

5870

5870

Form 504  
Rev. April 1935  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

Topographic }  
Hydrographic } Sheet No. 1

State New Jersey

LOCALITY

Barnegat Bay

Northern Part

193<sup>5</sup>

CHIEF OF PARTY  
Jack C. Sammons

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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. 1

REGISTER NO. **5870**

State NEW JERSEY

General locality ~~Inland Waters~~ Northern Part 13

Locality Barnegat Bay

Scale 1:10,000 Date of survey June, 1935

Vessel Chartered launches

Chief of Party Jack C. Sammons

Surveyed by John A. McGeehan

Protracted by P. M. Mealo

Soundings penciled by C. J. Harryman

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by [Signature]

Verified by [Signature]

Instructions dated May 16, 1935.

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 1.

INSTRUCTIONS

1 The work on this sheet was done in accordance with instructions dated May 16, 1935, Project H. T. 205.

LIMITS OF SHEET

2 The sheet extends from the Island Heights - Seaside Heights highway bridge to Metedeconk Neck. It includes all of Barnegat Bay within these limits, together with Kettle Creek and Mosquito Cove, and other small tributaries up to the limit of navigation. It joins on to Sheet 5615 of E.R. McCarthy of 1934 at the northern limits and to Sheet No. 2, of this party, at the southern limits.

SURVEY METHODS

3 All work on this sheet was accomplished by standard launch hydrographic methods, using shallow draft chartered motor launches. All soundings are recorded in fathoms and feet and reduced to feet. Sextant fixes were taken to objects located by triangulation on an aluminum mounted graphic control sheet. The shore line was transferred from tracings on celluloid of the photo compilation.

CHANNELS

4 The main channel of the inland route passes through this area covered by this sheet. It is well marked by lighted beacons and numerous small, temporary day markers, which are kept in place by the New Jersey State Board of Commerce and Navigation. The beacons are all located by topography or triangulation and the temporary day markers are noted by the hydrographer. The locations of these temporary beacons are changed from time to time. This channel has a controlling depth of five feet at Beacon No. 52, but the bottom is mud and it is possible that a slightly greater depth can be carried through this area by dragging bottom. Near beacon No. 56, the channel is in a narrow dredged cut, but is kept well marked by numerous temporary day markers.

✓ 5 ft  
controlling  
depth  
7th. in 1931

5 There are no other channels of importance on this sheet, although in several places there are deep channels near the shore line, caused by dredging operations. These channels do not connect with the main channels.

DANGERS

6 There are no dangers to navigation on this sheet. The shoal areas are all well marked.

### DISCREPANCIES

No discrepancies of importance were noted in plotting this sheet. In some cases the cross lines vary by one foot, but this can usually be traced to dropping fractions in the tide reducers.

### GEOGRAPHIC NAMES

No new names were obtained for geographic features shown on the sheet. All names shown were taken from Chart No. 3243 and appear to be in common usage.

### LANDMARKS FOR CHARTS

Lists of land marks for charts and non-floating aids to navigation are attached to descriptive reports for the graphic control sheets and another list with section of chart showing their location, was forwarded direct to the office under separate cover.

### COMPARISON WITH PREVIOUS SURVEYS

All soundings shown on chart 3243 were transferred to an overlay sheet for hydrographic sheet No. 1 and compared. These soundings agree in most cases and are out only about one foot in other places. The beacons are all badly misplaced on the chart and the main channel is shifted considerably from the position shown on the chart.

A comparison was made of the junction of this sheet with sheet No. 5615 of E. R. McCarthy, and the soundings checked <sup>well</sup> good except in the channel. This channel is a narrow, dredged out with spoil banks and it is likely the photostat was distorted which caused this apparent disagreement.

At the southern end, this sheet joins on to Sheet No. 2, of this party. The junction is made at the highway bridge across the bay and there is no overlap. *except at the draw, but not shown - too congested. Soundings are in agreement.* L.S.S.

### CHANGES IN SHORE LINE

This party located no shore line except on the outside beach and we have only a rough tracing of the shore line as determined by the photo compilation party. No comparison was made by this party to determine changes in shore line.

Lt. Jack C. Sammons,  
Chief of Party.

STATISTICS FOR HYDROGRAPHIC SHEET NO. 1 5870

Date	Day Letter	Statute Miles of Sounding Line	Number of Soundings	Number of Positions
1935				
May 8	a	11.8	643	90
9	b	23.3	1156	156
10	c	3.8	179	23
11	d	28.0	1277	172
13	e	20.6	997	143
14	f	22.5	1066	161
15	g	20.3	934	139
16	h	11.7	567	88
17	j	16.5	853	152
20	k	15.7	738	118
21	l	9.0	404	56
22	m	20.3	955	145
24	n	16.4	733	120
25	p	21.2	983	148
27	q	13.8	673	101
28	r	17.8	823	146
29	s	15.4	785	133
30	t	13.8	717	119
June 3	u	5.0	262	56
4	v	8.7	439	77
5	w	10.6	583	119
6	x	13.4	730	115
7	y	17.4	915	161
8	z	10.8	496	104
11	a'	12.7	774	124
12	b'	8.4	515	97
14	c'	7.4	437	85
17	d'	12.0	607	94
20	e'	8.2	469	82
21	f'	15.7	912	151
22	g'	7.9	460	74
24	h'	4.8	316	73
Totals		444.9	22371	3622

HYDROGRAPHIC SIGNALS  
SHEET NO. 1

Triangulation Stations

Topographic Stations

Triang. or Topo Name	Hydro Name	Year
△ Seaside Heights S.P. Pipe		1926
△ Lavalette S.P.	Lav	"
△ Chadwick	Chad	1932
△ Fish	Fish	"
△ Flag	Flag	1934
△ Mantoloking	Man	1932
△ Light Stand A	Light A	1935
△ " " B	" B	"
△ " " C	" C	"
△ " " D	" D	"
△ " " E	" E	"
△ Seaweed	Sea	"
△ Park	Park	"
△ Coates	Coats	"
△ Goose	Goose	"
△ Kettle	Ket	"
△ Island Heights S.P. Land		1932
△ Drew	Drew	1935
T Apple	Apple	1934
T South Gable	Able	"
T Creek	Creek	"
T Green Gable	Green	1934
T W.Gab. Boathouse	Gab	1934
T Wind Mill	Win	1934
T Bog	Bog	1934

A Located by triangulation  
T. Located by topography.

Name	Topo Sheet
Hot	C
Sky	B
Com	"
Cross	"
Log	"
Brick	"
Lone	"
Pal	C
Pole	B
As	A
Red	B
Cattle	A
Ida	B
Pat	A
Need	B
Ma	A
Bex	"
Rye	"
Cow	"
Ike	"
Rum	"
Oak	"
Ho	"
Mix	"
Ging	"
Mag	"
Bog	"
Fate	A
Chy	"
Pie	"
It	"

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5870

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

Number of positions on sheet	3622
Number of positions checked	14
Number of positions revised	0
Number of soundings recorded	22371
Number of soundings revised	90
Number of signals erroneously plotted or transferred	0

Date:

Verification by *Franking to [Signature]*

Review by *R.J. Christman*

Time: <sup>12</sup> 88<sup>1</sup>/<sub>4</sub>

Time: 10<sup>1</sup>/<sub>2</sub> hrs

Smooth Sheet Yes

Boat Sheet 1

Sounding Records 12 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 No *Report written by Chief of Party*

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service No *see par. 4 page 1 of the Desc. Rep.*  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Section of Field Records

Hydrographic Survey H5870 (1935) Field No. 1  
Barnegat Bay (Northern Part) New Jersey  
Chief of Party J. C. Sammons.

### 1. Condition of Records

The records are neat, legible and conform to the requirements of the Hydrographic Manual. ✓

### 2. Control and Shoreline

#### a. Control

The control signals for this survey H5870 originate with T6375a and b (1935) and T6396a (1935). ✓

#### b. Shoreline

The shoreline is from Air Photo Compilation surveys T5285 (1932), T5286 (1932), T5329 (1932) and T5330 (1932). It was left in pencil by the field party (see Descriptive Report) and was traced and inked from the above mentioned Air Photo Compilation Surveys by the undersigned. Although numerous notes indicating probable discrepancies in the shoreline appear on the boat sheet, only a few important differences were found. These were corrected on both the Hydrographic and Air Photo Compilation Surveys. ✓

### 3. Sounding Line Crossings

The agreement in depth of soundings at crossings is satisfactory. The majority of the crossings are either in perfect agreement or differ up to 1/2 foot; few show a difference of 1 foot. ✓

### 4. Depth Curves

The usual depth curves can be satisfactorily drawn. ✓

### 5. Junction with Contemporary Surveys

a. The junction on the south at the bridge with H5871 (1935) is satisfactory. ✓

b. The hydrographic survey 5615 (1934) overlaps this survey (H5870 - 1935) on the north approximately one half mile. There is evidence of shoaling from one half to one foot particularly in the channel. Because the present survey (H5870) adequately covers the overlapping area and was executed a year later it should be given preference in charting, for this reason only the soundings from H5615 (1934) at the limits of this survey, H5870 (1935), have been shown. ✓

Hydrographic Survey H5870 (1935) Field No. 1 - Continued

6. Field Plotting

The field plotting was complete and satisfactory except that the shoreline was left in pencil. See paragraph 2 b of this report. ✓

Verified and Inked by



Leo S. Straw

May, 16, 1936.



## TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

Dec. 5, 1935.

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

Tide Reducers are approved in  
12 volumes of sounding records for

HYDROGRAPHIC SHEET 5870

Locality Barnegat Bay, Northern Part, N. J.

Chief of Party: J. C. Sammons in 1935  
Plane of reference is mean low water reading  
2.8 ft. on tide staff at Island Heights  
3.7 ft. below B.M. 1  
2.7 ft. on Tide Staff at Mantoloking  
4.1 ft. below B.M. 1

Height of mean high water above plane of reference is 0.6 foot at  
both Island Heights and Mantoloking.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5870 (1935) FIELD NO. 1

Barnegat Bay, Northern Part, New Jersey  
Surveyed in June, 1935  
Instructions dated May 16, 1935 (J. C. SAMMONS)

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - Jack C. Sammons.  
Surveyed by - John A. McGeehan.  
Protracted by - P. M. Mealo.  
Soundings penciled by - C. J. Harryman.  
Verified and inked by - Leo S. Straw.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

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

2. Compliance with Instructions for the Project.

The plan, character and extent of development are in accordance with the instructions for the project.

3. Shoreline and Signals.

The shoreline originates with air photo compilations T-5285, T-5286, T-5329, and T-5330 all of 1932.

The signals were located by triangulation, and by plane table on Graphic Control surveys T-6375a, T-6375b, and T-6396a, all of 1935.

4. Sounding Line Crossings.

The sounding line crossings are satisfactory. Only a few soundings differ in depth by as much as 1 foot.

5. Depth Curves.

Within the area of the present survey the usual depth curves can be satisfactorily drawn.

6. Junction with Contemporary Surveys.

The junction with H-5871 (1935) to the south is satisfactory.

The junction with H-5615 (1934) is satisfactory. An apparent difference of 1 foot in some areas is due to the plotting of soundings to the whole foot and possibly to a slight shoaling from deposited sediment resulting from dredging operations to the northward (See chart letter 802 of 1935). In charting the overlapping area, H-5870 (1935) being the later survey, should be given preference.

7. Comparison with Prior Surveys.

a. H-108 (1840)

This survey on a scale 1:10,000 shows a few soundings in the extreme southern part of the area under consideration and has the general appearance of a reconnaissance. It has been superseded on the charts by a later survey and need not be considered in future charting of this area.

b. H-1317 (1876).

This survey is on a scale of 1:20,000. The agreement with the present survey is very good, depths generally agreeing within less than 1 foot, except in the improved channel near the southern edge of the sheet and in some places along shore where apparently material has been removed for filling purposes.

Because of the larger scale and much closer development of the present survey, H-5870 (1935) should supersede the above survey for future charting purposes.

8. Comparison with Chart 1216 (New Print dated Feb. 12, 1936).  
Chart 3243 (New Print dated Oct. 11, 1935).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraph. The bare spots charted in approximate latitude  $39^{\circ}57.5'$ , longitude  $74^{\circ}05.5'$ , ~~spots~~ represent fractional foot depths at the end of sounding lines on H-1317 (1876) and as charted, are misleading. The present survey shows that the entire area is covered by  $1/2$  to 1 foot of water.

b. Controlling Depth.

The charted controlling depth "5-1/2 feet Sept. 1935" for the dredged channel beginning at lighted beacon 50 (latitude  $39^{\circ}57.37'$ , longitude  $74^{\circ}06.27'$ ) and running southwestward comes from Chart Letter 802 of 1935. The present survey corroborates this depth insofar as the portion covered by it is concerned.

c. Aids to Navigation.

Chart 1216 does not show any aids to navigation in the area under consideration.

Chart 3243 shows the lighted beacons charted from information furnished by the State of New Jersey. The charted beacons are in substantial agreement with their positions on the present survey. Also see par. 4, page 1, of the Descriptive Report, relative to uncharted aids.

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Recommended.

The survey is very satisfactory and no further work is required.

11. Superseding Old Surveys.

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

H-108 (1840) in part  
H-1317 (1876) " "

12. Reviewed by - R. J. Christman, June 5, 1936.

Inspected by - A. L. Shalowitz.

Examined and approved:

*C. K. Green.*

C. K. Green,  
Chief, Section of Field Records.

*L. O. Lobert.*

Chief, Division of Charts.

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

*G. H. Hude*

Chief, Division of H. & T.

*Applied to drawing of Chart 1216 - Jan 11, 1937 - J.W.*

Applied to new compilation Chart 825 Sept. 1939 R.

S.M.A.

11