

7062

Diag'd. on diag. ch. No. 1215-2

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. FA-10245 Office No. H-7062

LOCALITY

State New York
General locality New York, N.Y.
Locality Eastern portion of Jamaica Bay

1945

CHIEF OF PARTY

Ralph L. Pfau

LIBRARY & ARCHIVES

DATE

7062

NOTES AND DATA FOR DESCRIPTIVE REPORT AND PROCESSING
OF HYDROGRAPHIC SURVEY, JAMAICA BAY, N.Y.
(Head of Bay and Grass Haddock Channel)

(Sheet FA-10245-Field No.)

U. S. COAST & GEODETIC SURVEY
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JAN 10 1946

ACC. No. _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

H7062

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

REGISTER NO. ~~H-7026~~⁶²

Field No. FA-10245

State New York

General locality New York, N.Y.

Locality Jamaica Bay.

Scale 1 : 10,000 Date of survey September 6 to November 6, 1945

Instructions dated Verbal Instructions by Supervisor, Eastern District.

Vessel FARIS

Chief of party Ralph L. Pfau.

Surveyed by Ralph L. Pfau.

Soundings taken by fathometer, graphic recorder, hand lead, wire 808 Fathometer & lead line.

Protracted by C.A. Schoene, M.E. Byrd

Soundings penciled by M.E. Byrd

Soundings in fathoms feet at MLW MLLW Feet at MLW

REMARKS:

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NOTES AND DATA FOR DESCRIPTIVE REPORT AND PROCESSING
OF HYDROGRAPHIC SURVEY, JAMAICA BAY, N.Y.
(Head of Bay and Grass Hassock Channel)
(Sheet FA-10245 -Field No.)
H-7062 (1945)

Project.

No project number was assigned, and no detailed instructions issued. The survey was made under verbal instructions given by the Supervisor, Eastern District, U.S. Coast and Geodetic Survey. These instructions called for the survey of the dredged channel in "Head of Bay," but not a complete survey of that area, since additional dredging is contemplated, and for extending the survey down Grass Hassock Channel as far as possible during the season.

Survey Limits.

No definite limits for the survey were set by the instructions. The work accomplished includes the dredged channel in "Head of Bay" to a junction with the old channel in the vicinity of buoy No. 25, and thence into Motts Creek. Some lines were run in the old buoyed channel in "Head of Bay" and also various additional lines, but a complete survey was not made. The survey of Grass Hassock Channel extends from a junction with the work in "Head of Bay" to the Long Island Railroad bridge in the vicinity of Barbadoes Basin.

Vessels and equipment.

The survey was conducted from the FARIS, basing at Vernam Basin, Arverne, New York. Launch No. 102 was used for hydrographic work throughout the survey.

Depths were measured with 808 Fathometer, supplemented by pole and hand lead.

TIDE STATIONS.

A portable automatic tide gage was established on the bulkhead of the Colonial Sand and Gravel Co. in Motts Creek, and maintained throughout the period of the survey. This was the only feasible location for a tide gage in this area. The staff was connected by levels to the bench marks established for Norton Point gage in 1934, and field tide reducers for the gage based on the staff reading corresponding to M.L.W. as determined from the 1934 bench marks.

Tide staffs were established at JoCo Marsh and Beach Channel Bridge, and read as necessary during periods of hydrography.

The following staff readings were determined by leveling to previously established bench marks as corresponding to the plane of M.L.W. and used for determining field tide reducers.

Motts Creek ----- 1.4 Ft.
JoCo Marsh ----- 0.4 Ft.
Beach Channel Brdg. 2.0 Ft.

Tide Stations (Cont'd)

The dividing lines between gages used for field reducers is shown on the boat sheet.

All records for the Motts Creek gage have been forwarded to the Washington Office. The original record of tide staff readings at Jo Co Marsh and Beach Channel Bridge are in Vols. 1 and 2 of the ~~hydrogax~~ sounding records. Checked transcriptions have been forwarded to the Washington Office. ✓

A tabulation of field reducers is being transmitted with other data for the project and also curves plotted from staff readings at Jo Co Marsh and Beach Channel Bridge.

Control.

The control was by triangulation stations and intersection stations of the New York triangulation, points from air photo compilation sheets, and signals located by the party.

With the exception of signals Doc, Cut, and End, which are partially dependent on sextant cuts, the position of all signals located by the party was determined from theodolite cuts from triangulation stations.

Geographic positions have been computed for points located by theodolite cuts and a list of geographic positions - which includes all previously established triangulation and intersection stations necessary for the plotting of the sheet - is included with the data submitted. ✓

A tabulation listing all signals used and their origin and also a tabulation showing the method of location of all points determined by the party is included with these data.

Shoreline and Topography.

Shoreline and topographic detail are from ~~xxxx~~ air photo compilation sheets T-5093 and T-5063. No topography was executed by the party. (of 1934) ✓

Soundings.

Fathometer No. S 71 and fish No. 809116 were used for sounding from A - D days inclusive.

Between D and E days work was done on the fathometer and the same combination of fathometer and fish as used on A-D days was used on E and F days.

Fathometer No. 57 and fish No. 809116 ~~wae~~ used for sounding on G and H days. ✓

Fathometer No. 57 and fish No. 809112 were used for sounding on J - P days inclusive.

The initial setting was 2.0 feet for all days.

Fathometer Corrections.

Fathometer corrections were determined by bar check. Due to wind and current, difficulty was encountered in obtaining bar checks at the deeper depths. ✓

Fathometer Corrections (Cont'd)

The bar checks have been tabulated and checked, curves drawn and checked, and the corrections tabulated and checked.

For the purpose of drawing correction curves, bar checks were combined as follows: (1) A-D days, (2) E-F days, (3) G-H days, (4) J-P days. A single curve was drawn for each group.

This division was based on the combination of fathometer and fish and the circumstances outlined under section titled "Soundings".

Aids to Navigation.

A tabulation of aids to navigation is included with these data. This tabulation includes under a separate heading temporary aids established by the Jamaica Bay Towing Line.

In accordance with instructions from the Supervisor, Eastern District, U.S.C.&G.S., a tracing made from the boat sheet was given the the U.S. Coast Guard, Aids to Navigation Division, in New York City, and it is probable that some of the aids will be shifted in the near future, and additional aids established along the dredged channel in "Head of Bay".

It will be noted that two positions of buoy No. 15 appear on the boat sheet. The most easterly position is that occupied by the buoy at the beginning of the survey, and the other that *shown on smooth sheet* occupied by the buoy at the close of the survey. The cause of this change in position is not known. The Aids to Navigation Division of the U.S. Coast Guard has been informed of the change in position.

Buoys in the area are sometimes struck by sand and gravel barges being towed to and from Motts Creek at the Head of Bay.

Boat Sheet.

The boat sheet, furnished by the Washington Office, is on a scale of 1 : 10,000. After the work was in progress, it was felt that ~~that~~ a larger scale would have been more satisfactory. ✓

It is recommended that the smooth sheet be plotted on a scale of 1 : 5,000.

Soundings shown on the boat sheet have been reduced for tide but not for fathometer corrections.

Work Done on Records.

1. Fathograms Scanned. This scanning was done by relatively inexperienced personnel, and it is recommended that they be rescanned in the Processing Office. ✓
2. Field tide reducers entered and checked.
3. Fathometer corrections entered and checked.

H-7062 (1945)

LIST OF HYDROGRAPHIC SIGNALS.

<u>NAME.</u>	<u>ORIGIN.</u>
Abe	G.Ps, Jamaica Bay, FARIS, 1945.
Big	G.Ps, Jamaica Bay, FARIS, 1945.
Chim	G.Ps, "vicinity of New York" Page 93. "Motts Creek incinerator, chimney, 1931."
Cin	G.Ps, "vicinity of New York" Page 91. "Hammels, incinerator No. 5, Chimney".
Con	G.Ps, Jamaica Bay, FARIS, 1945.
Cut	Cuts, FARIS, 1945. (Theod. cut from Springfield, sextant cuts from Mid and Doo.)
Doo	Cuts, FARIS, 1945. (Theod. cut from P.S. 42, sextant cut from Abe, sextant angles at Doo. - Also shown on T-5063)
Dot	G.Ps, Jamaica Bay, FARIS, 1945.
Ebb	G.Ps, Jamaica Bay, FARIS, 1945.
End	Cuts, FARIS, 1945. (Theod. cut from P.S. 42, sextant cuts from Rip and Sad.)
Fun	G.Ps, Jamaica Bay, FARIS, 1945.
Gas	T-5093
Gum	G.Ps, Jamaica Bay, FARIS, 1945.
Hut	G.Ps, Jamaica Bay, FARIS, 1945.
Mid	G.Ps, Jamaica Bay, FARIS, 1945.
Mott	G.Ps, "Vicinity of New York". Page 91. "Motts Point, Heinsheimer Memorial Hospital for Joint Diseases, ix flagpole, 1931.
Nip	G.Ps, Jamaica Bay, FARIS, 1945.
Odd	G.Ps, Jamaica Bay, FARIS, 1945.
Oil	G.Ps, Jamaica Bay, FARIS, 1945.
Pal	G.Ps, Jamaica Bay, FARIS, 1945.
Pipe	G.Ps, "Vicinity of New York City" Page 91. "Seaside, Jamaica Water Supply Co., Standpipe, 1931".
Point	G.Ps, "New York City and Vicinity", Page 72 . "point, 1931"
Rip	G.Ps. Jamaica Bay, FARIS, 1945.
Rock	G.Ps, "Atlantic Coast Aro" Page 16 of Vicinity of New York lithographed G.Ps. "Queensboro Gas & Electric Co., Tall stack, 1926.
Sad	G.Ps, Jamaica Bay, FARIS, 1945.
School	T-5093 "Brick Chimney". At P.S. 42.
Tank	T-5092. "Tank, (Tank on Roof)".
Twin	G.Ps, "vicinity of New York City". Page 91. "Rockaway Beach, St. Rose of Lima Catholic Church, <u>North</u> twin steeple, 1931".

H-7062 (1945)

LIST OF HYDROGRAPHIC SIGNALS LOCATED BY FARIS.

<u>STATION</u>	<u>THEODOLITE CUTS</u>			<u>FROM:</u>	
	<u>P.S. 42.</u>	<u>SPRINGFIELD.</u>	<u>HEAD</u>	<u>GOOSE</u>	<u>P.S. 124.</u>
Abe	--	x	x	--	x
Big	x	x	-	-	x
Con	x	x	-	x	-
Cut	-	x	*	*	- *
Doc	x	-	-	-	- **
Dot	-	-	X	-	x
Ebb	x	x	x	-	x
End	x	-	-	-	- ***
Fun	-	x	x	-	x
Gum	-	X	x	-	x
Hut	x	-	-	-	x
Mid	x	x	-	-	x
Nip	x	x	-	-	x
Odd	x	x	-	x	-
Oil	x	x	x	x	x
Pal	x	-	-	x	x
Rip	x	x	-	x	-
Sad	x	x	-	-	x

* Also sextant cuts from Mid and Doc.

** Also sextant cut from Abe, and sextant angles at Doc.
This is also an air photo point.

*** Also sextant cuts from Rip and Sad.

Geographic positions have been computed for all of the above signals except Cut, Doc, and End.

Statistics, Hydrographic Sheet of Jamaica Bay
 Field No. FA-10245
 H-7062 (1945)

Vol.	Day Letter	Date	No. Pos.	Stat. Miles
1	a	Sept. 21	59	4.4
1	b	" 24	101	9.2
2	c	" 27	129	12.1
2	d	" 28	22	1.1
3	e	Oct. 12	46	3.5
3	f	" 15	89	6.7
3 & 4	g	" 16	160	14.6
4 & 5	h	" 17	189	16.8
5	j	" 22	93	7.6
5 & 6	k	" 24	171	13.0
6	l	" 26	67	5.2
6 & 7	m	" 29	102	6.6
7	n	" 30	105	7.1
7	p	" 31	53	3.2
			<u>1386</u>	<u>111.1</u>

Total Square Statute Miles - 1.9

Total lead line soundings - 34

H-7062(1945)

Floating Aids To Navigation

Field Sheet No. FA-10245 - Jamaica Bay, N.Y.

Buoy No.	Latitude	Longitude	Depth (Ft.)	Volume	Pos. No.	Date (1945)
Black 29	40°-37.95	73°-44.82	9	1	1 a	21 September
" 31	40 38 04	73 44 79	7	1	2 a	21 September
" 27	40 37 86	73 44 85	11	1	3 a	21 September
" 25	40 37 84	73 45 02	5	1	4 a	21 September
" 23	40 37 71	73 45 18	7	1	5 a	21 September
" 21	40 37 61	73 45 38	5	1	6 a & 7 a	21 September
Red 16	40 37 57	73 45 51	3	1	8 a	21 September
Black 19	40 37 62	73 45 66	5	1	9 a	21 September
Red 14	40 37 59	73 45 84	4	1	10 a	21 September
Black 17	40 37 62	73 45 95	28	1	11 a	21 September
Red 12	40 37 54	73 46 12	5	1	13 a	21 September
Black 15	40 37 48	73 46 45	24	1	14 a	21 September
Red 10	40 37 39	73 46 52	26	1	15 a	21 September
Black 15	40 37 52	73 46 62	19	5	66 k	24 October
" 13	40 37 29	73 46 60	20	5	67 k	24 October
" 7	40 36 73	73 46 78	8	5	1 k	24 October
" 11	40 37 15	73 46 59	17	5	4 k	24 October
" 9	40 36 99	73 46 58	6	5	4 k	24 October
Red 8	40 36 56	73 47 03	7	4	6 h	17 October
" 6	40 36 37	73 47 33	11	4	7 h	17 October
" 4	40 36 26	73 47 47	10	4	8 h	17 October
Black 5	40 36 19	73 47 66	15	4	9 h	17 October
" 3	40 36 09	73 47 86	7	4	10 h	17 October
" 1	40 36 09	73 48 16	12	6	154 k	24 October
Red & Black 40	35 98	73 48 39	14	6	161 k	24 October
Red 2	40 36 04	73 48 32 15	6	6	162 k	24 October

Aids Established by the Jamaica Towing Co.

Channel Marker	40	37.64	73	46.00	1	12 a	21 September
" "	40	37 90	73	45 29.2	3	64 f	15 October
" "	40	37 85	73	45 45.2	3	65 f	15 October
" "	40	37 76	73	45 69.1	3	66 f	15 October
Spar Buoy	40	37 86	73	44 98.1	7	51 p	31 October
Oil Drum Buoy	40	37 86	73	45 11.0	7	52 p	31 October
Channel Marker	40	37 74	73	45 54.1	7	53 p	31 October

Copy checked P.H.

ADDENDUM


HYDROGRAPHIC SHEET NO. H-7062 (Fa 10245 Field)

This sheet was processed in the Hydrographic Section of the Southeastern District, Norfolk, Virginia.

Attention is called to a discrepancy at Latitude $40^{\circ} 37.29'$, Longitude $73^{\circ} 44.50'$ where the line between positions 20d - 22d (green) plots on land on the smooth sheet as well as on the boat sheet. Shoreline and topographic detail was taken from T-5063.(1934)

Positions & soundings were adjusted slightly to conform with shoreline of T-5063

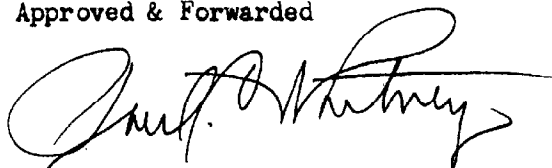
Respectfully submitted,



Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
Jan. 7, 1946

Approved & Forwarded



Paul C. Whitney
Supervisor, SE District

GEOGRAPHIC NAMES
 Survey No. **H7062**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>New York</u>		(title)							USCB	1	
<u>Jamaica Bay</u>		w								2	
										3	
<u>Brant Point</u>										4	
<u>Grass Hassoock Channel</u>										5	
<u>Jo Co Marsh</u>			(location one tide staff)							6	
<u>Green Point</u>										7	
<u>Head of Bay</u>										8	
<u>Motts Creek</u>			(location of one tide staff)							9	
										10	
										11	
			Names underlined in red approved								12
			by L. Heck on 6/10/17								13
										14	
<u>Beach Channel Bridge</u>			(location of one tide staff)							15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Hydrographic Surveys (Chart Division)

H7062

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets 1....; sounding vols. ..7...; wire drag vols.;
 bomb vols.; graphic recorder rolls 14....;
 special reports, etc. 1 folder of Bar Checks and Correction Curves...
 Tide Reducers Etc. sent to GTZ & G H. GTZ is Lib. File. 851-GTZ-1945P-66627
 GH " " 851-GH-1945P-66626

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

Number of positions on sheet		1377
Number of positions checked		81
Number of positions revised		6
Number of soundings revised (refers to depth only)		14
Number of soundings erroneously spaced		4
Number of signals erroneously plotted or transferred		-
Topographic details	Time	6 hrs
Junctions	Time	None
Verification of soundings from graphic record	Time	12 hrs
Verification by <i>Haven Wick</i>	Total time	146 hrs
	Date	9 June 47
Reviewed by <i>J.A. Dinmore</i>	Time	27 hrs
	Date	June 27 '47

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7062

FIELD NO. FA-10245

New York, Eastern portion of Jamaica Bay
Surveyed in September - November, 1945 Scale 1:10,000
Project No. Verbal Instructions

Soundings:

808 Fathometer
Hand lead
Pole

Control:

Sextant fixes on shore signals

Chief of Party - R. L. Pfau
Surveyed by - R. L. Pfau
Protracted by - C. A. Schoene, M. E. Byrd
Soundings plotted by - M. E. Byrd
Verified and inked by - H. Nichols
Reviewed by - T. A. Dinsmore, June 27, 1947
Inspected by - H. W. Murray

1. Shoreline and Signals

The source of the shoreline and signals is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

Within the limits of the survey, the usual depth curves were adequately delineated. As noted in the Descriptive Report, a complete survey was not made.

Extensive mud flats extend out from shore. Most of the channel area has been dredged but the dredging has been sporadic in some localities.

4. Adjoining Surveys

No contemporary surveys by this Bureau join the present survey. Charted information will, however, adequately join the present survey.

5. Comparison with Prior Surveys

- a. H-129 (1841), H-1392 (1878) and H-3705 (1914), scales 1:10,000

Comparison of the above surveys with the present survey reveals radical changes in depths and location of channels as well as shoreline. These surveys have been superseded by later surveys and no further consideration is necessary.

- b. H-5733 (1934) 1:10,000

This survey covers the entire area of the present survey. North of lat. $40^{\circ} 37.0'$, dredging has created a new channel through Head of Bay. Reclamation of marsh and mud flats to form additional land for the Idlewild Airport has moved the shoreline 400 meters south to its present position at lat. $40^{\circ} 37.60'$, long. $73^{\circ} 46.30'$. Depths in the south (or old) channel in Head of Bay show only slight changes and are generally in good agreement on the two surveys.

Little change has taken place south of lat. $40^{\circ} 37.0'$. In this area, agreement of depths is generally good. However, differences of 1 to 2 feet occur occasionally.

The 3-ft. sounding (charted) falling in present 5-ft. depths at lat. $40^{\circ} 36.09'$, long. $73^{\circ} 47.93'$, should be disregarded. Close development on the present survey clearly indicates a general deepening over this shoal area and establishes a present least depth of 5 feet.

The present survey supersedes this prior survey within the common area.

6. Comparison with Chart 542 (Latest print date of 3/3/47)

- a. Hydrography

Charted hydrography originates with the previously discussed surveys supplemented by advance information of the present survey contained in Chart Letter 703 (1945) and blueprint 40317 (1945). The verified information on the present survey should supersede the charted information.

Three piles (charted) falling in present 14-ft. depths at lat. 40° 36.58', long. 73° 47.15' should be retained. Originating with Chart Letter 684 (1932), the piles do not appear on either H-5733 (1934), T-5063 (1934) or the present survey. In the absence of a specific investigation, removal of the piling is not considered advisable.

b. Dredged Channels

Although greater depths generally prevail, 6 feet is the maximum depth that can now be carried through Head of Bay to Motts Creek.

c. Aids to Navigation

As most of the aids to navigation located on the present survey have subsequently been changed in character or position, a comparison with the present chart would serve no useful purpose.

7. Condition of Survey

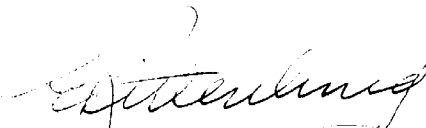
- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting is neat and carefully executed.

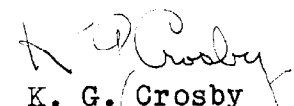
8. Compliance with Project Instructions

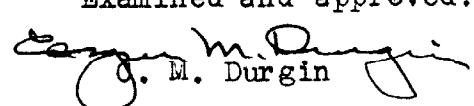
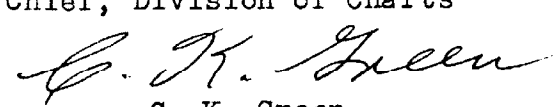
This survey was executed in compliance with verbal instructions.

9. Additional Field Work

This is an excellent basic survey and no additional field work is necessary. Continued dredging in this area, however, may necessitate a resurvey at some future period, and at which time the existence of the three piles discussed under paragraph 6a should be investigated.


I. E. Rittenburg
Chief, Nautical Chart Branch


K. G. Crosby
Chief, Section of Hydrography

Examined and approved:

G. M. Durgin
Chief, Division of Charts

C. K. Green
Chief, Division of Coastal Surveys

HW

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography:~~

19 March 1946

Division of Charts: H. W. MURRAY

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 7062

Locality Jamaica Bay, Long Island, New York.

Chief of Party: R. L. Pfau in 1945
Plane of reference is mean low water, reading
1.4 ft. on tide staff at Motts Creek
8.6 ft. below B. M. 1
0.4 ft. on tide staff at Jo Co Marsh
5.6 ft. below B. M. 1
2.0 ft. on tide staff at Beach Channel Bridge
14.8 ft. below B. M. 1

Height of mean high water above plane of reference is 5.2 feet.

Condition of records satisfactory except as noted below:

L. K. Green
Chief, Division of Tides and Currents.

NAUTICAL CHARTS BRANCH

SURVEY NO. H7062

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7-21-41	542	<i>[Signature]</i>	Before After Verification and Review <i>[Signature]</i> <i>[Signature]</i>
			Before After Verification and Review
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.