

5734

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 4

State NEW YORK

LOCALITY

South Shore - Long Island

Rockaway Inlet and Vicinity

1934

CHIEF OF PARTY

M. O. Witherbee

U. S. GOVERNMENT PRINTING OFFICE: 1934

5734

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. 4

REGISTER NO. **5734**

State New York

General locality South Shore - Long Island

Locality Rockaway Inlet and Vicinity

Scale 1:10,000 Date of survey June 13 to Nov. 5, 1934

Vessel Sachem Shore Party No. 2

Chief of Party M. O. Witherbee

Surveyed by G. A. Stanton

Protracted by L.C.A. G.C.M. H.J.B. S.T.Y. J.J.M.

Soundings penciled by G.C.M. J.J.M.

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by S.B. Levin

Verified by S.B. Levin

Instructions dated Aug 16, 1934, 192

Remarks:

HYDROGRAPHIC SHEET

No Descriptive Report received todate; May 1, 1935.

HYDROGRAPHIC SURVEY NO. 5734

Smooth Sheet 1

Boat Sheet 1 1 Tracing

Sounding Records 9 Vols. _____

Descriptive Report No July 24, 1935

Title Sheet No

List of Signals Yes - Cover Vol. 1

Landmarks for Charts (Form 567) _____

Statistics Yes

Approved by Chief of Party _____

Recoverable Station Cards (Form 524) _____

Special Chart for Lighthouse Service _____
(Circular Nov. 30, 1933)

Remarks No Descriptive Report received to date: May 1, 1935

Verifier's Report.

July 24, 1935.

The records and sheets of this survey conform to the requirements of the General Instructions except as noted below and in the review.

The usual depth curves can be completely drawn except in the areas here noted:

- (1) The zero and 6ft. curves along the south shore of Coney Island.
- (2) The zero and 6 ft curves along the south shore of Barren Island.
- (3) The zero curve in Mill Basin, East Mill Basin, Gerritsen Creek, Deep Creek, Shellbank Creek, Plumb Beach Channel, and Mill Creek.
- (4) In Sheepshead Bay portions of the 12, 18, and 30 ft curves have been omitted because, in view of current and recent dredging operations in that Bay, the hydrography of this survey is deemed insufficient to justify simple interpolation of curves between widely spaced soundings.

A certain amount of drafting done by the field party had to be done over by the verifier. The shoreline was found to be inaccurately drawn in several localities. Many docks, groins, piles, and bulkheads had been omitted. The shoreline was incomplete on the south side of Plumb Island and in the area immediately to the west. The shoreline was omitted at the small channel just north of the mouth of Mill Basin.

Verifier found fault with the spacing of soundings between positions. Poor spacing was common thruout most of the sheet, while along very many lines it was so bad as to necessitate complete repenciling of soundings. Erroneous spacing in many instances indicated depths 6 to 10 ft deeper than the correct sounding at that position. Many of the penciled soundings were illegible.

Several positions incorrectly plotted on the Smooth Sheet were protracted and replotted by the verifier.

The junctions with H-5736 (1934) on the west, and with H-5735 (1934) on the south are satisfactory. Adjacent sheet H- 5733 (1934) is not yet verified.

Attention is called to the slight shoal which extends into, and robs the Sheepshead Bay Channel of about half its width at N 40 - 34.9, W 73 - 55.9. The protracting and plotting of the positions and soundings at that point have been rechecked and found to be correct. The position of the beacon (FL R), established by the hydrographic party as 10 meters to the right of 67e, agrees quite closely with a corresponding position on T-6201a, a graphic control sheet. *Topo location used on hydrog. sum.*

Verifier has not been able to ascertain the source of the shoreline of Coney Island as drawn on this sheet. No recent maps are available. The shoreline of Sheepshead Bay is not given as there is no source map. These shorelines have probably been mapped by New York City ~~and/or Army Air Photo~~ Engineers. *Compilation party.*

At positions 124d and 125d notes in the records locate dock ruins which are not shown on the air photo compilation. (N 40-35.0, W 73-52.7).

The dock ruins, however, seem to appear on the original photographs, even tho very faintly, and they have therefore been inked by the verifier on the smooth sheet. *An Compilation Section notified. xym.*

Position 4ld at N 40-34.1, W 72-53.6 is, according to the records, 12m off the face of a dock. The position is protracted correctly, ^{as recorded} yet it is about 60 meters from the closest dock. The air photos are very clear at this point, so there is no doubt that the records are wrong. Either the notation is placed at the wrong sounding, or the fix is erroneously recorded. 4ld (10 $\frac{1}{2}$ ft) coincides, as plotted, with 87g (3 ft).

all signals changed at this position. Shp clearly out of position. Plotted on time, course and depth. xym.

Respectfully submitted,

S. B. Levin

S.B. Levin

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5734

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

Number of positions on sheet	2607
Number of positions checked	109
Number of positions revised	6
Number of soundings recorded	14,553
Number of soundings revised	9
Number of signals erroneously plotted or transferred	0

Date: July 24, 1935
Verification by S. B. Levin
Review by H. W. Murray
R. J. Christman

Time: 30 days
Time: 4 da. ⁶ hrs.
7 1/2 hrs.

Lae

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 7, 1935.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 5734

Locality Rockaway Inlet and vicinity, South Shore Long Island, N. Y


Chief of Party: M. O. Witherbee in 1934

Plane of reference is mean low water reading

- 1.3 ft. on tide staff at Norton Point, Jamaica Bay
- 8.6 ft. below B.M. 1
- 0.5 ft. on tide staff at Mills Basin
- 11.1 ft. below B.M. 1
- 1.8 ft. on tide staff at Gerritsen Creek
- 6.4 ft. below B.M. 1
- 2.5 ft. on tide staff at Barren Island
- 9.1 ft. below B.M. 1
- 1.8 ft. on tide staff at Sandy Hook
- 9.4 ft. below B.M. 2

Height of mean high water above plane of reference is 5.4 feet at
Nortons Point, Jamaica Bay; 5.2 feet at Mill Basin; 4.9 feet at
Gerritsen Creek; 5.0 feet at Barren Island; 4.7 feet at Sandy Hook.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5734 (1934) - FIELD NO. 4

South Shore - Long Island, Rockaway Inlet and Vicinity, New York
Surveyed in 1934

Instructions dated August 16, 1934 (M. O. Witherbee)

Hand Lead Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - M. O. Witherbee.

Surveyed by - G. A. Stanton.

Protracted by - L. C. A., G. C. M., H. J. B., S. T. Y, and J. J. M.

Soundings penciled by - J. J. M. and G. C. M.

Verified and Inked by - S. B. Levin.

1. Condition of Records.

The records are neat and legible but do not conform to the requirements of the Hydrographic Manual in that:

- a. A "Descriptive Report" which should have accompanied this sheet has never been received from the field.
- b. Topographic details such as docks, piles, etc., were not consistently shown on the smooth sheet. These were added in the office.
- c. Evidence that the plotting of hydrographic and topographic signals had been checked in the field was lacking, since the initials of the checker were omitted. This was accomplished in the office.

2. Compliance with Instructions for the Project.

Although the area of this survey is uniformly covered, it does not conform to paragraphs 3 and 6 of the Instructions in that a number of charted shoal soundings originating with U. S. Engineers' surveys and discussed in paragraph 7a of this review were insufficiently developed, which necessitated their retention on the chart. In addition, several doubtful soundings discussed in paragraph 9 of this review should have been investigated in the field. The lack of sufficient hydrography in Sheepshead Bay as noted on the boat sheet is due to boats anchored in midstream; however, sufficient lines should have been run at the entrance to clearly define the small channel shown on the Engineers' survey (Bp. 25876, 1932).

3. Sounding Line Crossings.

Such cross lines as result from the work are in satisfactory agreement.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn, including portions of the low water and 6 foot curves.

5. Junctions with Contemporary Surveys.

- a. The junction on the northeast with H-5733 (1934) will be considered in the review of that survey.
- b. The junction on the west with H-5736 (1934) and on the south with H-5735 (1934) is satisfactory.
- c. The junction with the 1934 U. S. Engineers' surveys (Bp. 27793) in the vicinity of lat. 40°32.3', long. 73°56.8' as prescribed in the Instructions for the Project (par. 2A) is in general satisfactory.

6. Comparison with Prior Surveys.

- a. H- 47 (1835), H-1275 (1872-74), H-56 (1840),
 H- 53 (1835), H-1358 (1877), H-62 (1836),
 H- 54 (1840), H-1359 (1877),
 H- 59 (1841), H-1506 (1881),
 H- 129 (1841), H-1662 (1885),
 H- 207 (1848), H-1834 (1888),
 H- 526 (1855-56), H-2405 (1899),
 H-1189 (1873), H-2605 (1902).

A study of the above surveys in connection with the present survey reveals numerous changes in depths and location of shoals, as well as changes in shoreline, the most important of which is Rockaway Point which has moved approximately $3\frac{1}{2}$ miles W X S of its position as determined in the year 1835. In view of the changeable character of the area and the fact that these surveys contain no important information not adequately covered by the present survey or other surveys discussed in subsequent paragraphs of this review, a detailed comparison will serve no useful cartographic purpose. The above surveys should be superseded by the present survey.

- b. H-3697 (1914) and H-4868 (1928).

Soundings of the above surveys are in good agreement with the present survey in some areas but marked differences are noted in others which, however, are due principally to dredging operations. The present survey does not cover "Irish Channel" and the hydrography in this channel should be retained from H-4868 (1928). See par. 10d of this review.

7. Comparison with Chart No. 369 and 542 (Scale 1-20,000).a. Hydrography.

Soundings shown on the above charts originate with surveys discussed in the foregoing paragraphs of this review and numerous U. S. Army Engineers' surveys, the more important of which are Bp's. 27793 (1934) and 27794 (1934) (U. S. Engineers No. 2917616, sheets 1 and 2), which are contemporary with the present survey and cover the general vicinity of Rockaway Inlet. Soundings applied to Chart 542, Ed. 1934 - 10/29) are generally in good agreement with the present survey, and as prescribed in the Instructions for the Project (par. 5), these surveys, for charting purposes, should be used to supplement the areas inside the widely spaced lines of the present survey.

A study of the several charted shoal soundings in the general locality westward of long. $73^{\circ}58'$ originating with Bp's. 15573 (1913-14), 15574 (1913-14), 25872 (1932), and 25779 (1932), and varying 6 to 12 feet in depth, discloses no reason for their retention on the chart. The development on the present survey is sufficiently close to show general changes in depths in their immediate vicinities, including the 7 charted in lat. $40^{\circ}33.2'$, long. $73^{\circ}58.5'$, which falls in depths of 14 feet on the present survey. However, the development on the present survey is insufficient to disprove the *8 in lat. $40^{\circ}33.5'$, long. $73^{\circ}58.8'$; 7 in lat. $40^{\circ}33.5'$, long. $73^{\circ}59.5'$; 12 in lat. $40^{\circ}33.7'$, long. $73^{\circ}59.0'$; and 9 in lat. $40^{\circ}33.3'$, long. $73^{\circ}58.7'$. These soundings should be retained on the chart pending further investigation (see Add'l. Work, par. 10).

In the area north of lat. $40^{\circ}34.6'$, soundings of the Engineers' surveys are in good agreement with the present survey in some areas but vary 1 to 12 feet deeper in others, as for example in Gerritsen Creek. The greater changes are undoubtedly caused by improvements.

The present survey, except as noted above, should, within its limits, supersede previous chartings from the Engineers' surveys.

b. Controlling Depths in Channels.

The dredged depths of 12 feet at the head of Gerritsen Creek agrees favorably with depths on the present survey, however in the main portion of the creek the controlling depth as determined on the present survey is 8 to 11 feet and is considerably shoaler than the dredged depth of 20 feet as of "May, 1933" (authority: Chart Letter No. 337, 1933).

* 8 is 8.8 on Bp 15573 - charted 9 on ch. 540. Other soundings not considered worth carrying forward. - JFW 1/25/46

c. Aids to Navigation.

- (1) The following charted buoys were not located on the present survey but are shown on the contemporary Engineers' survey of 1934 (Bp. 27793 and 27794). They vary 35 to 70 meters from the positions as charted.

Black bell buoy 1	in lat.	40°33.8'	long.	73°56.5'
Black can	" 1 "	" 40°34.2'	"	73°55.1'
Lighted	" "2" "	" 40°34.2'	"	73°55.0'
Black can	" 1 "	" 40°34.3'	"	73°53.6'

The HS bell buoy charted in lat. 40°34.35', long. 73°53.9' and shown on the present survey is not shown on the Engineers' survey, Bp. 27794 of 1934.

- (2) The perpendicular striped bell buoy (Gong) in lat. 40°32.8', long. 73°57' was located about 530 meters south of its charted position.
- (3) The lighted buoy No. 4 (Fl R) in lat. 40°34.4', long. 73°55' was located about 150 meters southeast of its charted position.

Other buoys are located in approximately their charted positions and their distance off station does not constitute a menace to navigation. However, the buoys should not be charted in the positions given by the present survey, as they probably have been replaced on station by the Lighthouse Service.

- d. The three charted piles in lat. 40°33.95', long. 73°54.2', originating with Chart Letter No. 166 (dated February 15, 1933), were located by 3-point fixes on natural objects. They were not located on the present survey although the hydrographer was in the immediate vicinity during tides of 2 and 5 feet, respectively. The piles are, furthermore, not shown on the contemporary topographic surveys nor on the aerial photographs. Their present existence is doubtful and the Inspector at the N. Y. Field Station has been asked to verify their existence.

8. Field Plotting.

Field protracting and plotting were satisfactory and conform to the requirements of the Hydrographic Manual except that soundings were inaccurately spaced throughout most of the sheet. Those so plotted were respaced in the office.

9. Doubtful Soundings.

The following shoal soundings which have been retained on the present survey appear to be leadsmen's errors and should have been investigated in the field:

		<u>Sounding Depths</u>	
19 feet	lat. 40°32.5', long. 73°57.6'	24 $\frac{1}{2}$	to 28 feet
21 "	" 40°34.0', " 73°54.5'	25 "	27 "
23 "	" 40°35.0', " 73°54.5'	32 "	35 "
10 "	" 40°36.2', " 73°54.5'	13 "	17 "

completed, see 6763

10. Additional Field Work Recommended.

In order to complete the area covered by this survey and at the same time fulfill the intentions prescribed in paragraphs 3 and 6 of the Instructions for the Project, an investigation of the following soundings is necessary. In the case of shoal soundings, definite recommendations regarding their rejection or retention should be made.

a. Shoal soundings originating with various Engineers' surveys discussed in paragraph 7a of this review.

- (1) 8 feet; lat. 40°33.5', long. 73°58.8'; from Bp. 15574 (1913-14). x
- (2) 7 " " 40°33.5', " 73°59.5'; " " 15574 (1913-14). x
- (3) 12 " " 40°33.7', " 73°59.0'; " " 25872 (1932). x
- (4) 9 " " 40°33.3', " 73°58.7'; " " 25779 (1932). x

b. The doubtful shoal soundings discussed in paragraph 9 of this review.

c. If local conditions permit, the middle portion of Sheepshead Bay including the narrow channel at the entrance discussed in paragraph 2 of this review should be fully developed.

d. If considered of sufficient local importance, a development of Irish Channel (approx. lat. 40°36', long. 73°54') should be made. (See par. 6b).

*Chart 540
 9 x 12 ft. soundings only ones now retained on chart
 because of later U.S. E. surveys. W. G. Bunker, 14/2/45*

*Beard
filled*

11. Note to Compiler.

The shoreline shown on this sheet cannot be considered correct until after a comparison has been made with the air photo compilation.

12. Superseding Previous Surveys.

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

H- 47 (1835)	in part.	H-1358 (1877)	in part.
H- 53 (1835)	" "	H-1359 (1877)	" "
H- 54 (1840)	" "	H-1506 (1881)	" "
H- 59 (1841)	" "	H-1662 (1885)	" "
H- 129 (1841)	" "	H-1834 (1888)	" "
H- 207 (1848)	" "	H-2405 (1899)	" "
H-526 (1855-56)	" "	H-2605 (1902)	" "
H-1189 (1873)	" "	H-3697 (1914)	" "
H-1275 (1872-74)	" "	H-4868 (1928)	except as noted in par. 6b.
H- 56 (1840)	" "		
H- 62 (1836)	" "		

13. Reviewed by - Harold W. Murray, August 3, 1935, and R. J. Christman, August 12, 1935.

Inspected by - R. L. Johnston.

Examined and approved:

K. T. Adams

K. T. Adams,
Asst. Chief, Division of Charts.

P. O. Robert
Chief, Division of Charts.

F. S. Gordon

Chief, Section of Field Work.

Stude

Chief, Division of H. & T.

applied to chart 540. Dec 20, 1945 W.A.B. (new chart)