

6195

1217-2
1216-2

6195

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 15
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
MAY 18 1937

State New Jersey

LOCALITY
Atlantic Coast
~~Beach Haven Inlet~~
Beachhaven Inlet

1936

CHIEF OF PARTY
L. D. Graham

Acc. No.

U. S. GOVERNMENT PRINTING OFFICE: 1934

140

6195

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

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

Field No. 15

REGISTER NO. H 6195

State New Jersey
 General locality Atlantic Coast
Beach Haven Inlet
 Locality _____
 Scale 1:10,000 Date of survey Sept., 19 36
 Vessel Launch MIKAWA
 Chief of Party L. D. Graham
 Surveyed by John C. Bull
 Protracted by Raymond H. Carstens & G. E. Varnadoe
 Soundings penciled by Raymond H. Carstens
 Soundings in fathoms-feet
 Plane of reference M.L.W.
 Subdivision of wire dragged areas by _____
 Inked by G. H. Everett
 Verified by G. H. Everett
 Instructions dated _____, May 16., 1935
 Remarks: _____

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet 15

DATE OF INSTRUCTIONS - May 16, 1935

Project HT-205

SURVEY METHODS

Standard Coast Survey methods were used in making this survey. Lines were controlled by sextant fixes on hydrographic signals ashore, lines were run on shore ranges and soundings were taken with a leadline.

DISCREPANCIES

The crossings on this sheet are very good, most of them being 2 feet or less. Those greater than 2 feet are: A sounding of 26 feet between positions 9-10 h, on 22 feet between positions 47-48g; and a sounding of 16 to 18 feet between 67-68h, on 13 feet between 78-79a. The last discrepancy occurred on a shoal where a slight displacement in the sounding would make a good crossing.

Lat. 39° 30.3
Long. 74° 15.1
NOT PLOTTED
Lat. 39° 31.9
Long. 74° 15.2

No depth curves are plotted on the boat sheet because the soundings on several of the days were reduced using the wrong tide reducer. An overlay was later made with the correct soundings plotted. This overlay was inadvertently destroyed and can not be forwarded.

DANGERS

The most important danger found on this sheet is the bar east of Beach Haven Inlet. Due to the constant roll of breakers across the bar it was impossible to make an extensive search for the least depth. Soundings of 2 feet were found on positions 94b and 108b, Lat. 39° 31.2', Long. 74° 16.3', on the west side of the shoal, and a sounding of 1 foot was found on position 76f, Lat. 39° 30.6', Long. 74° 16.6'.

Because of the constantly shifting bottom and strong currents navigation in this area is dangerous and should not be attempted unless local knowledge is available. Because of the limited area surveyed in Little Egg Inlet, no discussion is made of its dangers and channels. Reference is made to descriptive report for hydrographic sheet No. 11 submitted by John C. Bull.
H-6145 (1935-36)

CHANNELS

The most important channel leading into Beach Haven Inlet runs close to the south end of Long Beach. It crosses the bar east of the south point of land, running westward and curving northward after passing inside the islands. The least depth on crossing the bar is 6 feet, found in Lat. 39° 31.35', Long. 74° 15.90' between positions 24 and 25d.

COMPARISON WITH PREVIOUS SURVEYS

A very noticeable change in this area has occurred since the previous surveys were made. The change is in the configuration of the shoreline as well as in the location of the bars and channels. On comparing the smooth sheet with chart 1216, it is noticed that the land area on Long Beach has extended southward and westward for about $\frac{1}{2}$ mile and the land area on Tucker Island has extended northward for about $\frac{1}{4}$ mile and a little westward. The inlet, previously 1.2 miles wide is now only $\frac{1}{2}$ mile wide.

The shoreline near Beach Haven Inlet has been traced from chart 1216 and dotted on the boat sheet in red for comparison. The shoreline as rodded in, in 1936, is in blue and that as sketched by a previous field inspection party is in black. The south tip of Long Beach changed slightly since the topographer rodded it in and has been sketched in pencil on the boat sheet by the hydrographic party. This revision has also been placed on the smooth sheet and is indicated as a dashed black line.

H.W.M.

The bottom has changed even more noticeably than the land. The main channel to the south of Long Beach has moved southward. The bar obstructing the inlet has built up considerably and completely blocks the channel formerly cutting through near the center of it. Inside the inlet the channel leading to the southward, as shown on chart 1216 has been blocked off and only one channel remains leading northward.

75

On comparing this sheet with sheet No. 11 the following discrepancies are noted:

H-6145 (1935-36)

Sounding	Sheet H-6145	on Sounding	Sheet H-6145	Lat.	Long.
4,7,8	11	10,11,13	15	39-30.3	74-16.45
6,9	11	2,3	15	39-30.25	74-17.1
12	11	5	15	39-30-0	74-17.4
9,10	11	14	15	39-29.65	74-17.6

It is thought that these discrepancies are due mainly to the constant change occurring on the bottom and it is recommended that the latest soundings be accepted. See Rev., par. 6 of H-6145 for office treatment.

H.W.M.

GEOGRAPHIC NAMES

The geographic names in this area were included in reports sent in with graphic control sheets for New Jersey Coast, 1936.

Submitted by,

Approved by,

L. D. Graham

L. D. Graham
H. & G. Engr.
Chief of Party

Raymond H. Carstens

Raymond H. Carstens
Deck Officer, C. & G. S.

LIST OF STATISTICS - SHEET 15

Date	Day Letter	Sta. Miles	Soundings	Positions
Sept. 2	a	20.6	580	105
4	b	14.9	567	116
8	c	14.7	468	93
9	d	19.7	614	119
11	e	22.8	812	164
14	f	16.6	627	136
15	g	19.2	531	105
16	h	14.1	455	89
21	j	9.1	320	69
23	k	3.7	135	32
Total		155.4	5129	1028

Smooth sheet No. 15 was plotted under the immediate supervision of the Chief of Party. The sheet and accompanying records have been inspected and are approved.



L. D. Graham
H. & G. Engr.
Chief of Party.

Field Records Section (Charts)

H6195
HYDROGRAPHIC SHEET NO.

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet	1028
Number of positions checked	107
Number of positions revised	8
Number of soundings recorded	5129
Number of soundings revised	7
Number of signals erroneously plotted or transferred

Date: July 1938

Verification by G.H. Everett

Time: ~~3~~⁴³/₄ hrs.

Review by Harold W. Murray

Time: 18 1/2 "

Ver. corrections by "

6 "

HYDROGRAPHIC SURVEY NO. H-6195

Smooth Sheet Yes

Boat Sheet Yes

Sounding Records 4 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service Yes Chart 3243
(Circular Nov. 30, 1933) W.M.

Remarks _____

HYDROGRAPHY
10

Total Days

Sept. 23, 1936

Last Date

Remarks.

Decisions

1		<i>See T-5445</i>
2		<i>USGB Decision</i>
3		<i>See T-5445</i>
4		<i>See T-5445</i>
5		<i>USGB decision</i>
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GEOGRAPHIC NAMES
 Survey No. **H6195**

Name on Survey	Source of Name										
	A. On Chart No. 1216	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List			
<u>Long Beach</u>	✓ app'd										1
<u>Little Egg Inlet</u>	✓ app'd										2
<u>Tucker I.</u>	✓ app'd										3
<u>Beachhaven Inlet</u>	✓ app'd										4
<u>New Jersey</u>	✓ app'd										5
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Names underlined in red approved											25
by <u>GH</u> on <u>5/18/37</u>											26
											27

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY }
 DESCRIPTIVE REPORT } No. H -6195
~~PHOTOSTATIC OF XXXXXXXXXXXXXXXXXX~~ } ~~No. 1~~

{ received May 13, 1937
 { registered May 18, 1937
 { verified
 { reviewed
 { approved

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.

ROUTE		Initial	Attention called to
20			
22			
24			
✓ 25		WJ	D. H.
26			
30			
40			
62			
63			
✓ 82	E. P. Ellis	EP	page 1 D.H.
83			
88			
90			

RETURN TO

82	C. K. Green
----	-------------

✓

VERIFIERS' REPORT ON H-6195

I. The Records conform to the requirements of the ✓
General Instructions.

II. Curves - The zero and one fathom curves are broken. However the one fathom curve is practically complete. The 5-fathom curve is broken at the limits ✓
of the sheet. All other curves are complete within the limits of the survey.

III. Drafting. The plotting of the sheet was very well ✓
done and complete.

IV. Junctions. The junction with H-6145 (1935-36) has not been made. It is referred to the Reviewing Section for further study due to the change in the depths since that survey was made.

Junction with H-5893 (1935) has been made only ~~so far as~~ in part, omitting the transfer of soundings in the area of change in depth since that survey was made. A holiday exists between H-5893 and this sheet in Lat. 39-30.8 Long 74-17.5. The curves in this area have not been inked. This junction is also referred to the Reviewing Section.

There are no other contemporary adjoining sheets.

V. Remarks

Topo - The topo detail shown on this sheet are from T-6400 b (1935 - Add'l work, 1936) and T-6401 a (1935 - Add'l work, 1936) both plane table ✓
surveys and also T-5445 (1932-33) Air-photo Comp.

The shore line of Tucker Island and the south end of Long Beach are from the 1936 surveys ✓
of T-6400 b and T-6401 a.

The shore line inside the inlet is from T-5445 ✓
The point of land shown with a broken line ✓

Disposed of by Reviewer. N.M.

at Lat 39-31.5; Long. 74-16.5 represents the revised shore line as made by the hydro party. The authority is Pos. 19K (Vol. 4, pg. 43) and the Boat sheet. This point was shown in pencil on the smooth sheet and inked in the office.

Buoys. All buoys inked on sheet were located by the hydro party, by sextant fixes recorded in the sounding volumes. None of the buoys shown on the topo sheets have been transferred to this sheet. It has been inferred that the buoys have been changed in position since the 1935 survey as those buoys so shown were not mentioned in the records. OK.

Respectfully Submitted

L. T. Everett

July 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 28, 1937

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis.

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 6195

Locality Beachhaven Inlet, Coast of New Jersey.

Chief of Party: L. D. Graham in 1936.
Plane of reference is mean low water, reading
4.1 ft. on tide staff at Atlantic City.
15.8 ft. below B.M. 32
1.4 ft. on tide staff at Tucker Island
7.1 ft. below B.M. 1

Height of mean high water above plane of reference is 4.1 feet at Atlantic City; 3.7 feet at Tucker Island.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6195 (1936) FIELD NO. 15

Beachhaven Inlet, Atlantic Coast, New Jersey
Surveyed in Sept. 1936, Scale 1:10,000

Instructions dated May 16, 1935 (E.H.Kirsch)

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - L. D. Graham.
Surveyed by - John C. Bull.
Protracted by - R. H. Carstens and G. E. Varnadoe.
Soundings plotted by - R. H. Carstens.
Verified and inked by - G. H. Everett.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that the reference station was incorrectly shown, the value of station "Inlet (1935)" in the vicinity of Barnegat Inlet being given instead of that on the present survey. This was corrected in the office.

The Descriptive Report is clear and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project except that west of Tucker Island a size-
able gap was left in the work where the present survey joins the work of 1935 (H-5893). The inland waterway passes through this area.

This gap satisfactorily covered on H-6216 (1935-36) H.W.M. 10/20/37

3. Shoreline and Signals.

The shoreline is from air photo compilation T-5445 (1932-33) and graphic control sheets: T-6400b (1935 and 36) and T-6401a (1935 and 36). The dashed shoreline at the tip of Long Beach was sketched by the hydrographer in Sept. 1936, one 3 point fix (pos. 19k) being taken at the western edge. It represents changes subsequent to the June 1936 delineation on T-6400b.

The signals are from the above mentioned graphic control sheets.

4. Sounding Line Crossings.

The sounding line crossings on this sheet are satisfactory being generally 2 feet or less.

5. Depth Curves.

Within the limits of the survey, the usual depth curves may be completely drawn including a portion of the low water line.

6. Junctions with Contemporary Surveys.

a. H-5893 (1935).

(1). The junction with this survey to the southwest of Tucker Island is satisfactory considering the changeable nature of the area. Differences of one to 6 ft. are noted in portions of the area. Since the later survey should control for charting, only these soundings from the 1935 work that were in general agreement with the present survey were transferred in the overlapping area. The present survey, including the soundings transferred, should supersede the 1935 work in this common area.

(2). To the west of Tucker Island the present survey fails to effect a junction with the 1935 work. A gap of about 350 meters exists here. There is a possibility, however, that this work as well as the area west of the western limits of the present survey in Beachhaven Inlet has been covered on Field Sheet No. 7 (not yet received) which joins the present survey to the northward. A photostat covering this area has been sent to the field party with instructions to complete this junction if it has not been included on Field Sheet No. 7.

This gap satisfactorily covered on H-6216 (1935-36) H.W.M. 10/20/37

b. H-6145 (1935-36).

The junction with this survey on the south is extensive but is satisfactory in part only. On H-6145, the 1936 work (blue position numbers) and the 1935 work (red position numbers) shown in black is in good agreement. The 1935 work, however, which is shown in blue (see review, H-6145, par. 4) is in conflict with the present survey, the differences of 1 to 6 feet noted being due to changes in bottom occurring between the working seasons. Therefore in transferring the overlapping soundings from H-6145 (1935-36) to the present survey the soundings shown in blue on H-6145 were omitted. The resulting junction is satisfactory. The present survey including the soundings transferred should supersede H-6145 (1935) in the common area.

c. The junction with Field Sheet No. 7 to the northward of Beachhaven Inlet and with other field work authorized or in progress to the northeast and eastward will be considered when that work is received from the field.

H-6216 (1935-36)

7. Comparison with Prior Surveys.

- a. H-101 (1844), H-109 (1840), H-110 (1840), H-111 (1841), H-112 (1841), H-113 (1847), H-116 (1843), H-670 (1859), H-1125 (1871), H-1158a (1872), H-1158b (1874), H-1196 (1873), H-1558 (1882-83) and H-2657 (1903).

The above surveys cover portions of the present survey and are on scales varying from 1:5000 to 1:40,000 except H-670 (1859) and H-1558 (1882-83) which are on scales of 1:400,000 and 1:300,000 respectively. This area is an exceedingly changeable one with respect to both shoreline and hydrography. The instability even for a period of one year is well borne out by the 1 to 6 foot differences noted between the 1935 and 1936 season's work in the same area (discussed in paragraph 6a and b of this review). A discussion of changes noted would serve no useful cartographic purpose and is therefore omitted. It is noted, however, that the width of Beachhaven Inlet in 1840 (H-109) was 2240 m. The present surveys shows a width of only 800 m. The present survey should supersede these surveys in future charting.

- b. H-4387 (1924).

This 1:5000 scale sheet covers most of the present survey in Beachhaven Inlet. Comparison shows considerable changes in shoreline, depths and axis of natural channels. The tip of Long Beach as shown on the present survey is approximately 1100 m. southwestward of that shown on the 1924 survey. Formerly depths as great as 28 feet existed in what is now exposed land. Further details are omitted as they would serve no useful cartographic purpose. The present survey should supersede this survey in future charting.

8. Comparison with Charts 1216 (New Print dated Oct. 7, 1936 and 3243 (New Print dated July 7, 1937)).

- a. Hydrography.

Hydrography shown on the charts originates with surveys discussed in preceding paragraphs and needs no further consideration in this review.

- b. Controlling Depths.

A general note on the chart states that a depth of 4 to 9 feet as of Sept. 1935 may be carried in the inland waterway. Within the area covered, the present survey shows a minimum depth of 6 feet. Slightly greater depths, however, are available if local knowledge is used.

- c. Aids to Navigation.

Aids to navigation are charted in a portion of the inland

waterway only (Chart 3243), maintained aids at the entrance to Beachhaven and Little Egg Inlets being omitted since they are frequently moved in position. The inland waterway aids are maintained from March to November. (See general notes on chart.) The piles on which the lighted beacons are located are usually destroyed during the winter. (See D.R., T-6400b (Ad. Wk. 1936), page 7.)

Buoys N"8", C"5" and N"6A" in the channel westward of Tucker Island were located on the present survey in substantially the same positions as charted. Buoys N"H" and C"5A" were located in positions varying 100 and 320 m. respectively from their charted positions. The charted positions originate with L.H.N. to M. 50 (December 11, 1935). Buoy C in lat. 39°31.7' long. 74°17.2' as well as buoys C"G1", C"G", N"F1", N"F" and C"E1" in the vicinity of lat. 39°29' long. 74°19' are not shown on the chart. Buoy N (lat. 39°30.0' long. 74°18.1') was located 600 m. south of its charted position. The charted position originates with L.H.N. to M. 16 (1937) and is subsequent to the present survey.

The lighted beacon shown on the present survey in lat. 39°31.4' long. 74°17.5' is 220 m. south of its charted position. The source of the charted position was not ascertained but it is shown on the Aid Proof of Chart 3243 dated January 20, 1934. Lighted Beacon No. 32 in lat. 39°30.3' long. 74°17.8' is not shown on the charts. The charted lighted beacon in lat. 39°30.2' long. 74°18.2' is noted as "destroyed in 1936" on T-6400b (1935 and 1936). The charted lighted beacons in lat. 39°29.8' long. 74°18.6'; lat. 39°30.7' long. 74°17.8'; and lat. 39°32.0' long. 74°17.1' were established subsequent to the present survey (Bp. 30623 (1937)).

9. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Recommended.

This is an excellent survey and no additional field work is required except as noted in par. 6a(2) of this review.

satisfactorily covered on H-6216 (1935-36). H.W.M. 10/20/37

11. Note to Compiler.

The compiler's attention is called to the following:

- a. Paragraph 6a, b and c of this review relative to treatment of junctions with other surveys.

The transfer of soundings from H-6145 (1935-36) out to the 12 foot curve was intentional so that no confusion would result in applying this area to the chart. It will simplify the application of these two surveys if the present survey

is applied first and charting then continued from H-6145 (1935-36).

- b. Paragraph 8c of this review relative to the status of various aids to navigation. In this connection, buoy positions determined on the present survey (Sept. 1936) are subsequent to those determined on T-6400b (1935 and 36).
- c. Paragraph 3 of this review relative to the latest revised shoreline at the tip of Long Beach which was determined on the present survey.

12. Superseded Prior Surveys.

Within the area covered, the present survey supersedes the following surveys for charting purposes:

H-101	(1844)	in part.	H-670	(1859)	in part.
H-109	(1840)	" "	H-1125	(1871)	" "
H-110	(1840)	" "	H-1158a	(1872)	" "
H-111	(1841)	" "	H-1158b	(1874)	" "
H-112	(1841)	" "	H-1196	(1873)	" "
H-113	(1847)	" "	H-1558	(1882-3)	" "
H-116	(1843)	" "	H-2657	(1903)	" "
			H-4387	(1924)	" "

13. Reviewed by Harold W. Murray, August 3, 1937.

Inspected by A. L. Shalowitz.

Examined and approved:

Fred. L. Peacock
Chief, Section of Field Work.

L. O. Tolbert
Chief, Division of Charts.

A. H. Brown
Chief, Section of Field Records.

G. H. Hude
Chief, Division of H. & T.

Applied to drawing of Chart 1216 - Sept. 1, 1937 - J. F. Walker
Applied to chart 826 4/24/38 H.C.