

4667

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

_____, Director

State: Delaware

DESCRIPTIVE REPORT

Aero-
Topographic
Hydrographic

Sheet No. 4667

LOCALITY

Delaware Bay

West Shore

1932

CHIEF OF PARTY

O. S. Reading

4667

There are assembled on Sheet No. 4667, to which this report is attached, six plots of sections of the topography along the west shore of Delaware Bay. These plots were compiled from single lens air photographs for chart revision purposes.

Scale

The scale of these plots is approximately 1:10,000.

Photographs

The single lens photographs, Nos. 3 to 460, of the shorelines of Delaware Bay and the Delaware River from Wilmington, Delaware, to the Capes were photographed by the U. S. Army Air Corps.

Time and Date of Photographs

There is submitted herewith a statement, furnished by the U. S. Army Air Corps, of time and date on which these photographs were taken.

There is listed one flight of pictures Nos. 108 to 211 as photographed from 12:00 noon to 1:10 P.M., December 5. Examination of the photographs shows that the flight in question was started with photo No. 108 and ended with photo No. 136 at Woodland Beach, Delaware. Another flight began with photo No. 137 at Woodland Beach, Delaware, and continued to photo No. 211 at Edgemoor, Delaware.

Photos 137 to 211 were taken some time between noon and 4:00 P.M., as evidenced by the shadows, but no definite time is available for this flight. The clock shown on the photographs was stopped at 5:02 P.M., which is obviously wrong as that would be after sunset. It seems probable that the date, December 5, as given in the U. S. Air Corps report, is also wrong for these photos, Nos. 137 to 211.

Negative Number	Date	Time
3 to 105	Dec. 3, 1931	11:45 A.M. to 12:40 P.M.
108 to 211	Dec. 5, 1931	12:00 noon to 1:10 P.M.
215 to 264	Dec. 7, 1931	11:10 A.M. to 11:30 A.M.
266 to 325	Dec. 8, 1931	10:30 A.M. to 11:15 A.M.
327 to 338	Dec. 8, 1931	11:17 A.M. to 11:25 A.M.
340 to 348	Dec. 12, 1931	12:52 P.M. to 12:56 P.M.
350 to 378	Dec. 12, 1931	1:10 P.M. to 1:30 P.M.
381 to 460	Dec. 15, 1931	10:45 A.M. to 11:40 P.M.

Method of Compilation

a. Scale. Each plot was made to the scale of a selected line (line between centers) on one of the photographs used in its compilation. The photographs are to scales of between 1:9,000 and 1:10,000. The plots have been reduced and printed by photolithographic process to an approximate scale of 1:10,000.

b. Compilation. The plots were compiled by the radial line method and particular care has been taken to reduce any errors in azimuth and distance below a magnitude at which they would be considerable on the scale of the chart.

c. Photographs. Many of the photographs have less than fifty per cent overlap, and were taken with their centers over the water. In order to retain accuracy in scale and azimuth, it has, therefore, been necessary to restrict the extent of the plots to small areas.

d. No Field Inspection. This work has been done without field inspection. The topographic sheets and U.S. Engineers' blue-prints have been used to assist in interpretation of the photos. Where identification of an object was in doubt, full particulars have been given in the following reports on the individual plots. These reports should be used in applying the plots to the chart.

e. Control. These compilations have been made entirely from the photographs and without control. In order to determine the scale of the plots and to provide points with which to apply them to the chart, there have been located on each plot two or more reference points, the positions of which have been previously determined. The reference points are either objects located by triangulation, objects located on the topographic sheets, or on the U. S. Engineers' blue-prints. Only a few triangulation stations can be identified on the photos, and it has been necessary in most cases to use as reference points objects shown on the topographic sheets. Where the reference points are objects located on the topographic sheets, the scale as determined from those reference points must be considered as a close approximation rather than an exact scale. For this reason, the term "approximate scale" is used in the titles.

Localities

Plots have been made only in those localities where considerable changes are evident.

Water Line

Low water line can not be determined from the photos. The water line appearing on the photos is shown either by a broken line

or by the outer limit of the sanded area in the case of sand beaches.

High Water Line

These plots were made for revision of a 1:80,000 scale chart and a larger probable error in the selection of the high water line on the photos has been tolerated than in the case of a standard 1:10,000 scale topographic sheet. Where the high water line could be selected within approximately ten meters of its true position it has been shown without question. Otherwise, it has been shown as a broken line and the fact noted in the report.

Marsh Areas

On Plots 2, 3, 4, 5, and 6 the marsh areas have not been covered by the Standard Symbol but such areas have been lettered "MARSH," and their limits shown by the Standard Symbol.

Plot No. 1

Photos 133 to 143, Smyrna River to Woodland Beach.

Reference points are Smyrna River range lights, jetties at mouth of the Smyrna River, and the long wharf at Woodland Beach. All these points are shown on U.S. Engineers' blue-print No. 20108. Changes have been so extensive that there is very little correspondence in detail with the last topographic sheet of this area, No. 1547, 1883.

The larger of the two buildings at site of Old Bombay Hook Light-house at south side of the entrance to Smyrna River may be the light-house located in 1882 by Triang. (Bombay Hook L.H. 1882). Atlantic Coast light list for 1911 describes the light as established in 1831 and located on a dwelling.

Changes

Between the outer shore-line and Duck Creek and from the entrance to Smyrna River to Woodland Beach there are extensive tide flats and numerous sloughs as shown on this plot. The plot has been carried inshore to the limit of the photos.

The road shown on chart 1218 about 350 meters south of the Smyrna River entrance does not exist. The only road in this vicinity is the narrow road shown on the plot.

At Woodland Beach only a few of the buildings are shown on this plot. Roads in this vicinity are as shown on the plot. The narrow road in a S.E. and N.W. direction on the plot continues southeastward, but there is no road in the position of the one shown on chart 1218 between Woodland Beach and Farland Beach. The two small buildings shown on ~~at~~ Farland Beach on chart 1218 do not exist.

This plot could not be extended southeastward on account of centers of the photos being over the water.

Low Water Line

From the southeast end of this plot to Woodland Beach photos were taken at about 12:10 P.M., December 5, or about one hour before low water.

No definite time data are available on photos used on this plot from the ruins of the old docks at Woodland Beach to Smyrna River. See paragraph on time and date of photographs in this report.

Vicinity of Mahone River Entrance

Photo 109 - The road just south of Mahone River is very narrow and unimproved and should be removed from the chart.

Plot No. 2

Photos Nos. 85 to 94, vicinity of entrance to Murderkill River.

Reference Points are rear range light for Murderkill River entrance and several ditches and roads which are shown on topographic sheet 1548. Front range light for Murderkill River entrance and range lights for St. Jones River entrance could not be positively identified on the photographs and are not plotted.

Changes - These are shown on the plot several drainage ditches and sections of road not now on chart 1218. The plot was made chiefly to show the jetty at south side of Murderkill River entrance. Under the stereoscope the photos show a slightly dark line along the top of the jetty which is probably the section above high water. On the plot the highest ridge of the jetty, which is probably above high water, is shown by a heavy broken line. The outer end of the jetty is lower and is covered at high water.

The high water line is shown as a broken line on sections of wide sand beach where it could not be closely identified on the photos.

Buildings shown on this plot are only a few of those existing in this vicinity.

It was noticed that on chart 1218 the channel at Murderkill River entrance is not shown on the range fixed by the range lights as plotted on that chart.

Tide Data: The photos were taken at about 12:40 P.M., Dec. 3, 1931, or with the tide approximately 2-1/2 feet above mean low water.

Marsh Areas are lettered "MARSH" and their limits shown by the standard symbol.

Plot No. 3

Photos 64, 66, 68, and 69 - Vicinity of Mispillion River entrance.

Reference points are the road intersections and a bridge, which are located on T-1548 dated 1884. The Mispillion River Light was rebuilt in 1929, but seems to be in same place as located on T-1548. South jetty light is also shown on the plot.

Changes - This plot was made to show changes in the length of the north jetty, shore-line along the south jetty, and changes in the roads.

Due to the fact that centers of the photos fall on the water, the azimuth of the plot could not be held strong enough to extend it south to include the detail shown on plot No. 4.

Tides - The photos were made at 12:30 P.M., December 3, 1931, U.S. Engineers' report, or with tide approximately 2 feet above mean low water.

*

Photos 69 to 78 show a narrow canal running north from St. Jones River entrance parallel to the shore-line. No plot was made as the centers of these photographs fall over the water.

Plot No. 4

Photos Nos. 60 to 64 - Vicinity of Cedar Beach.

Reference points - This plot overlaps No. 3 and some of the detail can be identified on T-1548.

Changes - The plot was made to show the small wharf at Cedar Beach and changes in the roads.

Tides - See report on Plot No. 3.

Plot No. 5

Photos Nos. 48 to 57 - Slaughter Creek to Fowlers Beach.

Reference points - Definite reference points are not available, but an approximate scale has been obtained by comparison with T-1548 and the plot is submitted as it shows numerous changes in this vicinity.

Changes - This plot was made to show changes which should be made largely by removing some of the detail now shown in this vicinity from chart 1218.

(1) The road paralleling the beach between Prime Hook Creek and Slaughter Creek does not exist. There is only an unkept, narrow wagon road along a short distance near Prime Hook Creek.

*Small islands shown
are covered by marsh.*

(See photos 45 to 47) which is not important enough to show on the chart.

(2) The old road shown on this plot near the mouth of Slaughter Creek is in poor repair, is apparently unused, and has settled into the marsh in places. It does not seem worth showing on the chart.

(3) Slaughter Creek and sloughs in that vicinity are as shown on this plot and are not correctly shown on the chart.

(4) The canal or ditch between Cedar and Fowlers Beach is shown partly on this plot and partly on plot No. 4. The entire length of this canal does not show on the photos.

Tide Data - See report No. 3 for time of photos and height of tide in this vicinity.

Plot No. 6

Photos 39 to 45 - Prime Hook Creek to Broadkill River.

Reference points - Detail along Broadkill River and Prime Hook Creek can be identified on T-1503 and used to apply this plot to the chart. Detail along Broadkill River is shown also on plot No. 1, sheet No. 4668 and can be more readily applied from that plot.

Changes - The plot shows changes in the shore-line north of Broadkill River, closing the north end of the channel which once formed a small island. Changes are also shown at north entrance to Leves ^{Canal} Creek, in Prime Hook Creek and in sloughs leading south from Prime Hook Creek.

The buildings at Broadkill Beach are generalized and only a few are shown on the plot.

The road leading inland from Broadkill Beach is not shown on the chart. From this road a narrow, apparently unimproved wagon road leads northward approximately parallel to the shore-line but is not shown on the plot as it does not seem important enough to show on a small scale chart.

Approved

B. G. Jones
Respectfully Submitted

J. S. Reading
J. S. Reading

Approved

K. T. Adams
K. T. Adams
FIELD RECORDS (C)

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REG. NO. 4667

TOPOGRAPHIC TITLE SHEET Acc. No.

Aerial

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. ~~4667~~-----

REGISTER NO. 4667

State Delaware-----

General locality Delaware Bay-----

Portions of
Locality West shore-----

Approximate Scale 1:10,000----- Date of Photographs taken December, 1931
survey April, 1932
compilation

Vessel Army Air Corps plane-----

Chief of Party O. S. Reading-----

Compiled
Surveyed by B. G. Jones-----

Inked by B. G. Jones-----

Heights in feet above-----to ground to tops of trees

Contour, Approximate contour, Form line interval-----feet

Instructions dated-----, 19-----

Remarks: This Sheet comprises an assembly of 6 Plots
of Sections of the West Shore of Delaware Bay compiled
from Single Lens Air Photographs for Chart Revision Purposes.