run more economically by orienting the photographs directly
under the map projection.

9. In order to supplement the horizontal control plotted on the projection
sheet and to insure a good junction between this plot and Surveys Nos. T-8775
and T-8777 to the south, pass points previously established on these surveys
and common to Survey No. T-8774 were transferred thereto. In addition several
pass points established by the 1:20,000 scale plot common to this area were
also transferred to Survey No. T-8774 by the following method:-

Templets were made by placing a celluloid sheet over the 1:20,000 projection
sheet and drawing radial lines through intersections of projection lines, grid
lines, or a projection line with a grid line, using the pass point as the center.
A minimum of four radials were drawn. The templets were then superimposed on
the 1:10,000 scale projection sheet for Survey No. T-8774 and oriented with the
radial lines, which had been extended, passing through the common intersections
of projection lines, grid lines, and grid lines with projection lines. The
pass point was then pricked through the templet to the projection sheet.

10. The radial plot was then made by sliding the photographs directly beneath
the projection sheet and orienting the control pricked thereon to its correspond-
ing plotted control station. Radials were then drawn on the projection sheet
through all selected pass points. All horizontal control identified on the
photographs was "held to" tangentially or better except the two stations discussed
under paragraph No. 6. FINN R.M. No. 2 which was identified in the compilation
office was also "held to" in the plot. Satisfactory results were obtained.

11. The positions of the pass points determined by radial intersection and of
photograph centers determined by resection were then pricked directly on the
projection sheet.
12. The positions of all pass points and photograph centers are within 0.5 mm of their correct geographic positions.

Approved and forwarded
12 September 1947

Respectfully submitted
3 September 1947

[Signature]
Officer in Charge
Baltimore Photogrammetric Office

[Signature]
Supervisor
<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME OF STATION</th>
<th>METHOD OF IDENTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>426</td>
<td>NEW CASTLE, 1933</td>
<td>Substitute Station</td>
</tr>
<tr>
<td>433</td>
<td>BULKHEAD BAR FRONT RANGE LIGHT</td>
<td>No recovery</td>
</tr>
<tr>
<td>434</td>
<td>PENNSVILLE TRINITY M.E. CH.SP. 1933</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>435</td>
<td>PEA_PATCH ISLAND DIKE UPPER RIVER BEACON N. END OF DIKE, 1933</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>436</td>
<td>PEA PATCH ISLAND DIKE MIDDLE RIVER BEACON S. END OF DIKE, FLASHING GREEN, 1933</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>436A</td>
<td>DIKES END (USE) 1898</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>437</td>
<td>NEW CASTLE DELAWARE RAYON CO. N.W. STACK, 1933</td>
<td>Recovered, Not identified</td>
</tr>
<tr>
<td>437</td>
<td>NEW CASTLE DELAWARE RAYON CO. S.E. STACK, 1933</td>
<td>Recovered. Not identified.</td>
</tr>
<tr>
<td>438</td>
<td>HAMBURG SEXTANT (USE), 1932</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>439</td>
<td>FINNS POINT REAR RANGE LT., 1933</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>442</td>
<td>FORT MOTT NAT. CEM. MONUMENT 1933</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>443</td>
<td>FORT MOTT, 1933</td>
<td>Recovered, Not identified</td>
</tr>
<tr>
<td>443</td>
<td>FORT MOTT, (USE) 1933</td>
<td>Recovered, Not identified</td>
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<tr>
<td>444</td>
<td>FINN, 1934</td>
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<tr>
<td>445</td>
<td>PEA PATCH ISLAND LIGHT, 1933</td>
<td>Substituted Station.</td>
</tr>
<tr>
<td>445A</td>
<td>FORT DELAWARE (USE), 1937</td>
<td>Pricked direct</td>
</tr>
<tr>
<td>437</td>
<td>NEW CASTLE DELAWARE RAYON CO TALL BLACK WATER TANK, 1933</td>
<td>Pricked Direct</td>
</tr>
</tbody>
</table>
LEGEND

○ Field Photograph

● Office Photograph

△ Horizontal Control (see attached list for names of stations)

LAYOUT SKETCH for

SURVEY NO. T-8774,
Project No. Ph-7-(46)-C
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR ( \phi )-COORDINATE</th>
<th>LONGITUDE OR ( \lambda )-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET OR Projection Line IN Meters</th>
<th>DISTANCE FROM GRID IN Meters</th>
<th>DISTANCE FROM GRID IN Meters</th>
<th>FACTOR DISTANCE FROM GRID OR Projection Line IN Meters</th>
<th>FACTOR DISTANCE FROM GRID OR Projection Line IN Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW CASTLE, 1946</td>
<td>G-1664 Pg. 73</td>
<td>N.A. 1927</td>
<td>( 39^\circ 39' ) 29.124&quot;</td>
<td>( 75^\circ 33' ) 44.056&quot;</td>
<td>898.2 (952.2)</td>
<td>1050.3 (380.1)</td>
<td>831.9 (1018.5)</td>
<td>Removed from manuscript</td>
<td>Removed from manuscript</td>
</tr>
<tr>
<td>SUB. STA., NEW CASTLE</td>
<td>G-1751 Pg. 124</td>
<td>&quot;</td>
<td>( 39^\circ 39' ) 18.727&quot;</td>
<td>( 75^\circ 33' ) 23.460&quot;</td>
<td>577.6 (1272.9)</td>
<td>559.3 (871.1)</td>
<td>183.0 (1667.4)</td>
<td>364.3 (1066.2)</td>
<td>364.3 (1066.2)</td>
</tr>
<tr>
<td>PENNSVILLE, 1933</td>
<td>G-1751 Pg. 123</td>
<td>&quot;</td>
<td>( 39^\circ 39' ) 05.934&quot;</td>
<td>( 75^\circ 33' ) 15.282&quot;</td>
<td>1464.2 (386.2)</td>
<td>837.2 (593.4)</td>
<td>1289.8 (560.6)</td>
<td>160.9 (1269.7)</td>
<td>160.9 (1269.7)</td>
</tr>
<tr>
<td>NEW CASTLE, DELE- WARE RAYON CO.</td>
<td>G-1751 Pg. 124</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 47.475&quot;</td>
<td>( 75^\circ 35' ) 35.112&quot;</td>
<td>1460.8 (389.6)</td>
<td>824.7 (605.9)</td>
<td>1454.5 (395.9)</td>
<td>813.3 (617.3)</td>
<td>1454.5 (395.9)</td>
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<tr>
<td>TALL BLACK WATER TANK, 1933</td>
<td>&quot;</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 47.366&quot;</td>
<td>( 75^\circ 35' ) 34.588&quot;</td>
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<td>824.7 (605.9)</td>
<td>1454.5 (395.9)</td>
<td>813.3 (617.3)</td>
<td>1454.5 (395.9)</td>
</tr>
<tr>
<td>NEW CASTLE, DELE- WARE RAYON CO., NW STACK, 1946</td>
<td>G-1751 Pg. 124</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 47.160&quot;</td>
<td>( 75^\circ 35' ) 34.109&quot;</td>
<td>1289.8 (560.6)</td>
<td>160.9 (1269.7)</td>
<td>1289.8 (560.6)</td>
<td>160.9 (1269.7)</td>
<td>160.9 (1269.7)</td>
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<td>NEW CASTLE,DELE- WARE RAYON CO., SE STACK, 1946</td>
<td>G-1751 Pg. 125</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 41.82&quot;</td>
<td>( 75^\circ 34' ) 06.75&quot;</td>
<td>1289.8 (560.6)</td>
<td>160.9 (1269.7)</td>
<td>1289.8 (560.6)</td>
<td>160.9 (1269.7)</td>
<td>160.9 (1269.7)</td>
</tr>
<tr>
<td>PEA PATCH ISLAND DIKE, UPPER RIVER BEACON, NORTH END OF DIKE, FLASHING GREEN, 1933</td>
<td>G-1751 Pg. 125</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 64.63</td>
<td>&quot;</td>
<td>1493.4 (1585.8)</td>
<td>Radially plotted position 1/2 mile S 35° E of A.S.E (Point 367)</td>
<td>1493.4 (1585.8)</td>
<td>1493.4 (1585.8)</td>
<td></td>
</tr>
<tr>
<td>PEA PATCH ISLAND DIKE MIDDLE RIVER BEACON, SOUTH END</td>
<td>G-1751 Pg. 125</td>
<td>&quot;</td>
<td>( 39^\circ 38' ) 68.58</td>
<td>&quot;</td>
<td>264.6 (1585.8)</td>
<td>Radially plotted position 1/2 mile S 35° E of A.S.E (Point 367)</td>
<td>264.6 (1585.8)</td>
<td>264.6 (1585.8)</td>
<td></td>
</tr>
</tbody>
</table>

COMPUTED BY L. A. Senasack
DATE 1/9/47
CHECKED BY G.O. Fellers
DATE 1/9/47
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR $\nu$-COORDINATE</th>
<th>LONGITUDE OR $x$-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tbody>
<tr>
<td>HAMBURG SEXTANT (U.S.E.), 1932</td>
<td>G-1664 Pg. 75</td>
<td>N.A. 1927</td>
<td>39° 37.40390&quot;</td>
<td>75° 36.277852&quot;</td>
<td>1245.6 (604.8)</td>
<td>664.2 (766.8)</td>
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<tr>
<td>FINNS POINT REAR RANGE LT., 1933. r. 1946</td>
<td>G-1751 Pg. 125</td>
<td>&quot;</td>
<td>39° 37.01063&quot;</td>
<td>75° 32.0310&quot;</td>
<td>32.8 (1817.6)</td>
<td>79.0 (1352.2)</td>
<td></td>
</tr>
<tr>
<td>FORT MOTT NATIONAL CEMETERY MONUMENT, 1933, r. 1946</td>
<td>G-1751 Pg. 125</td>
<td>&quot;</td>
<td>39° 36.41741&quot;</td>
<td>75° 32.23196&quot;</td>
<td>1287.3 (563.1)</td>
<td>553.3 (878.0)</td>
<td></td>
</tr>
<tr>
<td>FORT MOTT, 1933 r. 1946</td>
<td>G-1664 Pg. 74</td>
<td>&quot;</td>
<td>39° 36.13.419&quot;</td>
<td>75° 32.13.810&quot;</td>
<td>413.8 (1436.6)</td>
<td>329.5 (1102.0)</td>
<td></td>
</tr>
<tr>
<td>FORT MOTT (U.S.E), 1900, r. 1946</td>
<td>G-1664 Pg. 79</td>
<td>&quot;</td>
<td>39° 36.13.786&quot;</td>
<td>75° 32.13.713&quot;</td>
<td>425.2 (1425.2)</td>
<td>327.2 (1104.3)</td>
<td></td>
</tr>
<tr>
<td>FINN, 1934</td>
<td>G-1913 Pg. 136</td>
<td>&quot;</td>
<td>39° 35.32.866&quot;</td>
<td>75° 32.14.552&quot;</td>
<td>Destroyed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINN, 1934 R.M.</td>
<td>&quot;</td>
<td>&quot;</td>
<td>39° 35.5</td>
<td>75° 32.5</td>
<td>1099.3 (751.1) (from s. 2-4)</td>
<td>365.6 (1066.1)</td>
<td></td>
</tr>
<tr>
<td>DIKES END (USE) 1898</td>
<td>U.S.E.D. Ph. Dist.</td>
<td>&quot;</td>
<td>39° 37.34.284&quot;</td>
<td>75° 34.18.887&quot;</td>
<td>1060.4 (790.0)</td>
<td>450.5 (980.5)</td>
<td></td>
</tr>
</tbody>
</table>

1 FT. = 0.3048006 METERS

COMPUTED BY: L. A. SENASACK

DATE: 1/9/47

CHECKED BY: G.O. FELLERS

DATE: 1/9/47
T-8774 is one of 12 shoreline manuscripts in Project No. Ph-7(46)C located along the Delaware River and Bay. These surveys are to be compiled in accordance with instructions dated 25 March 1946 and 19 July 1946 by graphic photogrammetric methods.

26. **CONTROL**

See layout of control submitted to the Washington Office, 12 September, 1947. A list of stations on Form No. M-2388-12 is included in this report.

27. **RADIAL PLOT**

Refer to the report for the individual radial plot covering the area of Survey No. T-8774, which was submitted to the Washington Office 12 September 1947, precedes this compilation report.

28. **DELINEATION**

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

A portion of the apparent shoreline in Goose Pond is very indefinite on the photographs due to the fact that the area overflows. This area was carefully delineated however, making use of the grass in water symbol.

Photographic coverage was inadequate for the most westerly section of Pea Patch Island Dike.

30. **MEAN HIGH WATER LINE**

The shoreline was delineated from single lens photographs (1:10,000 scale field ratio prints) in accordance with the field identification shown thereon. Shoreline, for which no field inspection was furnished (approximately 50%) was delineated in the compilation office after careful stereoscopic examination of the photographs.

31. **MEAN LOW WATER**

It was generally noted that the low water line and the apparent shoreline were synonymous (See Field Report for Survey No. T-8753, Paragraph 8).

Only that portion of the mean low water line identified by the field party was delineated on the map manuscript.
32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE

Delineated in accordance with the field identification.

33. WHARVES AND SHORELINE STRUCTURES

Delineated in accordance with the field identification.

(See Field Report for Surveys No. T-8751 and No. T-8753, paragraph 9).

34. LANDMARKS AND AIDS TO NAVIGATION

Four (4) three point sextant fixes were made by the field party to determine the azimuth of navigational ranges on New Castle Range and on Bulkhead Bar Range.

After these sextant fixes were carefully plotted on the manuscript, it was found that the two fixes on Bulkhead Bar Range could not be held together in azimuth with Bulkhead Bar front and rear range lights.

See form 567 submitted with reports for Topographic Surveys Nos. T-8751 and T-8753.

35. HYDROGRAPHIC CONTROL

Six (6) photo hydro points.

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

36. LANDING AREAS AND AERONAUTICAL AIDS

(See Field Report for Survey No. T-8751, Paragraph 13).

38. GEOGRAPHIC NAMES

Geographic names were taken from final names standards, dated 12/18/36, furnished by the Washington Office. A list of geographic names is attached to this report.

It is believed that the geographic name "Finns Point National Cemetery" appearing on the final name standard may be in error since a triangulation station in this area is known as "Fort Mott National Cemetery Monument".
39. **JUNCTIONS**

Junctions with Surveys Nos. T-8777 and T-8775 to the south have been made and are in agreement.

Junction with Survey No. T-8773 to the north has been made and is in agreement.

There are no other contemporary surveys.

T-8774 is a part of Topographic Surveys Nos. T-8751 and T-8753.

40. **BOUNDARIES**

The limits of a U.S. Coast Guard Reservation has been delineated in accordance with field inspection data.

No other boundaries have been shown.

41. **BRIDGES**

There are no bridges over navigable waterways in the area.

44. **COMPARISON WITH EXISTING TOPOGRAPHIC SURVEYS**

Survey No. T-8774 has been compared in detail with the U.S. Geological Survey, Wilmington Quadrangle, scale 1:62,500 and was found to be in fair agreement. However, a large portion of Goose Island Flats which has been filled in, and around which a rock bulkhead has been built, does not appear on the quadrangle. A large pond inland from Reybold Cove also does not appear on the quadrangle.

45. **COMPARISON WITH NAUTICAL CHARTS**

T-8774 has been compared with Nautical Chart No. 294, scale 1:40,000 and found to be in fair agreement.

The following topographic information shown on T-8774 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 should be completed by the hydrographic party.

Respectfully submitted
23 October 1947

[Signature]
Engineering Draftsman
Compilation and Descriptive Report

[Signature]
Cartographer
Photogrammetric Office
Reviewer

Harry M. Rudolph
Supervisor

[Signature]
Approved and forwarded
13 November 1947

[Signature]
Officer in Charge
Baltimore Photogrammetric Office
GEOGRAPHIC NAMES

- Deerfield Beach
- Delaware River
- Dobbsville
- Finns Point
- Finns Point National Cemetery (This is official name of cemetery, situated in Fort Mott Military Reservation - War Dept. Doc. No. 496, 1916)
- Fort Mott
- Gambles Gut (Pending with U.S.B.N.)
- Goose Pond
- Hamburg Cove
- Hamburg Road
- Hoppemense Creek
- Kelly Point
- Lincoln Park
- Miles Creek
- Mill Creek (N. J. side)
  - Newark & Delaware City Branch (P.R.R.)
- Pennsylvania R.R.
- Pea Patch Island
- Penna Beach
- Pennsville
- Heybold Cove (Preferably omit, as very little of feature is on this map)
- Stonebank Creek
- Taggart Properties

New Castle
- Red Lion Creek
- Killcohook National Wildlife Refuge (Official name)

Tom Creek (Omit this name, as entirely unknown locally)
- Army Creek (Pending with U.S.B.N.)

Names preceded by * are approved. 8-5-49 L. Hekr
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Fricked on Photo Number</th>
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<tbody>
<tr>
<td>5101</td>
<td>North Gable (Penns Beach Yacht Club House)</td>
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<td>5301</td>
<td>S.W. Corner of Pier</td>
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<td>5302</td>
<td>Top of Observation Tower</td>
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<td>S.W. Corner of Pier</td>
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<tr>
<td>5308</td>
<td>Finns Point Front Range Light</td>
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</tr>
<tr>
<td>5309</td>
<td>Finns Point Jetty Light</td>
<td>2045</td>
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</tbody>
</table>

Listed by: [Signature]
Engineering Draftsman

Checked by: [Signature]
Cartographer
34. Landmarks and Aids to Navigation:

1. New Castle Range:—New Castle Range Rear Lt. was incorrectly pricked on two of the photographs so that the radial cuts placed it out of its true position. By taking cuts through correctly pricked points the light position on the manuscript was moved westward 3.3 mm. The position of the light has been corrected on the Form 567.

2. Bulkhead Bar Range:—The sextant fix location for the northern “fix” point in this range was deleted from the manuscript because it did not fall on the range azimuth. Azimuths of range were drawn on the manuscript.

Ten Aids to Navigation lie within the area of T-8774:

- Finns Point, Range Front
- Finns Point, Range Rear
- New Castle, Range Front
- New Castle, Range Rear
- Bulkhead Bar, Range Front
- Minnis Point Jetty Light
- Pen Patch Island Dike, Upper
- Pen Patch Island Dike, Middle
- Pen Patch Island Dike, Gap Light
- Port Mott Aluminaut

(40') Lamps

35. Topographic Sections:—Forms 524 for LNSD, 1946 and CALE, 1946 have been filed under T-8751.

# 43. Comparison with previous Topographic Surveys:

<table>
<thead>
<tr>
<th>T-138</th>
<th>1:50000</th>
<th>1942</th>
<th>(no contours)</th>
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<tr>
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<td>1:10,000</td>
<td>1961</td>
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<td>T-156</td>
<td>1:10,000</td>
<td>1943</td>
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<td>T-1505a</td>
<td>1:5000</td>
<td>1932</td>
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<td>T-1505b</td>
<td>1:10,000</td>
<td>1982</td>
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<tr>
<td>T-1511a</td>
<td>1:5000</td>
<td>1931</td>
<td>(with 20 ft. contour)</td>
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<tr>
<td>T-1511b</td>
<td>1:10,000</td>
<td>1932</td>
<td>(with 20 ft. contour)</td>
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</tbody>
</table>

T-8774 supersedes these maps for nautical charting purposes.

44. Comparison with Topographic Quadrangles:

- USGS Wilmington 1:62,500 ed. Nov. 1936, rep. 1944
- USGS Wilmington 1:62,500 ed. 1919 rep. 1921
- USGS Wilmington 1:4,000 April 1942

45. Comparison with Nautical Charts:

- 294 1:40,000 Sept. 1943, rev. 7/19/48

No significant differences occur between the map and the chart.

* For contours and minute detail see contemporary surveys T-8751 and T-8753.
The chart and the manuscript are in general agreement, except:

1. The railway paralleling the shore from New Castle to Delaware City has been abandoned.
2. A pier between Finns Point Jetty Light and Finns Point is in ruins.
3. A wreck lying in the east side of Pea Patch Island Dike and just north of the Cape Light does not appear on T-3774 (no field inspection data).

4. Adequacy of Results and Future Surveys. This shoreline map meets the Bureau requirement of accuracy and adequacy for use as a base for hydrographic survey and nautical chart construction.

Reviewed by: Lena T. Stevens

Approved by:

A. V. Griffeth
Chief, Review Section
Division of Photogrammetry

Wm. E. Monaco
Chief, Nautical Chart Branch
Division of Charts

O. S. Read
Chief, Div. of Photogrammetry

Wm. J. Scampe
Chief, Div. of Coastal Surveys
Azimuth of Navigational Ranges
(copied from Desc. Rpt. T-3751)

Three-point sextant fixes to determine the azimuth of navigational ranges were obtained by George F. Varnadoe and James E. Hundley on 16-17 Sept. 1948 and are as follows:

At points on New Castle Range:

1. \( \Delta \) Fort Mott Monument, 1933  
   \( \ell \) Light on Point, N.W. of Monument  
   \( \ell \) New Castle F. & R. Range Light 76°57'00"

2. \( \Delta \) Fort Mott Monument, 1933  
   \( \ell \) Light on Point, N.W. of Monument  
   \( \ell \) New Castle F. & R. Range Light 71 18 00

At a point on Bulkhead Bar Range:

1. \( \Delta \) Fort Mott Monument, 1933  
   \( \ell \) Light on Point, N.W. of Mon.  
   \( \ell \) Rear Range Light (New Castle Range 63°18'30"

2. \( \Delta \) Fort Mott Monument, 1933  
   \( \ell \) Light on Point, N.W. of Mon.  
   \( \ell \) Rear Range Light (New Castle Rng. 83 31 50

*deleted from manuscript*
# Nautical Charts Branch

**Survey No. 7-8774**

## Record of Application to Charts

<table>
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<tr>
<th>Date</th>
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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.
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