State: New Jersey

DESCRIPTIVE REPORT

Locality
West Coast of New Jersey
Avon to Spring Lake
Shark River and Vicinity

Photographs Taken 1932 - 1933

Chief of Party
R. C. Bolstad, Jr. H. F. C. Engr.
applied to drawing 17 chart 1216 - Dec 30, 1936 - JTF
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 69

REGISTER NO. T5283

State. New Jersey.

General locality. East Coast of New Jersey.

Locality. Aven to Spring Lake, Shark River and Vicinity

Scale. 1:10,000. Date of survey. July 24, 1932. May 20, 1932

Date of compilation. June 3, 1935

Surveyed by sea data sheet enclosed in the descriptive report for this sheet.

Inked by W. E. Brown.

Heights in feet above ground to tops of trees

Contour, Approximate contour, Form line interval...

Instructions dated. November 15, 1932

Remarks: Compiled on a scale of 1:10,000 and printed by

Photo Lithography.

* Blue print on scale 1:10,000
- STATISTICS -

SHEET, FIELD NO. 69, REG. NO. 75283

PHOTOS, NOS. 66-11-31 to 66-11-33 incl. DATE Apr. 19, 1932
PHOTOS, NOS. 66-32-65 DATE May 20, 1932
PHOTOS, NOS. 66-33-27 to 66-33-30 incl. DATE May 20, 1932
PHOTOS, NOS. 66-51-28 to 66-51-30 incl. DATE July 24, 1932
PHOTOS, NOS. 876-14 (M2698 to M2704) incl. DATE Jan. 23, 1933

Scale factor of this sheet is 1.00

PROJECTION J. G. Albert 8-3-34
PROJECTION CHECKED W. D. Ayers 8-3-34
CONTROL PLOTTED H. M. Barach 9-9-34
CONTROL CHECKED J. G. Albert 9-10-34
TOPOGRAPHY TRANSFERRED J. G. Albert 9-11-34
TOPOGRAPHY CHECKED J. P. O’Donnell 9-11-34
SMOOTH RADIAL LINE PLOT W. E. Hackett 12-10-34 to 1-9-35
R. H. Beckworth 11-30-34 to 12-9-34
RADIAL LINE PLOT CHECKED A. C. Rust 1-10-35
DETAIL INKED W. E. Brown 4-5-35 to 6-3-35
PRELIMINARY REVIEW OF SHEET W. E. Hackett 6-18-35 to 6-20-35

AREA OF DETAIL INKED 19.8 sq. Statute Miles (Land Area)
AREA OF DETAIL INKED 0.5 sq. Statute Miles (Shoals in Water Area)
LENGTH OF SHORELINE (more than 200 m. from nearest opposite shore) 4.6 Statute Miles
LENGTH OF SHORELINE (rivers and sloughs less than 200 m. wide) 29.0 Statute Miles
LENGTH OF STREETS, ROADS, TRAILS, RAILROADS, etc. 219.0 Statute Miles

GENERAL LOCATION East Coast of New Jersey
LOCATION Avon to Spring Lake
DATUM North American 1927

STATION Wall, 1934
Latitude 40° 10' 24.406" (752.6 m.)
Longitude 74° 02' 16.292" (385.5 m.)
COMPILER'S REPORT

for

AIR PHOTO TOPOGRAPHIC SHEET FIELD NO. 69

GENERAL INFORMATION

The Air Photo Field Inspection Report, dated Nov. 19, 1954 for New Jersey attached to the descriptive report for the Air Photo Topographic Sheet No. T5579 furnished the necessary field data for the compilation of this sheet. Additional information was obtained by R.L. Fisher, Draftsman Party No. 12, who is familiar with the area.

The accompanying STATISTICS sheet details all necessary data used in connection with the compilation of this sheet.

The sheet was compiled from four flights of photographs which were taken by the Aero Service Corporation of Philadelphia, Pa., using a single lens camera equipped with an orthomesser lens with a focal length of 8 inches. The photographs were taken at a scale of approximately 1:22,000 and were enlarged to a scale of 1:10,000.

The time of day at which the photographs were taken was not available and therefore the tidal condition could not be determined. The U.S. Army Air Corps furnished a supplementary set of photos taken with a single lens camera at a scale somewhat smaller than 1:10,000. The scale difference between the compilation and these photographs rendered them unfit to use in the compilation; however, they were used for checking the change in detail between the time of the Aero Service pictures and those of the Army Air Corps.

CONTROL

(A) Sources

The following sources of control were used in the compilation of this sheet:

(a) Triangulation by P.C. Doren, in 1933, North American 1927 datum, field positions adjusted.
(c) Aluminum Control Sheet by P.C. Doren, 1933, Reg. No. 74747.

The topographic sheet by P.C. Doren Reg. No. 74747 was used for comparison purposes only. No stations were used from this sheet for the control of this compilation.

(B) Errors

There are no apparent errors in the control petitions for this compilation. The control along the shore is, in general, strong and the radial plot gave good intersections.

(C) Discrepancies

No other control stations established by other organizations were used in the compilation of this sheet. However, the track traverse data of the Pennsylvania Railroad
Additional Note: (C) Interpretation

Sea Girt Inlet

The south shore of the inlet to Wreck Pond, at Lat. 40° 08.3', Long. 74° 01.6', is detailed with a dashed line to indicate that this point does not remain as the photographs show; for the high water line is continually changing.
was used as supplementary control.

**COMPILATION**

(A) **Method**

The usual radial line method of plotting was used in the compilation of this sheet.

(B) **Adjustment of Plot**

The photographs of this area are free from excessive tilt and undue scale fluctuation. There are some areas in the westerly and southwesterly parts of the sheet where the photographs are not clear in definition.

(C) **Interpretation**

The usual graphic symbols were used as approved by the Board of Surveys and Maps, 1932, in the compilation of this sheet.

First order roads are indicated by the double full line private driveways and roads of lesser importance by a double broken line. Exceedingly poor roads and trails are shown by a single broken line. In most cases, unless noted on the field prints, the classification had to be determined by the appearance under the stereoscope.

Field Memorandum No. 2 (1935), Location and Drafting of Buildings on Air Photo Compilations, dated April 1, 1935, was followed.

The railroad traverse used as control and plotted hereon consists of a double track line about parallel to the Ocean Beach and about 1 mile inland and a branch line near the southwesterly limit of the sheet (700 meters within the area of detail) both controlled by the Pennsylvania Railroad Co.

Hydraulic fill at Lat. 40° 10' 50", Long. 74° 01' 50", was in progress during the time of the field inspection. The area behind the bulkhead along Shark River is being filled in, and has been labeled on the cover sheet.

(D) **Bridges**

There are four bridges over navigable waterways, all of which cross Shark River Inlet. The data shown on the cover sheet for these bridges was taken from the U.S. Coast Pilot, Section C, 1933. (It is assumed that Lieut. has submitted any revisions necessary to the Coast Pilot.) Other bridges of little or no importance to navigation have been indicated by only the usual graphic symbols.

(E) **Information from Other Sources**

Pennsylvania Railroad Track Traverse data provided the only other information than sources other than those previously mentioned. This data was used as supplemental information in detailing the main line and sidings.

Bridge data shown on the overlay sheet was obtained from the Coast Pilot.
Additional Note: Landmarks

The following two signals, shown at present on Chart 1215 as Landmarks, are no longer in existence and should be expunged from the chart.

(a) Radio, at Lat. 40°10' 43", Long. 74 04' 24"
(b) Hotel Cupola, at Lat. 40°10' 23", Long. 74 00' 52"

Additional Note

Chart 1215 shows a light on the southern jetty of Shark River Inlet. Verification of this light was missed by the field inspection party. However, it was understood that Lieut. McCarthy was to obtain all information in regard to the landmarks in this area. As no information in regard to landmarks has been received by this party for this area, the light has been omitted from this compilation.

This light was located on Graphic Control Survey T6215 b Aug 1934 and has been transferred to the compilation in this office. 1960.
(F) Conflicting Names

There are no names shown on this compilation which conflict with any of the names as shown on the present edition of the U.S.C. & G.S. Chart.

LANDMARKS

It is assumed that a list of landmarks has been previously submitted by Lieut. E.R. McCarthy for this area, although no list has been received by this party.

There are many other objects (such as houses, ends of docks, etc.) which are located within the accuracy specified under the following heading, RECOMMENDATIONS FOR FURTHER SURVEYS and may be used to obtain hydrographic "fixes". Care should be taken in using the houses to use the center as the size shown on the compilation sheet may be expanded somewhat.

COMPARISON WITH OTHER SURVEYS

The junctions with all adjoining sheets are satisfactory.

Lat. 40° 11.8', Long. 74° 00.00' stone jetty appearing on Topographic Sheet T4747 is not of the same shape as the actual construction at the present time. This jetty has been correctly shown on this compilation. There are several new jetties in this area which have also been shown on this compilation.

Lat. 40° 11.2', Long. 74° 00.6' the shoreline beginning at this point and continuing southward on the Topographic Sheet No. T4747 does not agree with the existing conditions and has been changed accordingly.

Near triangulation station Shark River the outlet from the lake to the ocean has not been shown on the compilation as it is a covered culvert but has been labeled on the cover sheet.

Lat. 40° 11.2', Long. 74° 01.5' there are several new docks in this area which have not been shown on the topographic sheet T4747 but have been detailed on the compilation.

The remainder of Topographic Sheet Reg. No. T4747 checks well with the Air Photo Compilation.

RECOMMENDATIONS FOR FURTHER SURVEYS

The compilation of this sheet is believed to have a probable error of not over two meters in well defined detail of importance for charting and of four meters for other data. It is understood that the width of roads and similar objects may be slightly expanded in order to keep the detail clear and keep it from photograping as a solid area in the photo Lithographic process.

To the best of my knowledge is complete in all detail of importance for charting purposes, within the accuracy stated above, and no additional surveys are required.

Submitted by
W.E. Brown
W.E. Brown
Draftsman

Assisted by
W.E. Hackett
Surveyor
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<td>Shark River Inlet</td>
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Comparison with Graphic Control Surveys

**T 6215b (1934), 1:10,000**

Numerous recoverable topographic stations (locations of objects of recoverable nature, mostly flagpoles, house cupolas, etc., located for hydrographic fixes) are shown on T 6215b. Of these, only those described on Form 524 were transferred to the compilation. These stations, together with the triangulation, give a spacing of one control station for approximately every quarter mile on the compilation. Stations plotted by R. M. Berry and checked by L. A. McGann (L.A.M.).

The shoreline at the entrance to Shark River, shown in pencil on T 6215b and stated in the report for the same to have been furnished by the air photo party, does not agree with the shoreline shown on the compilation. This may be due to faulty transferring or to a subsequent change in the air photo compilation. The compilation is accepted as correct.

The wreck of the "Morro Castle" shown on T 6215b has been removed. (Page 3 of 3, verifier's report, H. 5638.)

Refer to descriptive report, T 6215b for discussion of U.S.E. control in this area; also for discussion of fish traps in this area; and for discussion of relative importance of cities.

Comparison with Recent Topographic Surveys

**T 4747 (1933), 1:10,000**

T 4747 was made subsequent to the taking of the photographs for T 5283 but prior to their compilation. T 4747 was available to the air photo party and was used for comparisons and is in very good agreement except as noted on page 5 of the descriptive report for the compilation. The following recoverable topographic stations, located by planetable methods on T 4747 and described on a supplemental page in the report, T 4747, may be of value as landmarks and were transferred to the compilation:

- Mac - Southerly of 4 radio towers,
- Rad - Second tower from south,
- Ned - Green roofed summer pavilion.

The remaining recoverable topographic stations on T 4747 are of minor importance, flagpoles, house cupolas, etc., and have not been transferred because of density of recoverable stations already on the compilation. Stations transferred by R.M.B. and checked by L.A.M. (L.A.M.)

Comparison with Contemporary Hydrographic Surveys

**H 5300 (1933), 1:10,000**

There are some small differences in high water line between H 5300 and the compilation. Page 5 of the preceding report discusses these
differences with T 4747 which is the source of the shoreline of H 5300. The compilation is accepted as correct. There is no conflict with soundings.

H 5638 (1934), 1:10,000

There are some small differences in position of a few of the docks shown on H 5638. The source of these positions on H 5638 is the planetable survey T 4747 whose differences with the compilation are discussed on page 5 of the preceding report. The compilation is accepted as correct.

Shoreline detail along the coast is not complete on H 5638. H 5638 was apparently surveyed before this compilation was completed. This has been referred to Captain Ellis.

Except as mentioned above there is no conflict between the compilation and H 5638.

Comparison with chart 1215 (Ed. 10/29/35).

The propeller-shaped boat basin on the south side of the neck of Shark River in Belmar is incorrectly shown on chart 1215. The park-like area surrounding the basin has been shown with water tint and the basin proper tinted buff-colored to denote an island.

The north jetty at the entrance to Shark River is approximately the same length as the south jetty.

Numerous docks along the outside coast and in the Shark River, shown on the compilation, are not shown on chart 1215.

Landmarks and Aids to Navigation

Two radio towers shown just west of Shark River on chart 1215 (40° 11.2', 74° 03.6'; 40° 10.7', 74° 04.5') are positions determined for the end towers of a row of six, the same being station No. 6 of the Marconi Wireless Telegraph Corp. (J.E. McGrath, 1917, triang.). Careful examination of the photographs in connection with a blue print layout of the station discloses the remains of some of the footings and guy-bases. The stereoscope reveals no elevated structure of any kind and analysis of the visible footings, etc. shows that two of the masts would now be in the paved area of a road. These structures are, without doubt, non-existent at this date and should no longer be shown as landmarks. Triangulation station "Radio 3, 1933", described as the "third from the southerly end of a row of 4 radio towers" plots approximately 250 meters from the position of the old easterly tower and may have been mistaken for it and for that reason the old tower was not reported as non-existent.

Topographic positions from T 4747 give the location of the southerly two of the previously-mentioned four radio towers. Triangulation (Doran, 1933) gives position for the third. The fourth tower has been overlooked by both topographic and triangulation parties. It is not
No definite information is given in the descriptive report on the field photographs as to whether a detailed ground inspection was made of H.W. line along the outer coast. The high water appears to have been drawn largely from an office interpretation of the photographs of Jan 23, 1933. It is accepted as if that date is sound, though possibly.
High Water Line on the Outer Coast

High water line on this compilation is of the date of the field inspection, July-October 1934. Field inspection report for the project is filed under T 5279.

See page 3, first section of report, T 5279 regarding ground inspection on this project for changes during the interval between the date of the photographs, April-July 1932 and the field inspection, July-October 1934.

Changes in high water line were marked on the photographs by reference distances and sketching.

This method lends itself more readily to delineation of large changes than to small detail. In this area there is in general an abundance of permanent objects to which reference measurements can be made.

On this compilation no large changes have occurred and high line is only slightly different from that shown on the 1932 photographs. 

Big Jones
visible in the photographs and therefore is not shown on the compilation. The group of four radio towers now standing is a different group from the six towers mentioned above.

No position is available for the Shark River North Breakwater Beacon which is stated in the 1936 Light List "New York and Approaches" to have been built in 1935 (Light No. 1091.5), and this beacon is therefore not shown on the compilation.

With the above exceptions, all landmarks and lights and beacons shown on the present chart, or listed in the 1936 Light List, are shown on the compilation.

Bridges

Vertical clearance of bridges over Shark River are given in various sources as follows:

<table>
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<tr>
<th>USE 1927 list</th>
<th>Coast Pilot T 6215b</th>
<th>T 4747</th>
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<tr>
<td>(1)Bascule bridge at entrance</td>
<td>10.3 above H.W.</td>
<td>13.5 H.T.</td>
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<td>(2)Second bridge above entrance</td>
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<td>Bascule</td>
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Note: The two bridges at this site listed on page 400 of U.S.E. List, 1927 have been removed and replaced by one Bascule Bridge as stated on page 1, par. 7, report T 4747 and as shown on this compilation.

| (3)R.R. Bridge, Fixed span | 9.7 above H.W. | 8.5 ft. H.W. datum plane | 6.0. No datum plane |
| (4)4th Bridge, H.W. Bridge | Bascule | 15.5. No datum plane | Bascule-draw not operated. |

Clearances not shown on printed compilation.

General

A better statement of the accuracy of this compilation would be 0.2 mm. to 0.5 mm. For intersected points 0.2 to 0.8 mm. for traced detail.

Described station cards (Form 524) for this sheet are filed under T 6215b.

March 23, 1936
R. M. Berry

R. M. Berry
Review of Photo Topographic Survey No.

Title (Par. 56)

Chief of Party Roswell C. Bolstad Compiled by (See page 2 Statistics)

Project New York Air Photo Compilation Instructions dated November 15, 1932
Party No. 12

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.)

2. The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".

3. The control and adjustment of the radial plot were adequate. (Par. 12, 29.)

4. There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.)

5. High water line on marshy coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.)

6. The representation of low water lines, sand bars, shoal areas, and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.)

7. Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front. No changes in such details have been noted on this sheet.

8. The span, draw and clearance of bridges are shown. (Par. 16c.)

9. The data furnished by the Field Inspection is adequate.

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.
10. The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.)

11. The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs".

12. The descriptions of recoverable stations and references to shoreline were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.)

13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.)

14. The geographic datum of the sheet is North American 1927 and the reference station is correctly noted. (Par. 34.)

15. Junctions with contemporary surveys are adequate.

16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.)

17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.)

18. No additional surveying is recommended.

19. Remarks:

Preliminary Review

20. Examined and approved:

Chief of Party

21. Remarks after review in office:

Reviewed in office by: Ralph H. Berry

Examined and approved:

Chief, Section of Field Records

Chief, Division of Charts

Chief, Section of Field Work

Chief, Division of Hydrography and Topography.
MEMORANDUM
IMMEDIATE ATTENTION

No. H
No. T 5283

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

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RETURN TO 82

Please return promptly.