

5368

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: New York

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 2 5368
Hydrographic }

LOCALITY

Great South Bay, L. I.

Nicoll Bay to Cedar Island

1933

CHIEF OF PARTY

Raymond P. Eymen

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET No. 2, GREAT SOUTH BAY, LONG ISLAND, N.Y.

Date of Instructions:

February 25, 1933.

Survey Methods:

The work done on this sheet was accomplished with four gasoline launches and a skiff with outboard motor. The launches are as follows:-

<u>Name</u>	<u>Length</u>	<u>Draft</u>
Whale	30'	2 $\frac{1}{2}$ ft
Rosana	39'	3 "
Kate	29'	2 $\frac{1}{2}$ "
Eva	33'	2 $\frac{1}{2}$ "

The position numbers and day letters of all launches are inked in blue. For work done with the skiff with outboard motor, red ink was used.

Signals on the sheet were located by triangulation, topography and sextant cuts and fixes.

Standard survey methods were used through-out. Shallow depths were taken with a sounding pole and deeper depths were taken with lead-line.

Tides:

A standard automatic tide gage was maintained throughout the season at Fire Island Lighthouse. This gage was used as the standard station after simultaneous comparison with the gage at Whitehall St., New York City.

Four portable automatic tide gages were maintained in the following places: Bayshore, Babylon, Oak Beach. Mean values were obtained for each of these gages by simultaneous comparison with Fire Island Lighthouse gage. Soundings on this sheet were reduced to the gage in that vicinity. Since none of the tides on this sheet have a mean range of more than one foot, all soundings are reduced to a datum one half foot below mean water level. (See Instructions, paragraph 22.)

Descriptive Report to accompany Hydrographic Sheet No. 2,
Great South Bay, Long Island, N.Y. - Continued.

Channels:

Snakehill Channel is narrow and is marked by brush stakes which are maintained by the local fishermen. The brush stakes are put in place in the spring and remain until late fall when they are usually destroyed by ice. Snakehill Channel carries a controlling depth of about 5 feet and can only be used by shallow draft boats. The south end of Snakehill Channel is some times partially closed with a shifting sand bar.

Dickerson Channel has an average width of about 200 meters and carries a controlling depth of about 6 to 7 feet. The channel is marked by buoys. On account of ice during the winter, these buoys are not maintained in place except during the summer months.

West Channel has an average width of about 200 meters and carries a controlling depth of about 14 feet. The channel is well marked by buoys except during the winter.

Range Channel is 200 to 300 meters wide and carries a controlling depth of 6 to 7 feet. It is marked at the north end by a buoy with flashing light and the south end is marked by a black can buoy. The buoys are only maintained in place during the summer months. On account of shallow depths Range Channel is only used by shallow draft boats, the deeper draft vessels use East Channel, just east of Range Channel.

Main Ship Channel, between Fire Island Beach and the Fire Islands, carries a controlling depth of about 15 to 18 feet and is well marked by buoys except during the winter. This channel and East Channel are used by the deeper draft boats and tugs bound from Fire Island Inlet to Sayville and Patchogue.

Statistics and Tidal Sheet accompany this report.

Respectfully submitted:

J.C. Partington,
Jr. H & G Engr. US C & G S.

Raymond P. Egan,
Chief of Party.

STATISTICS for FIELD SHEET NO. 2.

<u>Date</u>	<u>Boat</u>	<u>Day Letter</u>	<u>Stat. Mi.</u>	<u>No. of Soundings</u>	<u>No. of Positions</u>
Apr. 27	Whale	a	1.4	65	9
" 28	"	b	19.6	832	146
" 29	"	c	12.5	475	84
May 3	Kate	d	3.0	134	23
" 11	Whale	e	26.4	943	144
" 12	"	f	21.7	791	134
" 15	Rosana	g	17.7	660	100
" 16	"	h	18.2	633	96
" 17	"	j	19.1	663	107
" 18	"	k	17.4	593	94
" 19	"	l	22.6	728	117
" 20	"	m	17.8	550	83
June 3	Whale	n	8.7	351	66
" 5	Eva	p	13.8	506	96
" 8	"	q	6.7	249	49
" 9	"	r	3.8	153	33
" 11	"	s	20.7	775	160
" 15	"	t	4.9	192	46
" 16	"	u	11.5	486	99
" 17	"	v	11.6	374	66
" 19	"	w	19.8	699	120
" 20	"	x	16.0	590	106
" 23	"	y	14.2	529	102
" 24	"	z	8.0	288	52
" 26	Skiff	a	13.0	463	90
" 27	"	b	11.7	462	95
" 30	"	c	2.2	109	19
July 1	"	d	6.3	349	70
" 7	"	e	11.1	462	89
" 8	"	f	12.9	501	91
" 10	"	g	6.2	237	49
" 12	"	h	8.7	316	66
" 13	"	j	1.2	46	9
" 14	"	k	9.7	467	89
" 20	"	l	5.9	307	38
" 22	"	m	9.2	461	60
Aug. 17	"	n	1.5	123	17
" 19	"	p	3.5	230	35
" 22	"	q	4.1	253	39
" 25	"	r	8.2	491	89
" 26	"	s	1.0	56	10
Sept. 5	"	t	3.0	187	30
" 6	"	u	4.9	248	23
" 9	"	v	12.0	551	96
" 11	"	w	13.0	507	100
" 12	"	x	10.1	380	70
" 6	"	a'	0.6	48	6
" 8	"	b'	6.3	297	47
" 9	"	c'	21.3	768	118
" 11	"	d'	9.9	468	69
" 12	"	e'	12.1	370	88
" 13	"	f'	12.3	555	93
" 21	Helen C	g'	5.9	194	28
Totals			565.9	22,165	3,845

List of Signals
Hydrographic Sheet Two

Name	Method of Location
Arm	Flagpole Babylon Cove Triang. 1933
Bab	Tank Babylon Triang. 1933
Bag	Topo Sheet D
Bam	" " "
Bath	" " "
Beak	Hyd. cuts p. 6 vol.10
Bee	Oakbeach C.G. Tower Triang. 1933
Ber	Triang. 1933
Big	Topo Sheet D
Bill	Windmill Ocean Beach Triang. 1933
Bog	Topo Sheet D
Bright	Triang. 1933
Bulk	Topo Sheet B
Bun	Topo Sheet D
Bur	Topo Sheet D
By	Presbyterian Ch. Sp. Bayshore Triang 1909
Car	Topo Sheet B
Cant	Hyd. Cuts p.2 vol. 10
Caw	Topo Sheet B
Cap	Triang. 1933
Cod	Topo Sheet D
Col	Topo Sheet D
Con	Conklin Pt. 3 Triang. 1933
Cross	Topo Sheet D
Din	Topo Sheet B
Ding	Topo Sheet D
Doll	Topo Sheet D
Drake	Triang. 1933
East	East Flagpole (Whig Inlet) Triang. 1933
Ex	Topo Sheet D
Fag	Topo Sheet D
Fire	Fire Id. Lighthouse Triang. 1933
Fleet	Triang. 1933
For	Topo Sheet B
Gar	Topo Sheet D
Gas	Gas Tank Bayshore Triang. 1933
Gap	Topo Sheet D
Gob	Topo Sheet D
Gold	Topo Sheet D
Green	Topo Sheet C
Has	Topo Sheet D
Han	Hyd. cuts p. 6 vol. 10
High	Topo Sheet D
Hit	Topo Sheet D
Hop	Topo Sheet D
Island	Triang. 1933

Name	Method of Location
Islip	Gray Tank E. Islip Triang. 1933
Jack	Hyd. cuts p. 10 vol. 10
Jam	Topo Sheet B
Kin	Topo Sheet D
Lag	Topo Sheet D
Las	Tower La Salle Academy Triang. 1933
Lar	Topo Sheet D
Ley	Topo Sheet D
Lie	Topo Sheet B
Life	Triang 1933
Lin	Tank Lindenhurst Triang. 1933
Loft	Topo Sheet D
Look	Lookout Tower C.G. Sta. Triang. 1933
May	Topo Sheet D
Mil	Windmill Tower Triang. 1933
Mit	Topo Sheet B
Mot	Topo Sheet B
Nab	Topo Sheet D
Nal	Topo Sheet D
Nic	Nichols Triang. 1933
Nig	Topo Sheet D
Nor	Topo Sheet D
Nub	Topo Sheet D
Nut	Hyd cuts pp 3&4 vol. 11
Oak	Triang. 1933
Old	Topo Sheet D
Out	Outer Beacon Triang. 1933
Pale	Presbyterian Ch. Sp. Babylon Triang. 1933
Pav	Topo Sheet D
Peak	Topo Sheet B
Ped	Topo Sheet D
Pink	Topo Sheet D
Pol	Topo Sheet D
Pop	Hyd. cuts pp.3&4 vol 11
Pres	Methodist Ch. Sp. Bayshore Triang. 1909
Rad or Radio	Radio Tower Sayville Triang. 1932
Ram	Topo Sheet D
Red	Topo Sheet C
Ree	Topo Sheet D
Rek	Topo Sheet B
Rex	Hyd. cuts p.6vol 10
Rub	Hyd. cuts p. 39 vol. 9
Sag	Topo Sheet D
Sal	Tank La Salle Academy Triang. 1933
Salt	Tank Saltaire Triang. 1933
Sam	Triang. 1933
Saw	Topo Sheet D

Name	Method of Location
Sep	Topo Sheet D
Sid	Topo Sheet D
Sign	Topo Sheet C
So	Topo Sheet D
Sop	Topo Sheet D
Spire	Topo Sheet D
Sta	Topo Sheet D
Strong	Triang. 1933
Tall	Flagpole W. Fire Island Triang. 1933
Tel	Hyd. cuts p. 25 vol. 11
Tim	Topo Sheet B
Tin	Topo Sheet D
Tow	Tower Oak Island Triang. 1933
Tree	Topo Sheet D
Ty	Topo Sheet B
Up	Topo Sheet D
Vat	Hyd. cuts p. 38 vol. 9
Vim	Topo Sheet D
Wat	Standpipe Bayshore Triang. 1933
Wave	Topo Sheet D
Web	Topo Sheet B
Wes	Tank West Sayville Triang. 1933
West	West Flagpole (Whig Inlet) Triang. 1933
Why	Hyd. cuts p. 7 vol. 13
Wood	Tank Point O'Woods Triang. 1933
Yam	Hyd. cuts p. 25 vol. 11
Yel	Square Yellow Tower Triang. 1909
Yo	Topo Sheet D

Smooth Sheet No. 2 and the records for it have been examined by the Inspector, New York Field Station.

Soundings not plotted by the drafting unit are shown on a sheet attached to Sheet No. 2. The records for this sheet had been sent to the Washington Office before the photostat to scale was available to plot the shore line of some of the creeks. These few soundings can only be plotted with reference to the topography.

With this exception the sheet seems to be complete.

George D. Cowie

George D. Cowie, Inspector,
New York Field Station.

LAC

Division of Hydrography and Topography:

February 5, 1934.

✓ Division of Charts:

Tide Reducers are approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 5368

Locality Nicoll Bay to Cedar Island, Great South Bay, Long Island, N.Y.

Chief of Party: R. P. Eyman in 1933

Plane of reference is mean low water (0.5 ft. below half tide level), reading

2.3 ft. on tide staff at Babylon

4.0 ft. below B. M. 6

2.7 ft. on T.S. at Bayshore


4.3 ft. below B.M. 1

2.7 ft. on T.S. at Fire Island Lighthouse

16.8 ft. below B.M. 7

Height of mean high water above plane of reference is approximately 1-foot.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5368

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. 2

REGISTER NO. 5368

State New York

General locality Great South Bay, L.I.

OK EPC

Locality Nicoll Bay to Cedar Island

Scale 1 : 20,000 Date of survey April to Sept., 19 33

Vessel Leased launches.

Chief of Party Raymond P. Eyma

Surveyed by J.C. Partington, G.A. Stanton, R.A. Philleo, M.O. Witherbee
J.C. Tison

Protracted by J.C. Partington, R.A. Philleo, D.B. Bennett

Soundings penciled by D.B. Bennett

Soundings in fathoms feet

Plane of reference 0.5 foot below mean water level

Subdivision of wire dragged areas by none

Inked by _____

Verified by _____

Instructions dated February 25, 1933

Remarks: _____

SECTION OF FIELD RECORDS

Report on H - 5368
Chief of Party - Raymond P. Eyman
Surveyed by - J. C. Partington, G. A. Stanton,
R. A. Philleo, M. O. Witherbee,
J. C. Tison.
Verified by - H. W. Murray and S. E. Perkins
Inked by - H. W. Murray, E. W. Smith, and
S. E. Perkins.

Surveyed - April to
Sept. 1933
Protracted by,
J. C. Partington
R. A. Philleo
D. B. Bennett
Soundings plotted by,
D. B. Bennett
Topography partially
completed - done by
field party.

This sheet was inspected and field protracting verified by Mr. Murray. ✓
Important channels and canals were likewise inked.

The bouys were checked by Mr. Murray. According to information in the ~~Sounding~~ Sounding Records, they appear to be located by estimated distances from passing lines. In Lat. 40° 40.8', Long. 75° 13.52', a note opposite pos. 4x (blue) records a NUN bouy, and pos. 49x records a CAN bouy. Only the NUN bouy is represented on the chart. ✓

A boat sheet containing a portion of this work is filed with H - 5369. ✓

The use of red letter prime and double prime days have been confused by the field party. The initial red letter day is sufficient, and a single prime day for the next series. The plotter inconsistantly plotted plain and prime days for the 1st series.

Field protracting and plotting were very good. ✓

The precise character of "Fish Traps" was not clearly represented on the boat sheet.

The bouys and wreck outside of the area covered by the hydrography on this sheet, were not verified. It is suggested that they be removed from this sheet, since they are to be found on H - 5370. ✓

The Air Photo Compilation work for this area has not been received in the office up to this time (Mar. 21, 1934), hence the topography can not be completed. The hydrography, in the small canals and creeks on the northern shore of Great South Bay, has not been verified nor inked, because of the necessity of having the topographic sheet.

It will be observed that some of the main channels are distinctly outlined on the chart.

Hydrographic signal "BEAK" could not be identified.

There was no datum reference on the sheet.

The usual depth curves were drawn, and the 3 ft. also drawn.

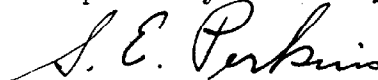
The records conform to the General Instructions. ✓

The sheets which make a junction with this sheet on the East and West, had not been verified at the time of the writing of this report.

The junction of H - 5370 on the South agreed very well. ✓

Mr. Murray collaborated with the writer in ^{the} writing of this report.

Respectfully submitted,



S. E. Perkins

Mar. 21, 1934

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5368.
Great South Bay, L. I. Nicoll Bay to Cedar
Island, New York.
Surveyed April to Sept. 1933.
Instructions dated Feb. 25, 1933 (Eyman).

Chief of Party - R. P. Eyman.
Surveyed by - J. C. Partington, G. A. Stanton, R. A. Philleo,
M. O. Witherbee and J. C. Tison, Jr.
Protracted by - J. C. P., R. A. P. and D. B. Bennett.
Soundings penciled by - D. B. Bennett
Verified by - H. W. Murray and S. E. Perkins.
Inked by - H. W. Murray, E. W. Smith and S. E. Perkins.

1. Records conform to the requirements of the Hydrographic Manual.
2. The plan and extent of development conform to the regulations and satisfy the specific instructions. The topo. control sheets do not show the entire shoreline and air photo compilations are not now available to plot the hydrography in several creeks along the north shore of the bay.
3. Soundings are consistent. Channel lines were run to supplement the regular development system. Aids to navigation are maintained during the summer season only. Beacons are shown on the sheet by circles instead of the usual symbols.
4. Depth curves can be drawn satisfactorily. The 3 foot curve is shown in violet.
5. Junctions with H. 5367b, H. 5370 and H. 5376 are satisfactory.
6. Comparison with H. 1198 (1873) and H. 1481 (1880) shows a fair general agreement but many differences in details. A number of channels have been deepened and new channels dredged across the shoal areas. The survey in 1914 (H. 3707) also shows slightly less water than the new survey in the channels common to the two sheets.

Chart 578 shows the location of the improved channels with notes relative to the controlling depths. Aids to navigation are maintained during the summer season only and many of the private markers are not shown on the chart.

7. Field protracting and plotting were very good. Some of the shoreline of islands and creeks awaits the completion of the air photo compilation. In the latter some of the soundings have not been inked pending the receipt of these topo. sheets.

8. Recommendation. This sheet (H. 5368) should supersede all previous information for charting the area represented.

No further surveys are deemed necessary at this time.

Frequent checking of the controlling depth in channels would seem desirable.

9. Reviewed by R. J. Christman, April 11, 1934.

L. O. Colbert,
Chief, Section of Field Records.

F. B. Borden
Chief, Section of Field Work.

Examined and approved.

L. O. Colbert
Chief, Division of Charts.

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

REVIEW OF PHOTO COMPILATION T-5056 (1935)

Comparison with Other Surveys:

1. T-5013 (1935), plane table control survey on 1:10,000 and 1:20,000 scales showing location of shore-line and signals for Hydrography. The differences in location of objects between this compilation and T-5013 are listed on pages 4 to 6 of the preceding report. These differences have been examined in the office as discussed below.

a. Stations Sly, Club, Fa, Or, Ed, Bun, and Rot, differences in location of 12 to 20 meters in directions from 0° to 60° from North. None of these stations are shown as topographic stations on the printed compilation. Only two are recoverable, Ed, the end of a small dock, and, Or, a tower on the corner of a house. The house and the small dock are shown on the compilation. The photo locations of these stations can be scaled from the celluloid if needed.

Part of the differences noted may be due to errors in locating the objects on the photographs. The banners and flags do not show on the photographs and must have been identified by field inspection. However, the differences are about the same as the differences in location shore-line in this area.

The differences are probably due to error in the plane table traverse which was run up the river without closing on control and is questioned in the plane table descriptive report, page 6. The compilation is on a larger scale in this area and is accepted as correct for this detail.

The hydrographic sheet has been plotted on the plane table control. However, no change in the hydrographic sheet,

H-5367b, seems necessary as the maximum difference is 20 meters. In compiling the charts of this area it is suggested that this shore-line be taken from the compilation and the hydrography swung slightly to fit as was done in compiling the new chart 578. A copy of this report is attached to descriptive report H-5367b and a note has been placed on the plane table sheet referring to the compilation for topographic detail in this area.

b. Stations No Name, Kin, and Bag listed on pages 4 and 5 of the preceding descriptive report. These stations are in the 1:20,000 scale area of T-6013 and were located by a three mile traverse which was adjusted 22 meters in distance (page 7 of the descriptive report T-6013).

The photo plot shows a good intersection for the location of station Bag, difference of 16 meters, but the preceding report, page 5, expresses some doubt as to the accuracy of spotting this point on the photographs and for that reason the plane table position is accepted. The station is not recoverable and does not appear on the printed compilation.

In regard to stations Kin and No Name, the photo plot is not well controlled and the photographs are not clear. The differences may be due to the photo plot, or error in the plane table traverse, or to both. To accurately replot this area as a check would necessitate re-mounting the photographs and possibly additional field inspection, requiring about two weeks of one man's time in this office. Comparison of the plane table survey and the compilation shows the probable error in location to be within 20 meters which is not large when applied to the 1:40,000 scale chart. This

detail has already been applied to chart 578. Due to the press of work at this time replotting of this area, Lat. $40^{\circ} 42'$, Long. $73^{\circ} 10'$ to $73^{\circ} 11.5'$, has been deferred to a later printing of the compilation. The stations are not shown on the printed copies of the compilation.

c. Stations Col, difference of 8 meters. The photo plot has been checked in the office and is accepted as correct. The chimney is shown as a topographic station on the printed compilation.

d. "Cod", difference of 23 meters. Described in the plane table survey report as East chimney stone house. Photo location is the east gable of the house. The house is shown on the compilation and can be seen clearly on the photographs but the chimney does not show on the photographs. The plane table position of the chimney when transferred to the compilation falls on the house but not on the east gable. The photo plot has been checked in this office and the three intersecting cuts are shown on the plane table sheet. The difference here is more likely due to location of different objects. There seems to be no basis for the compiler's assumption that the east chimney is necessarily the east gable. There is also a good possibility that the plane table location is of a chimney near the center of the house and that the description is either incomplete or erroneous.

2. Comparison with the older plane table surveys 1374a (1874) and 3485 (1914) shows changes in the marsh area at Timber Point and numerous changes throughout this area due to filling and construction. The compilation is adequate to supersede these old surveys.

Accuracy:

The estimate of accuracy of the plot of 2 to 4 meters given on page 19 is too high. A better estimate is an accuracy of location of 3 to 5 meters for intersected points and 3 to 10 meters for other detail. This value may be exceeded in the area mentioned on the preceding page.