6346

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

DESCRIPTIVE REPORT

Topographic / *Hydrographic* } *Sheet No.* 6346

State ~~Offshore~~ New Jersey

LOCALITY

Approaches to New York Harbor.
Off Barnegat Inlet

193 8

CHIEF OF PARTY

Frank S. Borden

U. S. GOVERNMENT PRINTING OFFICE

6346

300
312

Form 537
Ed. Dec., 1930

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. 42

REGISTER NO. 6346 H 6346

State ~~Off-shore~~ New Jersey

General locality Approaches to New York Harbor

Locality Off Barnegat Inlet

Scale 1:40,000 Date of survey July 22 - August 9 1938

Vessel U.S.C. & G.S.S. OCEANOGRAPHER

Chief of Party Frank S. Borden

Surveyed by ~~Ship's Officers~~ J.H Brittain, E.B. Latham

Protracted by John C. Mathisson,

Soundings penciled by John C. Mathisson

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by See H.D. 6343

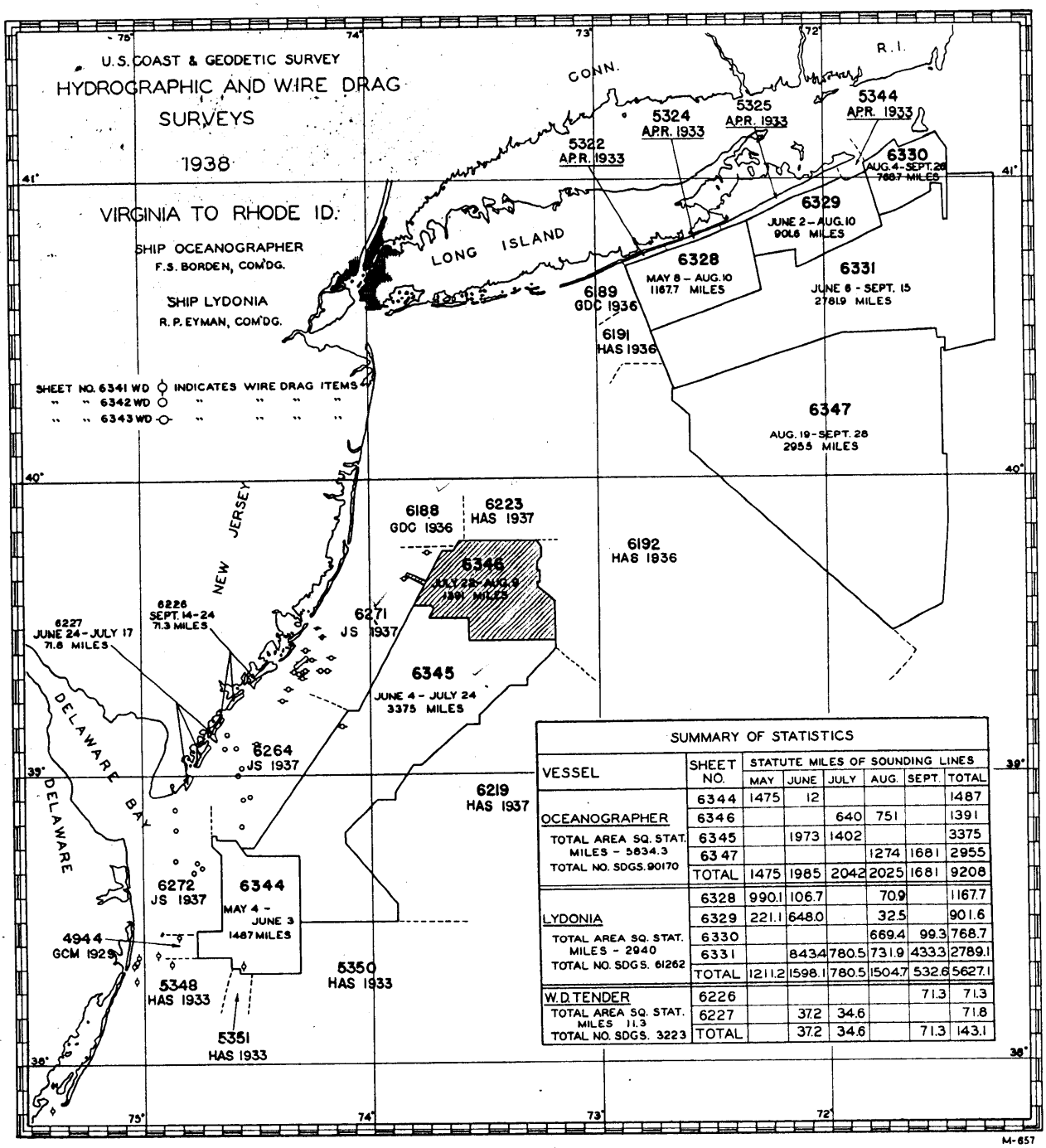
Inked by Harold W. Murray

Verified by "do"

Instructions dated March 4, 1938, 19

Remarks:

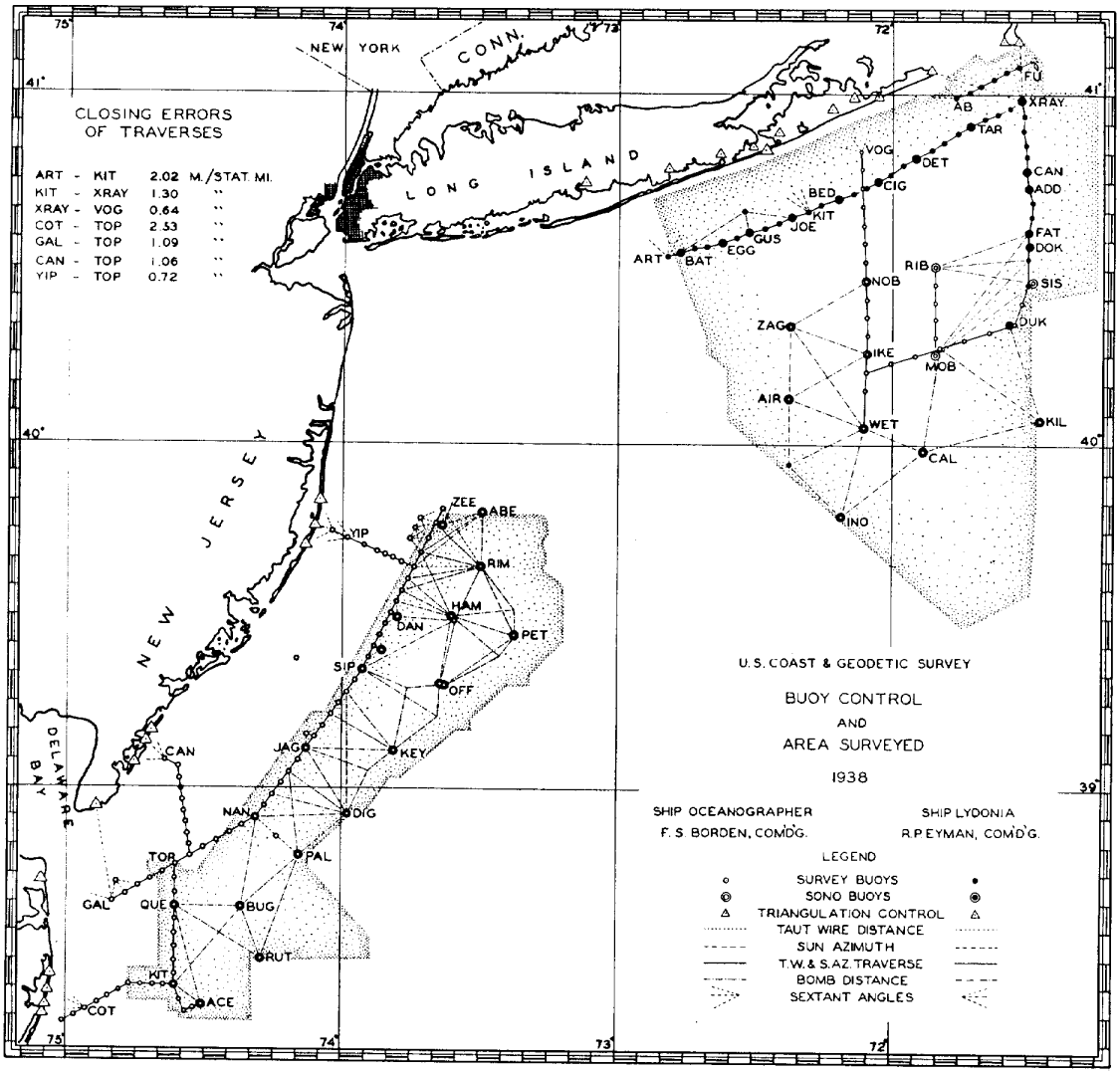
U. S. GOVERNMENT PRINTING OFFICE: 1932



SUMMARY OF STATISTICS

VESSEL	SHEET NO.	STATUTE MILES OF SOUNDING LINES					
		MAY	JUNE	JULY	AUG.	SEPT.	TOTAL
OCEANOGRAPHER	6344	1475	12				1487
	6346			640	751		1391
TOTAL AREA SQ. STAT. MILES - 5834.3	6345		1973	1402			3375
TOTAL NO. SDGS. 90170	6347				1274	1681	2955
	TOTAL	1475	1985	2042	2025	1681	9208
LYDONIA	6328	990.1	106.7		70.9		1167.7
	6329	221.1	648.0		32.5		901.6
TOTAL AREA SQ. STAT. MILES - 2940	6330				669.4	99.3	768.7
TOTAL NO. SDGS. 61262	6331		843.4	780.5	731.9	433.3	2789.1
	TOTAL	1211.2	1598.1	780.5	1504.7	532.6	5627.1
W.D. TENDER	6226					71.3	71.3
TOTAL AREA SQ. STAT. MILES 11.3	6227		37.2	34.6			71.8
TOTAL NO. SDGS. 3223	TOTAL		37.2	34.6		71.3	143.1

M-657


CLOSING ERRORS OF TRAVERSES
ART - KIT 2.02 M./STAT. MI.
KIT - XRAY 1.30 "
XRAY - VOG 0.64 "
COT - TOP 2.53 "
GAL - TOP 1.09 "
CAN - TOP 1.06 "
YIP - TOP 0.72 "
NEW YORK
CONN.
LONG ISLAND
NEW JERSEY
DELAWARE BAY
U.S. COAST & GEODETIC SURVEY
BUOY CONTROL
AND
AREA SURVEYED
1938
SHIP OCEANOGRAPHER
F. S. BORDEN, COMD'G.
SHIP LYDONIA
R.P. EYMAN, COMD'G.
LEGEND
SURVEY BUOYS
SONO BUOYS
TRIANGULATION CONTROL
TAUT WIRE DISTANCE
SUN AZIMUTH
T.W. & S.AZ. TRAVERSE
BOMB DISTANCE
SEXTANT ANGLES

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET REGISTER NO. 6346 (1938)

1938

INSTRUCTIONS:

Instructions authorizing this survey were contained in the Supplemental Instructions dated March 4, 1938 which were instructions for the continuation of Project H. T. 207, under the original date of May 16, 1936.

LIMITS:

This sheet embraces an area east of Barnegat Inlet, lying between the 12 fathom curve on the west and extending offshore to 21 and 22 fathoms. The southern limits of the area is at Latitude 39°-28' and extends northward to Latitude 39° - 48'. The inshore limit of the survey is at Longitude 73° - 52' and it extends offshore to Longitude 73° - 12'.

The sheet joins the contemporary survey shown on Sheet No. 6345 (1938) on the south. On the west, junction is made with the previous survey shown on Sheet No. 6271 (1937) and on the north with Sheet Nos. 6188 (1936) and 6223 (1937) On the east, the survey joins Sheet No. 6192.

The areas of the previous surveys and contemporary surveys as they join this sheet, which is cross-hatched in red, are shown on the sketch which forms the frontispiece of this report.

SURVEY METHODS:

The control for this survey was obtained from the northern terminus of the buoy traverse line established off the New Jersey Coast during the 1938 field season. The adjustment and other details of this control are contained in a special "Report on Buoy Control" which is submitted with the season's records.

With the exception of the nine hydrographic lines immediately adjacent to the line of buoys, this survey is controlled by bomb distances from sono-radio buoys incorporated in the traverse line or sono-radio buoys located to the east of the buoy line by a series of bomb distances which were plotted on aluminum mounted sheets. The details of these locations are also discussed in the "Report on Buoy Control". The nine lines of hydrography adjacent to the buoy line were controlled by sextant angles on three buoys as a general rule but the first line to the west of the buoy line was controlled by cross bearings and an occasional angle to two buoys.

For the methods of reducing bomb distances in seconds to meters, reference is made to the Descriptive Report for Sheet No. 6344 and also the "Report on Buoy Control".

All soundings on this sheet were obtained with the Dorsey Fathometer No. 1. For a discussion of the methods of reductions of these soundings, see the Descriptive Report for Sheet No. 6344.

METHODS USED IN SMOOTH PLOTTING:

The smooth sheet projection for this sheet was made aboard the OCEANOGRAPHER and immediately after the projection was made and checked the positions of the sono-radio buoys were plotted on the sheet and checked. After these locations were on the sheet, distance circles at intervals of 5,000 meters were drawn from each of the sono-radio buoys as needed to cover the area of the survey. These circles were placed on the sheet in pencil.

In plotting R.A.R. positions on the scale of this projection and with the meter scales available, it was necessary to divide the total distance from the nearest distance circle by four and use the 1:10,000 meter bar (as was done in plotting this sheet) or divide by two and use a 1:20,000 meter bar. After working over the sheet for several weeks in adjusting the lines etc., these distance circles in pencil became quite dim and almost impossible to recover and at several places it was necessary to recover parts of arcs and re-draw the distance circles in order to measure distances. If it did not present too great a problem in reproduction, it is recommended that these distance circles be drawn on the smooth sheet in a light shade of blue ink or some other color that would not reproduce. If this were done the "R.A.R. Plotting Device", a series of concentric circles, could be used in plotting the positions which would reduce the time in plotting materially. With the present use of pencil circles, it is impossible to see the distance circles through the celluloid on which the plotting device is made.

Arcs not inked in office

As a rule, the arcs for only one line were swung at a time and the line adjusted and inked before proceeding to the next line. In making the dead-reckoning plot for a line, a speed factor was determined between well fixed positions, usually positions resulting in three arc intersections, and the dead reckoning plot made on time. With this plot made on thin tracing paper, the arcs which were drawn on the sheet in pencil, were accepted or questioned in the sounding volumn. After the adjustment of the line the distance arcs were inked for a short distance on either side of the position in a distinctive color assigned to each sono-radio buoy.

Gyro compass bearings were obtained to buoys at every opportunity and these were recorded in the sounding volumn as read. In plotting these on the sheet, a uniform correction of minus one degree was applied. This correction was determined during the field season by various amplitude sights and bearings on ranges etc., to arrive at the gyro compass error.

The soundings on this sheet, except are plotted in feet. All soundings recorded are shown on "turn abouts" where there is insufficient control to definitely fix the position of the line.

DISCREPANCIES:

The crossings of sounding lines on this sheet are, as a general rule, very good. On 188 crossings on this survey discrepancies are as follows:

31.9 % are crossings in exact agreement
44.7 % are one half foot or less
69.2 % are one foot or less
82.4 % are one and one half feet or less
92.5 % are two feet or less
95.2 % are two and one half feet or less
98.4 % are three feet or less.

The three crossings in excess of three feet are as follows:

1. A six foot crossing between Positions 20 and 21 G day and Positions 141 and 142 L day (on turn) at Latitude 39° - 38' Longitude 73° - 31'. This crossing is at the extreme southwest point of a shoal and a slight displacement of lines would bring the crossing in agreement. Also, it is possible that a shoaler sounding appeared on the fathometer on the line between Positions 20 and 21 G day which was not observed by the records. Several deeper sdg's on G day omitted.

2. & 3. The soundings between Positions 146 and 147 C day where they cross the line of soundings between Positions 115 and 116 B day and Positions 80 and 81 B day (converging lines), at Latitude 39° - 28' Longitude 73° - 13', cross at approximately five feet. This is no doubt due to slight displacement on one of the lines over a somewhat irregular bottom. Portion of B day omitted.

There is appended hereto the rough draft of the analysis of sounding crossings. The lines containing the shoal soundings are indicated with an asterisk and the shoal soundings tabulated in the column on the right edge of the pages.

COMPARISON WITH CONTEMPORARY SURVEYS:

For a discussion of the comparison with the contemporary survey Sheet No. 6345 (1938) to the south of this survey, see page 3 of the Descriptive Report for that sheet.

~~COMPARISON WITH PREVIOUS SURVEYS:~~

Junction is made with Sheet No. 6192 at the eastern limits of this survey. The soundings on that sheet are plotted in fathoms only and a detailed comparison is not possible. The crossings on the southern half of this junction below the middle latitude of the survey shows discrepancies from one to thirteen feet with the maximum appearing approximately on Position 141 C day at Latitude 39° - 29.5', Longitude 73° - 11'. The soundings cross on the northern half of this junction much better and vary between a flat crossing and ~~five~~ nine feet with the average around 2 feet. It has been noted that the Review of Sheet NO. 6192 states that the Fathometer did not always operate well while making the previous survey, No. 6192. *Butt junction made.*

On the west the survey joins Sheet No. 6271. The crossings on this survey are very good and most are flat crossings. There is one four foot crossing on Position 6 J day which is also the deepest sounding in the vicinity on the contemporary survey. *Accepted.*

Two previous surveys join this survey along the northern limits. These are Sheet Nos. 6188 and 6223. The junction with Sheet No. 6188 is very good over most of the area and could be considered to be in agreement except for a five foot crossing at Latitude 39° - 46.2', Longitude 73° - 36'. A slight change in the line would make the crossing agree within two feet. *Accepted.*

The junction with Sheet No. 6223 between Longitude 73° - 18' and 73° - 32' is satisfactory. West of the latter, the agreement is not as good. The soundings vary from one to five feet between the two surveys. *Accepted.*

COMPARISON WITH PREVIOUS SURVEYS

The survey was also compared with the published charts covering the area, Chart Nos. 1216 and 1108. The agreement was exact in some areas while discrepancies exist that are as much as 25 feet in the area of the 24 fathom sounding on the present chart at Latitude 39° - 32.8', Longitude 73° - 18.3'.

A tracing paper over-lay, showing the soundings at junctions from previous surveys, is being transmitted with the sheet. *Destroyed by Reviewer*

TIDAL NOTE:

Tide reducers for this sheet were taken from the tabulated hourly heights from the tide station at Atlantic City, using the same range but taking the time to be one half hour earlier.

Respectfully submitted,

John C. Mathisson.

John C. Mathisson, Jr. H. & G. Eng'r.
Ship OCEANOGRAPHER.

Approved and Forwarded.

Frank S. Borden

Frank S. Borden, Comdr., C&GS.,
Commanding Ship OCEANOGRAPHER.

STATISTICS

SHEET REGISTER NO. 6346 (1938

DATE	DAY LETTER	STAT. MILES.	NO. SOUNDINGS	NO. POSITIONS
July 22, 1938	A	18	237	20
" 26 "	B	155	1406	147
" 27 "	C	146	1501	155
" 28 "	D	165	1582	179
" 29 "	E	156	1530	149
August 4, 1938	F	14	124	17
" 5 "	G	199	1906	198
" 6 "	H	70	697	86
" 7 "	J	146	1443	193
" 8 "	K	157	1490	158
" 9 "	L	165	1495	148
	Totals	1391	13411	1396

Area 542.5 Sq. Stat. Miles

Soundings & Crossings.

* indicates shoal sdg. on line.

BETWEEN E-W. LINE	BETWEEN N-S LINE	DISCREPANCY 0'	½'	1'	1½'	2'	2½'	3'	4'	5'	6'	Larger	Shoal Depth +	Remarks
74 B	70 B	✓											119'	
80-81 B	115-116 B *				✓								133	
82-83 B	115-116 B *						✓						132	
80-81 B	115-116 B *					✓							139	
82-83 B	117-118 B *			✓									133	
1-2 C	145 B *			✓									86	
1 C	47-48 B *		✓										85	
124-125 D *	45-46 B		✓										84	
42-43 B	129-130 D *			✓									78	
14-15 F *	11-12 B				✓								61	
15-16 F	34-35 B	✓											66	
15-16 F	138-139 D *					✓							81	
16-17 F	168-169 D *			✓									82	
17 F *	14 A			✓									79	
8-9 G	10-11 B *			✓									64	
7-8 J	12-13 B	✓											59	
7-8 J	33-34 B *				✓								65	
8-9 J	139-140 D *							✓					85	steep slope.
8-9 J	167-168 D *			✓									91	"
81-82 H *	12-13 B *					✓							65	sdg 2 bet 12-1
80-81 H	33-34 B	✓											67	
80-81 H	140-141 D	✓											76	
79-80 H	166-167 D	✓											104	steep slope.
79 H *	13 A *			✓									76	
78-79 H	4 H *			✓									80	
78-79 H	51-52 H *		✓										90	
78-79 H *	56-57 H				✓								89	
18-19 H	42 H *			✓									114	
3-4 K	42-43 K	✓											112	
3-4 K	65-66 H *			✓									116	
145-146 C	117-118 B *							✓					138	weak control
146-147 C	115-116 B *									✓			133	" ?
80-81 B 146-147 C *	converging lines									✓			127	" ?
77-78 D	151-152 C	✓											109	
7-8 D	151-152 C *					✓							109	* on turn
145-146 C	15-16 D *			✓									136	
TOTAL (this sheet)		8	3	12	4	4	1	2	0	2				

Between		Discrepancy											Shoal Depth	Remarks
E-W Line	N-S Line	0	½	1	1½	2	2½	3	4	5	6	Larger		
138-139 C	17-18 D *		✓										126	
56 C	19 D *		✓										137½	Positions very close.
17-18 C	34-35 D *				✓								111	
34-35 C *	35-36 D				✓								110	
48-49 C	35-36 D	✓											114	
69-70 C *	36-37 D			✓									114	
92-93 C	36-37 D	✓											115	
109-110 C	37-38 D	✓											114	
125-126 C *	37-38 D		✓	✓									109½	
126-127 B *	37-38 D			✓									106	
105-106 B *	38-39 D				✓								104	
90-91 B *	39 D					✓							107	
68-69 B	39-40 D	✓											120	
68 B	42-43 D *		✓										111	
90-91 B *	42-43 D			✓									103	
105-106 B *	43-44 D					✓							104	
126-127 B *	43-44 D		✓										110	
125-126 C *	44-45 D			✓									114	
110-111 C	44-45 D	✓											117	
91-92 C *	45-46 D				✓	✓							113	
77-78 C *	51-52 D			✓									129	
42-43 C	52-53 D *			✓									124	
34-35 C *	59-60 D			✓									110	
17-18 C *	60 D			✓									111	
74-75 D	145-146 B	✓											86	
74-75 D	46-47 B	✓											84	
76-77 D	46-47 B *			✓									84	
76-77 D	146-147 B *				✓								84	
123-124 D	146-147 B	✓											88	
2 E *	18-19 A						✓						73	
53 E *	19-20 A			✓									79	
54-55 E *	177-178 D			✓									73	
54-55 E	130-131 D *			✓									69	
55-56 E	40-41 B	✓											71	
56-57 E	40-41 B	✓											70	
57-58 E	130-131 D *			✓									70	
	Total (This Sheet)	10	✓	13	✓	2	1							

BETWEEN		DISCREPANCY												
E-W Line	N-S Line	0	1/2	1	1½	2	2½	3	4	5	6	Larger	Shoal-DEPTH	REMARKS.
57-58 E	178-179 D*		✓										78	
57-58 E	19-20 A					✓							55	
86-87 E* 25-26 E	Converging line		✓										127	
120-121 E*	18-19 A					✓							69	
121-122 E	175-176 D*			✓									66	
121-122 E	132-133 D*		✓	✓									68	
123 E	17 F	✓											79	16m Buoy JEB
123-124 E*	2-3 H		✓										78	
123-124 E*	52-53 H		✓										89	
124-125 E*	55-56 H					✓							91	
10 G	169-170 D	✓											74	
10-11 G*	14-15 A				✓								77	
11-12 G*	1-2 H		✓										81	
12-13 G	52-53 H*					✓							91	
12-13 G*	55-56 H							✓					95	✓ Chk this x'ing
91-92 E 34-35 G*	overlapping lines			✓									129	
55-56 G*	17-18 A			✓									70	
57 G*	173-174 D				✓								72½	
57-58 G*	16-17 A		✓										72½	
83-84 G*	55 H					✓							97	
83-84 G*	53-54 H				✓								95½	
83-84 G	1-2 H	✓											8X	
108-109 G	15-16 A	✓											76	
110-111 G	16-17 A	✓											74	
120-121 G	70-71 G*					✓							112	
70-71 G*	144-145 G						✓						110	Both on turn.
120-121 G*	145-146 G				✓								106½	
146-147 G	71-72 G	✓											109	E-W on turn.
31-32 G*	157-158 G				✓								123	N-S on turn.
159-160 G	31 G*				✓								123	
180-181 G	30-31 G*				✓								123	E-W on turn.
10-11 J	65-66 H*		✓	✓									115	
10-11 J*	66-67 H			✓									116	
71 J	30 H*					✓							172	
71-72 J	31-32 H*		✓										111	
88-89 J	32-33 H	✓											113	
	Total	7	9	4	7	7	1	1						

BETWEEN		DISCREPANCY.												
E-W LINE	N-S LINE	0	½	1	1½	2	2½	3	4	5	6	larger		Stream Depth
90-91J	32-33H	✓												114
100-101J	79-80J*					✓								109
107-108J	31-32H*			✓										112
67-118J	29-30H*		✓											113
58-59J	108-109J	✓												112
55-56J*	109-110J			✓										111
36-37J	109-110J	✓												111
34-35J*	110-111J					✓								112
17-18J	110-111J*			✓										111
119-120J	67-68H	✓												114
138J*	68-69H				✓									110½
14-15K	110-111J*			✓										111
48-49K*	46-47K			✓										97 Steep slope.
16K*	56-57K			✓										111
34-35K	57-58K	✓												114
59-60K	100-101K*					✓								111 N-S on turn.
75-76K	101-102K*			✓										104
97-98K	57-58K	✓												112
117K*	74-75H		✓											103½
118K*	73-74H				✓									101½
138K	72-73H	✓												102
139-140K	71-72H		✓											104
157-158K	71-72H	✓												106
157-158K	61-62H	✓												101
1-2L	10-11H	✓												92
1-2L	46-47H	✓												96
2-3L	62-63H	✓												102
2-3L	70-71H	✓												111
48-149K	30-31L*			✓										115
46-147K	30-31L	✓												112
29-130K	31L*		✓											109½
127-128K	32-33L*				✓	✓								107½
103-104K	33-34L	✓												111
75-76K	33-34L*			✓										111
58-59K	34-35L	✓												190½
99-100K	35-36L	✓												115
Total		17	4	9	3	3								

BETWEEN		DISCREPANCY											
E-W LINE	N-S LINE	0	½	1	1½	2	2½	3	4	5	6	L	Stat. DEPTH
33-34 K	35-36 L*			✓									122
17-18 K	36-37 L	✓											131
197-198 G	36-37 L	✓											129
22-23 G*	36-37 L	✓		✓									122
39-40 L 196-197 G		✓											126 Converging lines
17-18 K	41-42 L	✓											124
33-34 K	42-43 L*		✓	✓									125½
59-60 K	43-44 L	✓											118
74-75 K	43-44 L*		✓										101½
76 L	148 K*			✓									112
24-25 J	114-115 L*				✓								139
26-27 J	114-115 L*		✓										137
43-44 J	115-116 L	✓											136
47-48 J	115-116 L	✓											136
48-49 J	122-123 L	✓											136
43-44 J*	122-123 L			✓									135
27 J	123-124 L*				✓								135
24-25 J	123-124 L*					✓							137
91-92 J*	132-133 L						✓						111
86-87 J*	132-133 L							✓					113
36-37 H*	134-135 L							✓					121
24-25 H*	134-135 L				✓			✓					122½
11-12 K*	134-135 L			✓									119
15-16 J*	134-135 L				✓								118
115-116 J	135-136 L	✓											116
125-126 J	135-136 L	✓											118
133-134 J	136-137 L	✓											123
13-14 L*	136-13 L				✓								122
7-8 L	137-138 L	✓											123
27-28 L*	137-138 L			✓									124
151-152 K	137-138 L	✓											127
145-146 K	137-138 L	✓											129½
131-132 K	138-139 L	✓											132
125-126 K	138-139 L*				✓								134½
105-106 K	138-139 L	✓											133
77-78 K*	139-140 L					✓							127
		16	3	6	6	2	1	2					

BETWEEN		DISCREPANCY											
E-W LINE	N-S LINE	0	½	1	1½	2	2½	3	4	5	6 larger	Depth	
96-97 K *	139-140 L					✓						126	
36-37 K	140-141 L	✓										124½	
54-55 K *	140-141 L							✓				123	
132-133 E	140-141 L *			✓								118	
20-21 G	141-142 L *										6'	106	on turn.
74-75 G *	142-143 L						✓					117	
93-94 G *	143-144 L			✓								115	
100-101 G	143-144 L	✓										116	
Total	6	2		2		1	1	1			1		
	✓	16	3	6	6	2	1	2					
	4	17	4	9	3	3							
	3	7	9	4	7	7	1	1					
	2	10	5	13	5	2	1						
	1	8	3	12	4	4	1	2		2			
	Total	60	24	46	25	19	✓	6		2	1		✓ 188
% Less Than		31.9	44.7	69.2	82.4	92.5	95.2	98.4					

61 63

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

rae

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 23, 1939.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston.

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 6346

Locality Off Barnegat Inlet, Approaches to New York Harbor.

Chief of Party: F. S. Borden in 1938
Plane of reference is mean low water reading
4.1 ft. on tide staff at Atlantic City
15.8 ft. below B. M. 32

Height of mean high water above plane of reference is 4.1 feet.

Condition of records satisfactory except as noted below:

Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

	Remarks	Decisions
1	For Title	
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GEOGRAPHIC NAMES

Survey No. H-6346

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
New York Harbor										1
Barnegat Inlet										2
										3
										4
										5
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Names underlined in red approved by L. Heck on 6/16/39

M 234

Field Records Section (Charts)

H6346

HYDROGRAPHIC SHEET NO. .....

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

Number of positions on sheet	1396
Number of positions checked	1
Number of positions revised	0
Number of soundings recorded	13,411
Number of soundings revised	4
Number of soundings erroneously spaced	2
Number of signals erroneously plotted or transferred	✓

Date: Aug. 27, 1939

Verification by Harold W. Murray Time: 5 1/4 hrs.

Review by do Time: 6 "

2629

HYDROGRAPHIC SURVEY NO. H6346

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 6 Vols., Wire Drag ___ Vols., Bomb 2 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals ---

Landmarks for Charts (Form 567) ---

Statistics Yes

Approved by Chief of Party D. R. Only

Recoverable Station Cards (Form 524) ---

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

Hydrography: Total Days 11 ; Last Date Aug. 9, 1938

Remarks

3776

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
[redacted] } No. H-6346
[redacted]

received April 28, 1939
registered June 8, 1939
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
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RETURN TO

82	T. B. Reed

✓ JJSC

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6346 (1938) FIELD NO. 42

Off Barnegat Inlet, Approaches to New York Harbor, New Jersey.
Surveyed in July-August 1938, Scale 1:40,000
Instructions dated March 4, 1938 (OCEANOGRAPHER)

Dorsey Fathometer Soundings. 3 Point fixes on buoy signals. RAR control.

Chief of Party - Frank S. Borden.
Surveyed by - Ships' Officers.
Protracted by - John C. Mathisson.
Soundings plotted by - John C. Mathisson.
Verified and inked by - Harold W. Murray.

1. Shoreline and Signals.

   a. This is an offshore survey and no shoreline is shown.

   b. The control is furnished by hydrographic buoys and sono-radio buoys. The details of location are given in special cahier marked "Report on Buoy Control," OCEANOGRAPHER, F. S. Borden, Comd'g.

2. Sounding Line Crossings.

   Agreement of sounding line crossings is satisfactory. Further details, however, are noted in the Descriptive Report, page 3.

3. Depth Curves.

   The usual depth curves may be satisfactorily drawn.

4. Junctions with Contemporary Surveys.

   a. The junctions on the north with H-6223 (1937), on the northwest with H-6188 (1936), on the west with H-6271 (1937) and on the south with H-6345 (1938) are satisfactory. The Descriptive Report, page 4, lists several discrepancies. These, however, are of small extent and no adjustments for charting purposes were considered necessary.

   b. The eastern limit of the present survey joins H-6192 (1936). Consistent differences up to 9 feet are noted in the overlapping area. These differences are mainly attributed to the fathometer not working properly on H-6192. Only a fringe of soundings are shown from H-6192 at the

present survey limits. For charting purposes, the present survey should be used to its limits and then continued from H-6192.

5. Comparison with Prior Surveys.

a. H-100 (1842), H-101 (1844) and H-670 (1859), Scales 1:400,000.

H-670 is a compilation of surveys made prior to 1859 and contains no original information. The other two surveys supplement each other in covering the entire area of the present survey with widely spaced reconnaissance lines based on astronomic and dead reckoning control. The present survey covers these surveys in considerable more detail and should supersede them in charting.

b. H-1498a (1880-83), H-1531 (1882) and H-1558 (1882-83); Scales 1:1,200,000; 200,000 and 300,000.

Several soundings from each of these surveys fall within the limits of the present survey. The old survey soundings are widely spaced, poorly controlled and of no current value. They should be superseded by the present survey.

c. H-3773 (1915), Scale, 1:50,000.

A portion of this survey covers the present survey on the northeast. Sounding lines are spaced 1/4 to 1 mile apart. Soundings in depths greater than 78 feet are trolley soundings.

Agreement of depths is good in some areas, but in others the present survey depths vary 1 to 12 feet shoaler in some cases, and 1 to 5 feet deeper in others. The present survey, with its greater detail and more accurate control, should supersede this survey.

6. Comparison with Wire Drag Surveys.

H-6343 (1938), Scale 1:40,000.

One drag strip from this survey falls within the limits of the present survey in the vicinity of lat. 39°40', long. 73°50'. It does not conflict with the present survey information.

7. Comparison with Charts 1216 (New Print dated May 9, 1938), and 1000 (New Print dated June 17, 1939).

Hydrography shown on the charts originates with surveys discussed in previous paragraphs of this review and no further consideration is necessary.

8. Condition of Survey.

a. The sounding records are neat and legible.

b. The descriptive report is satisfactory. The discussion of crosslines and junctions is particularly adequate.

c. The field plotting is excellent.

d. Additional bottom characteristics for charting purposes may be obtained from the later prior surveys discussed in paragraph 5, above.

9. Compliance with Instructions for the Project.

Satisfactory.

10. Additional Field Work Recommended.

None.

11. Superseded Surveys.

H-100 (1842)	In part.
H-101 (1844)	In part.
H-670 (1859)	In part.
H-1498a (1880-83)	In part.
H-1531 (1882)	In part.
H-1558 (1882-83)	In part.
H-3773 (1915)	In part.

12. Reviewed by - Harold W. Murray, August 31, 1939.

Inspected by - H. R. Edmonston.

Examined and approved:

Thos. B. Reed
T. B. Reed,
Chief, Section of Field Records.

K. T. Adams
Chief, Division of Charts.

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

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

Applied to Chart 1216 - 9/18/39 - P.B.C.

Applied to Chart 70. 7/7/40/ L. A. McGann