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

**DESCRIPTIVE REPORT**

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Photogrammetric-Topographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td>T-8762</td>
</tr>
<tr>
<td>Office No.</td>
<td></td>
</tr>
</tbody>
</table>

**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>Delaware River</td>
</tr>
<tr>
<td>Locality</td>
<td>Frederica</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project PH-7(46)A</th>
</tr>
</thead>
<tbody>
<tr>
<td>194 6</td>
</tr>
</tbody>
</table>

**CHIEF OF PARTY**

<table>
<thead>
<tr>
<th>Thos.B.Reed</th>
</tr>
</thead>
</table>

**LIBRARY & ARCHIVES**

**DATE**

<table>
<thead>
<tr>
<th>June 7, 1948</th>
</tr>
</thead>
</table>
DATA RECORD

T- 8762

Quadrangle (II): FREDERICA

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

Field 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 (Field)
19 July 1946 (Office)

Copy filed in Descriptive Report No. T- (VI)
Division Photogrammetry Office Files

Completed survey received in office:
23 January 1948

Reported to Nautical Chart Section:

Reviewed: 26 March 1948 Applied to chart No. Date:

Redrafting Completed:

Registered: 6 April 1948

Published:

Compilation Scale: 1:20,000

Published Scale: 1:24,000

Scale Factor (III): 1.000

Geographic Datum (III): N.A. 1927

Datum Plane (III): MSL

Reference Station (III): UNION, 1932

Lat.: 39° 00' 44.4" 1369.2m
Long.: 75° 30' 38.7" 932.4 m

State Plane Coordinates (VI): Delaware

X = 473,260.70 feet
Y = 368,688.56 feet

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>15563 &amp; 15564</td>
<td>3-21-46</td>
<td>1110</td>
<td>1:20,000</td>
<td>5.2' above M.L.W.</td>
</tr>
<tr>
<td>15591 &amp; 15592</td>
<td>3-21-46</td>
<td>1230</td>
<td>1:20,000</td>
<td>5.0' above M.L.W.</td>
</tr>
</tbody>
</table>

Actual tide observation at Atlantic City with corrections to St. Jones River to Mispillon River.

Mean Range: 5.4
Spring Range: 6.3

Camera: (Kind or source) U.S. Coast and Geodetic Survey nine lens camera focal length 8½".

Field Inspection by: E. L. Jones  
Field Edit by: Donald G. Filipp  
R.J. Sipe, Chief of Party  

Date of Mean High-Water Line Location (III): As of date of photographs supplemented by field inspection during April 1946.

Projection and Grids ruled by (III) T.L.J.  
"    "    "    " checked by: T.L.J. - K.N.M.  
Control plotted by: L.A. Senasack  
Control checked by: G.O. Fellers  
Radial Plot by: F.J. Tarcza  
Detailed by: D.M. Brant  
Reviewed in compilation office by: J.W. Vonasek  

Elevations on Field Sheet  
checked by: J.W. Vonasek  

Manuscript  

Date: May-July 1946  
Date: 8-26-46  
Date: 8-26-46, 3-24-47  
Date: 1-6-47  
Date: 1-7-47  
Date: 4-18-47  
Date: 4-30-47  
6-12-47  
Date: 6-19-47 to 6-23-47  
Date: 6-20-47
STATISTICS (III)

Land Area (Sq. Statute Miles): 48

Shoreline (More than 200 meters to opposite shore): 5 statute miles

Shoreline (Less than 200 meters to opposite shore): 24 " "

Number of Recoverable Topographic Stations established: 9

hydrographic signal sites
Number of Topographic Stations located by radial plot: 5

Leveling (to control contours) - miles: 44 statute 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 Edit Corrections by:
Glady S. Nottenburg

Jan. 1948
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR Y-COORDINATE</th>
<th>LONGITUDE OR X-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</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>
</tr>
</thead>
<tbody>
<tr>
<td>KITS</td>
<td>G-1664 Pg. 66</td>
<td>N.A. 1927</td>
<td>39° 05'</td>
<td>58.176''</td>
<td>Reported as &quot;lost&quot; in 1947 (reform 52&quot;)</td>
<td>1794.0 (56.2)</td>
<td>72.0 (1369.8)</td>
<td></td>
</tr>
<tr>
<td>MURDERKILL RIVER</td>
<td>G-1751 Pg. 132</td>
<td>&quot;</td>
<td>75° 24'</td>
<td>02.996''</td>
<td></td>
<td>554.8 (1295.4)</td>
<td>575.9 (866.8)</td>
<td></td>
</tr>
<tr>
<td>UNION, 1932, r. 1946</td>
<td>G-1249 Pg. 15</td>
<td>&quot;</td>
<td>39° 00'</td>
<td>44.400''</td>
<td></td>
<td>1369.2 (481.0)</td>
<td>932.4 (511.2)</td>
<td></td>
</tr>
<tr>
<td>SUB. STA. UNION PT.'A'</td>
<td>&quot;</td>
<td>39° 00'</td>
<td>75° 30'</td>
<td>38.754''</td>
<td></td>
<td>1264.3 (585.9)</td>
<td>755.9 (687.7)</td>
<td></td>
</tr>
<tr>
<td>SUB. STA. UNION PT.'B'</td>
<td>&quot;</td>
<td>39° 00'</td>
<td>75° 30'</td>
<td>38.754''</td>
<td></td>
<td>1270.6 (594.6)</td>
<td>841.5 (602.1)</td>
<td></td>
</tr>
<tr>
<td>T.T. No.4j,1926 (U.S.G.S.) r. 1946</td>
<td>Bowers Quad</td>
<td>N.A.</td>
<td>39° 01'</td>
<td>32.31''</td>
<td>996.3 (853.9)</td>
<td>- 11.5</td>
<td>984.8 (865.4)</td>
<td>903.0 (540.3)</td>
</tr>
<tr>
<td>PRM. TRAV. STA. No.4 1917 (U.S.G.S.)</td>
<td>Cedar Creek Quad</td>
<td>N.A.</td>
<td>38° 59'</td>
<td>57.5''</td>
<td>1773.1 (77.1)</td>
<td>- 11.5</td>
<td>1761.6 (88.6)</td>
<td>572.2 (871.6)</td>
</tr>
</tbody>
</table>

1 FT. = 304.8000 Meters

COMPUTED BY: L.A. Senasack

DATE: 12/31/46

CHECKED BY: R.E. Rudolph

DATE: 1/2/47
SYMBOLS

Project Ph-7 (46)
39 April 1943

MEAN HIGH WATER LINE (fast line) ...........................................
OFF SHORE EDGE OF MARSH (apparent shoreline) ...........................
GRASS IN WATER ........................................................................
IN SHORE LIMITS OF MARSH .....................................................
MEAN LOW WATER LINE (infinite) ...............................................
APPROXIMATE MEAN LOW WATER LINE ....................................
INTERMITTENT DRAINAGE ........................................................
PERENNIAL DRAINAGE ...........................................................
CONTOURS ..............................................................................
PLANE TABLE ELEVATIONS FOR CONTOURS .................................
FLY LEVEL ELEVATIONS ...........................................................
ANCHOR MARKS, marked and described ......................................
TOPO STATIONS, natural object, described .................................
TOPO STATIONS, marked and described ......................................
TOPO STATIONS, addition Hydro Control, not named ..................
LANDMARKS ...........................................................................
FIXED AIDS TO NAVIGATION, (official light list name) ............
TRIANGULATION STATIONS ....................................................
SUBSTITUTE STATIONS ............................................................
BOUNDARIES: Refer to U.S.G.S. Bulletin 788 E for symbol, ink in purple or violet ink.
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
   Dr - dock
   Jet - jetty
   Bkh - bulkhead

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

CONSTRUCTIONS TO NAV
   Sh1 - 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't)
   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
   Rn - beacon
   Lw - light
   Rg - range
   F  - front range
   R Rg - rear range
   Chm - chimney
   Cup - cupola
   S, Pipe - stand pipe
   Gab - gable

BOUNDARIES
   Bdy - 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
   (a) - described
   (am) - described and marked
FIELD INSPECTION REPORT
T 8762 (39° 00' / 75° 30' / 7.5')
PROJECT PH 7 (46)
Sub-Project A
E. L. Jones, Chief of Party

1. Description of the Area:

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

80% of the terrain is fertile, undulating land. In general, the remaining 20% of the area is salt water or tidal marsh.

Drainage is through numerous streams feeding the St. Jones and Murderkill Rivers. A mosquito drainage ditch project along the marshes augments the above.

There are no prominent topographic features: the highest elevations are forty feet and range to sea level in gentle slopes.

Economically, agriculture is predominant and the towns of Frederica and Magnolia are farm villages. Bowers has seasonal fishing interests, some oystering and summer resort trade.

Practically all roads are excellent and the Dupont Highway passes through the area. There are no railways, but they are readily accessible at Dover which is about 5 miles to the Northwest.

2. Completeness of Field Inspection:

Field inspection was accomplished by two parties. The shoreline party accomplished shoreline inspection and the contour party did the interior inspection. It is believed to be adequate.

There are no telephone or power transmission lines of cross country or prominent nature within the quadrangle limits.

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

Deletions are shown in green ink.

3. Interpretation of the Photographs:

Numerous smooth, oftentimes round, dark areas usually denote the heads of drains or depressions.

Marshes bordering streams were often indistinguishable from the adjoining foliage.
Occasionally areas adjoining marshes appear fast land on photos but are intermittently flooded and not tillable. This was noted on inspection.

4. Horizontal Control:

Horizontal control was recovered and identified according to paragraphs 13-33, incl., of the project instructions, 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:

<table>
<thead>
<tr>
<th>STATION</th>
<th>AGENCY</th>
<th>RECOVERED</th>
<th>IDENTIF. ON PHOTO</th>
<th>METHOD OF IDENTIF.</th>
<th>QUAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>U.S.C. &amp; G.S.</td>
<td>yes</td>
<td>15562</td>
<td>Sub. Sta.</td>
<td>West of</td>
</tr>
<tr>
<td>MURDERKILL</td>
<td></td>
<td>yes</td>
<td>15563</td>
<td>Picked</td>
<td>8762</td>
</tr>
<tr>
<td>R. RG. LT.</td>
<td>U.S.C. &amp; G.S.</td>
<td>yes</td>
<td>15563</td>
<td>Direct</td>
<td>8762</td>
</tr>
<tr>
<td>PRIM. TRAV.</td>
<td></td>
<td>yes</td>
<td>15600</td>
<td>Picked</td>
<td>8762</td>
</tr>
<tr>
<td>STA. #4</td>
<td>U.S.G.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Vertical Control:

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

Frederick F. Kaiser, Air-Photo Observer, started B.M. recovery and the establishing of 4th order control April 30, 1946, and completed same on May 17, 1946.

The 4th order control was established by Wye levels. Spot elevations were used for control by the contour party, and were located at strategic, identifiable points. They are shown on the photographs by a dot in blue ink. The points are numbered consecutively from 1 to 96, incl., and each number is preceded by the prefix letters BW.

About 44 miles of 4th order levels were run by fly leveling methods; the maximum error of closure was 1.0 feet. All lines with an error of closure greater than 0.30 feet were adjusted, prorating the error among the spot elevations established.
The following is the recovery data for the Bench Marks in this quadrangle:

<table>
<thead>
<tr>
<th>BENCH MARK DESIGNATION</th>
<th>IDENTIF. ON PHOTO</th>
<th>QUAD</th>
<th>RECOVERED</th>
<th>USED IN 4th ORDER CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.T.Sta. #3J</td>
<td>none</td>
<td>8762</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>T.T.Sta. #2J</td>
<td>none</td>
<td>8762</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>T.T.Sta. #4J</td>
<td>15591</td>
<td>8762</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>G-2 1931</td>
<td>15563</td>
<td>8762</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>H-2 1931</td>
<td>15563</td>
<td>8762</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>P-2 1931</td>
<td>15564</td>
<td>8762</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

6. Contours and Drainage:

Contouring was started May 20, 1946, and was completed July 23, 1946, by Frederick F. Kaiser, Air-Photo Observer. The contour interval is 10 feet. Work, done directly on 9-lens photos, nos. 15563, 15564, and 15565 was held as near the center of the photographs as practical in order to minimize distortion. Planetable 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 planetable contouring progressed.

Elevations were shown along the south and west limits of the quadrangle, also the project limits, at a maximum interval of 500 ft. as per instructions.

Critical elevations 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.

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 MHWL was verified by actual measurements from points of detail.

In some areas the MHWL is indefinite, or too far removed from the grass line to be of value to the charts. Where this condition exists the apparent shoreline follows along the outside edge of vegetation. This vegetation is usually supported by a low mud bank,
which is, in most cases, about 4 feet high. Generally the LWL follows this same line, but in some cases the tide and wave action has caused this mud bank to break off and flatten out, and in some cases the LWL is outside the grass line.

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, the low water line and areas awash were indicated on the photographs.

9. Wharves and Shoreline Structures:

The wharves and shoreline structures in the quadrangle were delineated and noted on the photographs in red ink.

10. Detail Offshore from Mean High Water Line:

No obstructions were noted offshore. The shoreline inspection was done on foot or from a small boat close inshore. It was impractical to range more than one-half mile outside.

11. Landmarks and Aids to Navigation:

There were no charred landmarks along the shore of this quadrangle. A newly constructed steel tower at South Bowers should be added and is described on Form 567 attached hereto.

Three non-floating aids to navigation were identified on the photographs and are listed on the accompanying Form 567. One other aid was missing, having been destroyed in a June, 1943 storm, according to local information.* All aids present were checked against the 1945 Light List and found to be in agreement.

To determine the Azimuth of the Murderkill River Ranges, a point was established on the range. This is approximately 1.1 miles southwesterly of the rear range and determined with the same accuracy as a horizontal control station. This information is found on Photo 18591.

12. Hydrographic Control:

Hydrographic control was established and identified by the shoreline party. In addition to existing horizontal control, 6 recoverable topographic stations and 5 additional hydrographic control stations were identified.

The following recoverable topographic stations were identified. Form 524 is submitted for each at these stations, but form M-2228-12 is not submitted in all cases.

* See attached copy of letter to Director.
<table>
<thead>
<tr>
<th>STATION</th>
<th>IDENTIFIED ON PHOTO</th>
<th>METHOD OF IDENTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BABE</td>
<td>15591</td>
<td>Picked Direct</td>
</tr>
<tr>
<td>ADEL</td>
<td>15591</td>
<td></td>
</tr>
<tr>
<td>TAPE</td>
<td>15591</td>
<td></td>
</tr>
<tr>
<td>KENT</td>
<td>15591</td>
<td></td>
</tr>
<tr>
<td>MURD</td>
<td>15600</td>
<td></td>
</tr>
<tr>
<td>EBBA</td>
<td>15591</td>
<td></td>
</tr>
<tr>
<td>DAYM</td>
<td>15600</td>
<td></td>
</tr>
</tbody>
</table>

13. **Landing Fields and Aeronautical Aids:**

Dover Army Air Base is partially located in this quadrangle; the major portion containing installations is located in Quadrangle T 8761 as the east-west boundary line is in the lower third of the field.

The contouring and field inspection of the entire base was done by Elmer L. Williams, Engineering Aid, and further information is contained in paragraph 13 of the Descriptive Report of Quadrangle T 8761.

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 are two bridges, both over the St. Jones River, in this quadrangle.

At Barkers Landing is a bascule bridge having a horizontal distance between fenders of 50 ft. and a 5 foot vertical cleared clearance when closed. This bridge is tended from 6 a.m. to 7 p.m., but few craft require a lift. This information checks with the 1941 Revised Edition of the List of Bridges over Navigable Waters of the United States.

At Lebanon is an iron swing bridge which has been stuck shut since Oct., 1946, according to local sources.

The following differences were noted:

<table>
<thead>
<tr>
<th>HOR. CLEARANCE</th>
<th>VERTICAL CLEARANCE</th>
<th>DESCRIP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIELD INSPECTION</td>
<td>36 feet</td>
<td>3 feet</td>
</tr>
<tr>
<td>1941 List of Bridges</td>
<td>30 feet</td>
<td>6 feet</td>
</tr>
</tbody>
</table>
The horizontal clearances were measured with a steel tape to the nearest 0.1 of a foot and the vertical clearance was measured from the MHWL estimated to the nearest 0.1 of a foot with a steel tape.

16. **Buildings:**

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

17. **Boundaries:**

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

18. **Geographic Names:**

Geographic names for this quadrangle were obtained by the topographer and will be covered in a special report on Geographic Names, Project PH 7 (46)A, by Lowell I. Bass, Engr. 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.

20. **Inshore Limits of Marsh:**

Junctions were made with Quadrangle 8763 on the west and Quadrangle 8761 on the north.

48. **Accuracy Tests:** *(Vertical)*

One unofficial vertical accuracy test was completed on July 24, 1946, by Harland R. Cravat, Photogrammist. The test was not made to take the place of any accuracy checks to be made at the time of Field Edit but to determine the quality of the field party's work.

A planetable level profile test was completed in the N.W. corner of 8-lens photograph #15564, starting at spot elevation BW 88 and ending at spot elevation BW 89. The horizontal error of closure was 25 feet ground scale and the vertical error of closure was 0.4 feet. All results of the test have been shown directly on the contour photograph in black ink.
- RESULTS -

21 points tested
19 points in error less than 5 feet
2 points in error from 5 to 10 feet
0 points in error over a full contour interval

90.5% of points tested were found to be in error less than \( \frac{1}{2} \) contour interval

Submitted By,

Frédéric F. Kaiser,
Air Photo Observer

Approved and Forwarded:
August 2, 1946

Edmund L. Jones,
Chief of Party
T-8762 (Frederica Quadrangle) is one of four topographic maps in Project No. Ph-7(46)A located along the Delaware River and Bay. This survey is 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 planestable methods. Instructions filed in Division of 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-2368-12 is included in this report.

27. RADIAL PLOT:

See report for combined radial plot covering the areas of T-8761 to T-8764 inclusive, submitted to the Washington Office 12 May 1947.

28. DELINEATION:

The compilation is in accordance with written instructions pertaining to Project PH-7(46) dated 19 July 1946.

The contours were traced directly from field photographs.

29. SUPPLEMENTAL DATA:

Town map of Frederica, Del. dated 3-5-42, scale 1"=400. Town map of Magnolia, Delaware, dated 3/24/41, scale 1"=200'. Filed in Division of Photogrammetry General Files.

30. MEAN HIGH-WATER LINE:

The mean high water line was delineated in accordance with field data.

31. MEAN LOW-WATER LINE:

Only that part of the mean low water line identified by the field inspection party was shown on the map manuscript.

32. DETAILS OFFSHORE FROM THE HIGH-WATER LINE:

No comment.

33. WHARVES AND SHORELINE STRUCTURES:

No comment.
34. LANDMARKS AND AIDS TO NAVIGATION:

Refer to form No. 567, submitted with this report and to the field report for data pertaining to one landmark and three non-floating aids to navigation, to be charted.

Refer to form No. 567 attached to the field report for data pertaining to one non-floating aid to navigation to be deleted. No deletions. See photocopy of form 567 attached to this report. There are 4 non-floating aids.

35. HYDROGRAPHIC CONTROL:

Five hydrographic signal sites, identified by the field party, have been plotted on this map accompanied by their description.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

Refer to paragraph No. 13 of the field report.

37. GEOGRAPHIC NAMES:

Geographic names have been taken from final name standards dated 12/9/46 furnished by the Washington Office. A list of the geographic names is attached to this report. Approved by L. Heck, Geographic Names Sect., Div. of Charts.

38. JUNCTIONS:

A satisfactory junction has been made with Surveys Nos. T-8761 to the north and T-8763 to the east. To the south and west is the project limits.

39. DISCREPANCY OVERLAY:

A discrepancy overlay has been prepared.

40. BOUNDARIES:

The district boundaries were delineated as shown on the U.S.G.S. Bowers Quadrangle. The boundaries of Frederica and Magnolia have been taken from town maps listed under aide heading No. 29. The identification of the boundary lines of the town of Bowers and legal description thereof were not furnished the compilation office. The boundary lines of Bowers were, therefore, not shown on the map manuscript.

The field inspection party identified the boundary lines of Dover Army Air Base on the field photographs and were delineated on the map accordingly.

Discrepancies between boundary lines plotted from descriptions and those shown on the U.S.G.S. Bowers Quadrangle were noted on the discrepancy overlay.

41. BRIDGES:

All bridge information for the area covered by this report as listed
41. **BRIDGES: (Continued)**

In the U.S. Engineers "List of Bridges Over Navigable Waters in the U.S." dated July 1, 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. Engr. being prepared by the Review Section)

BRIDGE AT: | FIELD MEASUREMENTS | LISTED MEASUREMENTS |
---|---|---|
FREDERICA, DEL. over Murderkill River | Hor. Cl. 75' | 24' |
| Vert. Cl. 3' | 3.7' |
FREDERICA, DEL. over Murderkill River | Hor. Cl. Fixed concrete | 26' |
| Vert. Cl. bridge. Skiff clearance only. | 3.9' |
FREDERICA, DEL. over Spring Creek | Hor. Cl. 30' | 26' |
| Vert. Cl. 3' | 2.2' |

See paragraph No. 15 of the field report for field data on two additional bridges.

44. **COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:**

T-8762 has been compared in detail with the U. S. Geological Survey Bowers Quadrangle, scale 1:62,500 and found to be in good agreement except the contours, which are, in general, somewhat in disagreement.

45. **COMPARISON WITH NAUTICAL CHARTS:**

T-8762 has been compared to Nautical Chart No. 1218, scale 1:80,000 and found to be in fair agreement. The following topographic information shown on T-8762 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:
13 June 1947

Donald M. Grant
Photogrammetric Aid
Compilation and Descriptive Report

Joseph W. Voseck
Photogrammetric Engineer
Photogrammetric Office Review

Harry R. Rudolph
Supervisor

Approved and Forwarded
2 July 1947

J. M. Osborne
Officer in Charge
Baltimore Photogrammetric Office
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks, be charted on the charts indicated.

The positions given have been checked after listing by H. R. Rudolph

Thos. Reed
Chief of Party

<table>
<thead>
<tr>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>LAT. M.</th>
<th>LONG. M.</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Jones River Range Front</td>
<td>Same as charting</td>
<td>39 03</td>
<td>1797</td>
<td>75 24</td>
<td>144</td>
<td>1927</td>
<td>N.A.</td>
<td>Fad. Ploc</td>
<td>1947</td>
<td>x 1218</td>
</tr>
<tr>
<td>St. Jones River Range Rear</td>
<td>&quot;</td>
<td>39 03</td>
<td>1779</td>
<td>75 24</td>
<td>351</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1947</td>
<td>x 1218</td>
</tr>
<tr>
<td>Murderkill River Range Front</td>
<td>&quot;</td>
<td>39 03</td>
<td>817</td>
<td>75 23</td>
<td>1385</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1946</td>
<td>x 1218</td>
</tr>
<tr>
<td>Murderkill River Range Rear</td>
<td>&quot;</td>
<td>39 03</td>
<td>554.8</td>
<td>75 24</td>
<td>575.9</td>
<td>&quot;</td>
<td>&quot;</td>
<td>Tri.</td>
<td>1933</td>
<td>x 1218</td>
</tr>
</tbody>
</table>

Supersedes Form No. 567 forwarded to Washington 2 July 1947

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
The field edit of this quadrangle was accomplished during the period 1 September to 18 September 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.

11. **Landmarks and Aids to Navigation**: Two Range lights have been established in the Quadrangle since the field inspection. They are St. Jones Front and Rear Ranges, and were rebuilt in October 1946. St. Jones Front Range 1946 was identified on the manuscript but was rebuilt after the identification. These two Ranges have been identified by the field editor, and also a Pt. on Range has been identified.

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 method.

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 compiled roads and trails were deleted during the field edit. These were, however, valuable to the field editor in many instances. Several small outbuildings had been compiled but these have been deleted. Also some structures were added.

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**: Two accuracy tests were made in this quadrangle.

The field edit party has made no attempt 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. W.M. Stevenson
Frederica, Delaware

Respectfully submitted

[Signature]

Donald G. Flippo
Photogrammetric Aid
18 September, 1947
Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.

40. **Boundaries.**--

A notation on the field edit discrepancy sheet states that the identification and legal description of the Bowers' boundary line has been provided. These data were not available at the time of review. The boundary line of Bowers has not been shown on the map manuscript.

43. **Comparison with Previous Surveys.**--

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>T-150</td>
<td>1:20,000</td>
<td>1864</td>
</tr>
<tr>
<td>T-1548a</td>
<td>1:20,000</td>
<td>1883</td>
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<td>T-3087</td>
<td>1:20,000</td>
<td>1910</td>
</tr>
<tr>
<td>T-4667</td>
<td>1:10,000</td>
<td>1931-32</td>
</tr>
</tbody>
</table>

Numerous changes in shoreline and cultural features have occurred since the above surveys were made. 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, 1:62,500, 1926, 1933-34

45. **Comparison with Nautical Charts.**--

Chart No. 1218, 1:80,000, 1248-47

This map manuscript has not been applied to nautical chart 1218.

48. **Vertical Accuracy Test.**--

Two vertical accuracy tests run for this quadrangle meet the project specifications. This map complies with the national standard map accuracy requirements.

Reviewed by:

K. N. Mak
3-25-48
APPROVED BY:

S. V. Griffith  
Chief, Review Section  
Div. of Photogrammetry

K. T. Adams  
Chief, Div. of Photogrammetry

R. Ritterling  
Chief, Nautical Chart Br.  
Division of Charts

E. F. Green  
Chief, Div. of Coastal Surveys
<table>
<thead>
<tr>
<th>Geographic Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Ash Gut</td>
</tr>
<tr>
<td>- Barrers Landing</td>
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<tr>
<td>- Barratts Chapel</td>
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<tr>
<td>- Bay Road</td>
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<tr>
<td>- Brockonbridge Gut</td>
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<tr>
<td>- Bowers</td>
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<tr>
<td>- Cypress Branch</td>
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<td>- Cypress Pond</td>
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<tr>
<td>- Double Run</td>
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<tr>
<td>- Frederica</td>
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<tr>
<td>- John Wesley Church</td>
</tr>
<tr>
<td>- Kitts Hummock</td>
</tr>
<tr>
<td>- Kiunk Ditch</td>
</tr>
<tr>
<td>- Lebanon</td>
</tr>
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<td>- Magnolia</td>
</tr>
<tr>
<td>- Milford Neck</td>
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<tr>
<td>- Murderkill River</td>
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<tr>
<td>- Lewis Ditch</td>
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<tr>
<td>- Dover Army Air Base</td>
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<tr>
<td>- Murderkill Neck</td>
</tr>
<tr>
<td>- Olive School</td>
</tr>
<tr>
<td>- Sand Ditch</td>
</tr>
<tr>
<td>- South Bowers</td>
</tr>
<tr>
<td>- Spring Creek</td>
</tr>
<tr>
<td>- St. Jones River</td>
</tr>
<tr>
<td>- St. Jones Neck</td>
</tr>
<tr>
<td>- Union Church</td>
</tr>
<tr>
<td>- Webb Landing (Abandoned)</td>
</tr>
<tr>
<td>- Delaware Bay</td>
</tr>
<tr>
<td>- Dupont Highway, U.S. 113</td>
</tr>
<tr>
<td>- U.S. No. 118A</td>
</tr>
<tr>
<td>- State No. 9, 12</td>
</tr>
</tbody>
</table>

Names Preceded by * are approved 3/16/48 - L. Heck

Listed by Donald M. Blunt  
Photogrammetric Aid

Checked by Joseph W. W.  
Photogrammetric Engineer
7. June, 1946

To: Director
U. S. Coast & Geodetic Survey
Washington 25, D. C.

Subject: Report of Aid to Navigation Destroyed.

Benjamin W. Hoxie, Photogrammetrist in charge of the Sub Office on Project Ph-7 (46) at Dover, Delaware reports that the St. Jones River Range Rear listed on page 254, No. 1630, of the Light List, Atlantic and Gulf Coast's (1945) and on chart No. 121B (lat. 39° 04', long. 75° 24') has been destroyed.

According to local sources this rear range was washed out during a storm in June 1943.

Edmund L. Jones,
Chief of Party.
To: Lieut. Comdr. Edmund L. Jones, U.S. Coast and Geodetic Survey, Post Office Box 110, New Castle, Delaware

Subject: Report of Aid to Navigation Destroyed

Receipt is acknowledged, with thanks, of your letter of 7 June, calling our attention to the destruction of St. Jones River Range Rear Light shown on Chart No. 1218.

Information received from the Coast Guard is that this light will be replaced at an early date. It will, therefore, be marked on the charts as being temporarily extinguished.

Acting Director.
NOTES
FOR
HYDROGRAPHIC PARTIES
DELAWARE RIVER

MAP MANUSCRIPT, SURVEY NO. T-8762
PROJECT PH-7(46)A

The 2½ millimeter circles, accompanied with a name and date, are the positions of the recoverable photo (topographic) stations. The dot accompanied with a number and description are the positions of the hydrographic signals.

The outline of the shoal areas are approximate and are for your advance information.

T-8762 has been compared to Nautical Chart No. 1218, scale 1:80,000, and found to be in fair agreement.

The following topographic information shown on T-8758 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
13 June 1947

[Signature]
Photogrammetric Aid

Approved and Forwarded:
2 July 1947

[Signature]
Officer in Charge
Baltimore Photogrammetric Office