

6190

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 30 1937

Acc. No. _____

1575

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

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. 402

State NEW YORK & NEW JERSEY

LOCALITY
Approaches to New York Harbor
~~SOUTHERN COAST OF LONG ISLAND~~
~~AND EASTERN COAST OF NEW JERSEY~~
~~Brooklyn to Sea Cliff~~

193 6

CHIEF OF PARTY

GEORGE D. COWIE

4564

6190

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. 402

REGISTER NO. H 6190

State NEW YORK & NEW JERSEY

General locality APPROACHES TO NEW YORK HARBOR

Locality ~~SOUTHERN COAST OF LONG ISLAND & EASTERN COAST OF NEW JERSEY~~

Scale 1:40,000 Date of survey MAY 13 to SEPT. 28 1936

Vessel LYDONIA

Chief of Party GEORGE D. COWIE

Surveyed by GEORGE D. COWIE & EARL O. HEATON

Protracted by ROBERT A. EARLE

Soundings penciled by EDWARD B. BROWN, JR.

Soundings in fathoms feet FEET

Plane of reference MEAN LOW WATER

Subdivision of wire dragged areas by

Inked by G. C. Me. Blosson

Verified by G. C. Me. Blosson

Instructions dated APRIL 9, 1936

Remarks:

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SHEET No. 402

Ship LYDONIA - Project 207 - Year 1936

George D. Cowie Commanding

DATE OF INSTRUCTIONS:

April 9, 1936.

SURVEY METHODS:

All soundings on this sheet were obtained by the Ship LYDONIA using a Dorsey fathometer for sounding. Corrections were applied to the fathometer soundings for temperature, salinity, lag and draft in accordance with the special report on Dorsey fathometer corrections. Sounding lines were controlled by three point sextant fixes on shore signals, to a distance of about 8 miles off shore. A line of survey buoys was then planted approximately 10 miles off shore to control the off shore hydrography. (see special report Computation of Buoy Positions). The R. A. R. sounding lines were plotted on an aluminum sheet No. (401a - 402a). One line (position 124 HH to 129 HH) falls off the R. A. R. sheet and was plotted on tracing paper. From this tracing paper it was then transferred to the R. A. R. sheet and also to sheet 405.

H-6198 (1936)

DISCREPANCIES:

Signal GIRT is plotted 40 meters in error on the boat sheet and therefore fixes plotted on the smooth sheet using this signal differ slightly from the boat sheet plotting. On FF day (positions 78 to 91) and LL day (positions 168 to 171) are in error on the boat sheet about $\frac{1}{4}$ inch.

Some other errors in boat sheet positions were due to the fact that final adjusted positions of the survey buoys were not available at the time the hydrography was done.

When sounding lines cross the submarine valley, jumps were sometimes noted in course and time. This is possibly due to the sudden changes of current when crossing the valley.

On H day the soundings between positions 1 and 13 appear to be somewhat too shoal. It is believed that these soundings are less reliable than those on the lines which this line crosses. The following discrepancies are noted on this day:

✓ This line
✓ is OK
G.D.

Discrepancies continued:

Lat. 40 ⁰ - 32.3'	Pos. 259 - 260 H	2½ ft. difference	✓
Long. 73 - 39.1	6 - 7 A		
" 40 - 32.2	" 89 - 90 F	3½ " "	✓
73 - 39.9	8 A	<i>The discrepancy is</i> discrepancy	
" 40 - 32.3	" 122 - 123 F	2½ " "	✓
73 - 41.9	9 10 A		

On B day the soundings between positions 10 and 25 appear to be somewhat too shoal. It is believed that these soundings are less reliable than those on the regular system of lines in this vicinity. The following discrepancies are noted on this day:

Lat. 40 ⁰ - 30.4'	Pos. 27 - 28 G	2½ ft. difference	✓
Long. 73 - 42.5	" 15 - 16 B		
" 40 - 30.4	" 11 - 12 G	3 ft. "	✓
73 - 42.0	" 16 - 17 B		
" 40 - 30.5	" 256 - 257 H	2½ " "	✓
73 - 38.7	" 20 - 21 B		
" 40 - 30.6	" 23 - 24 D	4 " "	✓
73 - 36.2	" 23 - 24 B		
" 40 - 30.6	" 12 - 13 E	3 " "	✓
73 - 35.9	" 24 - 25 B		

Other discrepancies are as follows:

Lat. 40 ⁰ - 28.3'	Pos. 14 - 15K	3 ft. difference	✓
Long. 73 - 55.0	" 127 - 128P		
" 40 - 23.0	" 81 - 82Z	3 " "	✓
73 - 54.0	" 184 - 185P		
" 40 - 10.3	" 103 - 104AA	2½ ft. difference	✓
73 - 55.4	" 63 - 64W	probably due to uneven bottom.	
" 40 - 16.8	" 182CC	Soundings are not in	
73 - 46.3	" 129 - 130N	very good agreement. <small>Rapid change in depth.</small>	
		Probably due to slight <small>Discrepancy</small> displacement of lines. <small>justified.</small>	
" 40 - 19.6	" 51 - 52GG	3 and 4 ft. difference.	
	and just before 53GG		
73 - 55.7	Pos. 44 - 45U	U day is considered most reliable.	✓

Lat.	Long.	Position	Remarks
40°- 09.0'	73 - 54.2	30 - 31BB 132 - 133MM	10 ft. crossing caused by slight displacement of lines on steep slope. ✓
40 - 06.4	73 - 59.0	76 - 77NN 79 - 80KK 84 - 85KK	3 ft. difference probably due to irregular bottom. ✓
		77 - 78NN 54 - 55KK	3 ft. difference Crosses poorly probably due to irregular bottom. ✓
40 - 14.0	73 - 56.5	299 - 300QQ 153 - 154V	3 ft. difference probably due to irregular bottom. ✓

The soundings on UU day appear slightly shoaler than other soundings in this vicinity. The draft correction of +0.3 foot was not originally applied in computing the total fathometer correction, but after it was applied the correction was reduced from 1 ft. to zero for this day. All soundings were corrected in the sounding records using a zero correction and plotted on the sheet. The corrected soundings are in better agreement with other soundings in this vicinity than they were as originally reduced. ✓

Positions 1 to 8W were not plotted on the boat sheet or smooth sheet as this area had already been covered on P day and UU day. ✓

Positions 77 to 81W were rejected because of difficulty in plotting, due to weak fixes on indistinct signals. ✓

JUNCTIONS WITH ADJOINING SHEETS ✓

The junction with sheets Nos. 4797, 4792, 4793, and 4794 from the northwest ^{corner} of the sheet across the northern side to the northeast corner shows a general shoaling of from 1 to 3 feet. ✓

The least depth found on Wire Drag Sheet #4929 was ⁴⁰~~39~~ feet while the least depth found on sheet #402 was 45 feet at Lat. 40°-27.80' Long. 73°- 50.09'. As this area had been wire dragged a close development was not made. ✓

The junction with sheet #5735 is a good agreement varying from a minus to a plus one foot. ✓

The average depths at the junction with sheet #5639 are from one to three feet less on sheet #402. Average is about 1 foot less. Satisfactory ✓

An excellent agreement is found at the junction with sheets #5616, 5638, and 5615. ✓

For the junction with the present seasons work to the south see Report for Sheet #405. ✓

The adjoining sheets to the east, #401, and R.A.R. sheet 401a-402a, make good junctions with this sheet. ✓

H-6188

H-6189

H-6026

COMPARISON WITH PREVIOUS SURVEYS

<u>Lat.</u> <u>Long.</u>	<u>Charted</u> <u>Depth(Ft)</u>	<u>Chart</u> <u>No.</u>	<u>Remarks</u>
1. 40 ⁰ - 32.16 73 - 51.22	Wreck	1215	A sounding line was run over the charted ^{From} Chart ^{Letter} portion of this wreck with a sounding of 35 ⁽¹⁹³⁰⁾ feet on it. A uniform depth was found. ^{See par. 8a(1), review.}
2. 40 - 30.16 73 - 40.48	54 ft. ✓ From H-1538(1882). Present survey accepted because of better development.	"	This charted depth falls on a sounding line about 20 meters north of 58 feet. The least depth is 55 feet about 0.34 mile north. ✓
3. 40 - 29.55 73 - 38.42	54 ft. ✓ 5 1/4 fms. from H-1578a(1883) Fair agreement.	"	About 83 meters N. by E. of a 58 foot depth which is the least depth in this area. ✓ 3
4. 40 - 29.11 73 - 41.29	60 ft. ✓ 10 3/4 fms. from H-1538(1882) Fair agreement.	"	About 60 meters S. by W. of 66 foot depth. A uniform 66-67 foot depth is in this area. ✓ 4
5. 40 - 27.76 73 - 50.06	40 ft. ✓ From H-4929(1929) W.D. See par. 7h, review.	"	About midway between, (70 meters from) 46 and 50 ft. with the least depth in this area of 45 feet about 107 meters N. W. ✓
6. 40 - 27.55 73 - 55.36	Wreck marked by buoy (Fl G) "1A" Wreck and buoy removed. N. to M. 25 (1937)	"	The charted position of this buoy is about 165 meters south by west of the position as plotted on this sheet about midway of sounding lines with 62 ft. on the east and 54 feet on the west - about 255 and 170 meters respectively. ✓ 3
7. 40 - 26.63 73 - 54.41	44 ft. ✓ From U.S. Engineers B.P. 28897 See par. 8a(1), review.	"	About 25 meters north of a 62 foot sounding on a sounding line with depths of 61 - 62 feet. A least depth was found of 44 ft. about 0.26 mile W. by S. ✓
8. 40 - 26.19 73 - 53.55	51 ft. ✓ From H-4609(1926). Present survey accepted.	"	Just south of a 56 foot depth with a 51 foot sounding about 28 meters to the east. A least depth of 43 ft. is about 0.19 mile N.N.E. ✓
9. 40 - 26.04 73 - 53.14	50 ft. ✓ From B.P. 28897 See par. 8a(2) review.	"	About 30 meters south of a 57 foot sounding with 51 foot soundings about 0.13 mile north and northwest. ✓
10. 40 - 25.69 73 - 51.72	52 ft. ✓ From B.P. 28897 See par. 8a(2) review.	"	About 30 meters south of 57 foot sounding and 70 meters north of 53 foot depth. A least depth of 47 feet is found about 0.31 mile south. ✓
11. 40 - 25.33 73 - 51.51	49 ft. ✓ From B.P. 28897 See par. 8a(2) review.	"	About 35 meters S. E. of 48 ft. sounding with a least depth of 47 feet about 80 meters west by south. ✓

Comparison With Previous Surveys continued:

<u>Lat.</u> <u>Long.</u>	<u>Charted</u> <u>Depth(Ft)</u>	<u>Chart</u> <u>No.</u>	<u>Remarks</u>
12. 40 ⁰ - 24.74 73 - 56.25	35 From H-5624 (1934) Good agreement.	1215	Comes in between a 34 and 39 foot depth. ✓ ✓
13. 40 - 24.70 73 - 54.18	60 See par. 8a(3), review.	"	Falls on a 73 foot sounding with the immediate area from 70 to 73 feet. A 63 foot depth is found 0.32 mile west. ✓ ✓
14. 40 - 24.12 73 - 37.40	60 10 1/2 fms. from H-1538 (1882) Present survey accepted.	"	This charted depth falls about 60 meters south of a 70 foot sounding. The least depth is 67 feet about 315 meters south. ✓ ✓
15. 40 - 24.08 73 - 35.70	60 10 1/2 fms. from H-1538 (1882) Good agreement.	"	This depth is found about midway between and 95 meters from 64 and 65 feet soundings. The least depth in this area is 63 ft. about 210m. west. ✓ ✓
16. 40 - 23.56 73 - 35.22	60 10 1/2 fms. on H-1538 (1882) See par. 7g, review.	"	This depth falls on a sounding line between 69 and 71 feet, 107 meters and 50 meters distant, respectively. A depth of 65 feet is found 0.37 mile S. W. See par. 7g, review. ✓
17. 40 - 23.22 73 - 36.50	60 10 3/4 fms. from H-1578a (1883) Good agreement.	"	This depth is about 20 meters east of a 64 foot sounding with the least depth in this area a 61 foot sounding 190 meters north. ✓
18. 40 - 23.10 73 - 55.42	42 7 3/4 fms. from H-1538 (1882) Good agreement.	"	On sounding line nearly between, 75 meters from, a 53 foot and a 48 foot sounding. A depth of 43 ft. is 0.28 mile S. W. ✓
19. 40 - 21.79 73 - 56.09	Wreck From Chart P.D. 487 (1930). See par. 8a(4), review.	"	About 18 meters east of sounding line with 55-56 foot depths. A uniform 55-56 foot depth is shown in this area. ✓ * An Officer sent ashore to enquire of the local fishermen about this wreck found that they formerly used these wrecks for black fish fishing but had not of recent years, and had forgotten the location of the wrecks but stated that they believed they had broken up. ✓
20. 40 - 50.59 73 - 52.69	60 ft See par. 8a(3), review.	"	About midway between, 50 meters from, a 68 and a 71 foot sounding. The nearest 60 foot depth is 0.47 mile N.W. ✓ ✓
21. 40 - 17.83 73 - 56.49	Wreck P.D. reported From Chart Letter 178 (1924) * See par. 8a(5), review.	"	This position is about 30 meters west of a sounding line with a 55 foot depth. The surrounding area has a uniform bottom. Same note as under Lat. 40 ⁰ - 21.79' Long. 73 ⁰ - 56.09'. ✓ ✓

Comparison with previous surveys, continued:

<u>Lat.</u>	<u>Long.</u>	<u>Charted Depth</u>	<u>Chart No.</u>	<u>Remarks</u>		
22. 40° - 17.75	73 - 53.40	60	1215	About 40 meters west of 65 foot depth. No indication is found except about 0.8 mile westward.	✓	✓
		<small>10 3/4 fms. from H-1538 (1882) Good agreement.</small>				
23. 40 - 17.75	73 - 54.66	54	"	About 29 meters south of a 55 ft. sounding with the least depth of 5 1/2 feet about 142 meters west.	✓	✓
		<small>9 1/2 fms. from H-1538 (1882) Good agreement.</small>				
24. 40 - 17.73	73 - 55.35	48	"	A 54 foot sounding is about 25 meters south with 51 feet, the shoalest depth in this area, about 96 meters S.E.	✓	✓
		<small>8 3/4 fms. from H-1538 (1882) Good agreement.</small>				
25. 40 - 16.90	73 - 53.44	60	"	The nearest sounding, 74 ft. is about 72 meters north. The only indication of this depth is 325 meters south with a 58 foot depth.	✓	✓
		<small>10 3/4 fms. from H-1538 (1882) Good agreement.</small>				
26. 40 - 16.67	73 - 55.10	48	"	This charted sounding falls almost on a 59 foot sounding with the least depth of 55 feet about 83 meters south.	✓	✓
		<small>8 3/4 fms. from H-1578a (1883) Good agreement.</small>				
27. 40 - 16.56	73 - 55.89	60	"	About 35 meters north of a 63 foot sounding and about 95 meters southeast of 60 feet, least depth in this area.	✓	✓
		<small>10 3/4 fms. from H-1538 (1882) Good agreement.</small>				
28. 40 - 16.53	73 - 56.00	Wreck	"	About 57 meters west of 61 foot sounding and about 125 meters S.E. and S.W. of two 60 foot depths.	✓	✓
		Reported	"	* Same note as under "Remarks", page 5, opposite Lat. 40° - 21.79', Long. 73° - 56.09'.	✓	✓
		<small>From Chart Letter 287 (1978) See par. 8a(6), review.</small>				
29. 40 - 16.11	73 - 53.95	60	"	About midway, 80 meters distant, between 62 and 65 ft. with a least depth of 58 feet about 0.1 mile S. by E.	✓	✓
		<small>10 1/4 fms. from H-1578a (1882) Good agreement.</small>				
30. 40 - 15.54	73 - 55.92	48	"	About 70 meters north of the least depth in this area of 49 feet and about 60 meters west of 54 feet.	✓	✓
		<small>8 3/4 fms. from H-1578a (1883) Good agreement.</small>				
31. 40 - 13.19	73 - 52.10	54	"	About 80 meters east of a 54 foot sounding. This is the least depth found in this area.	✓	✓
		<small>9 3/4 fms. from H-1538 (1882) Good agreement.</small>				
32. 40 - 13.12	73 - 54.28	54	"	Falls almost on a 55 ft. depth with another about 0.07 mile east.		
		<small>9 3/4 fms. from H-1538 (1882) Good agreement.</small>				

Comparison with previous surveys continued:

Lat. Long.	Charted Depth(Ft)	Chart No.	Remarks
33. 40°- 12.63' 73 - 55.43	48	1215	About 45 meters east of a 57 foot depth with a least depth of 53 feet about 0.12 mile S.W. ✓
	<i>8 3/4 fms. from H-1578a (1883) Wood agreement.</i>		
34. 40 - 12.18 73 - 58.90	37	"	This depth is about 56 meters east of 44 ft. with a 42 ft. depth about 0.08 mile south, which is the least depth in this area. ✓
	<i>From H-106 (1840). Carried forward. See par. 7c, review.</i>		
35. 40 - 11.97 73 - 53.68	54	"	On sounding line between 64 ft. soundings with a least depth in the area of 57 ft. about 0.23 mile S. by W. ✓
	<i>9 3/4 fms. from H-106 (1840) Wood agreement.</i>		
36. 40 - 11.83 73 - 55.94	40	"	About 40 meters N.W. of 58 ft. with 54, 56 and 58 ft. around it. The least depth in this area is 43 ft. about 0.38 mile S.W. ✓
	<i>From H-106 (1840) See par. 7c, review.</i>		
37. 40 - 11.15 73 - 52.71	54	"	Falls about 42 meters south of 68 ft., with 61-60- and 60 ft. to the south. The least depth is 58 ft. about 0.08 mile S. E. ✓
	<i>From H-106 (1840) See par. 7c, review.</i>		
38. 40 - 11.00 73 - 57.09	45	"	This sounding comes between 43- 47 and 43- 50 ft. with 38 ft. about 0.23 mile N.E. at Lat. 40°- 11.17' Long. 73°- 56.89'. ✓
	<i>From H- 3773 (1915) Wood agreement</i>		
39. 40 - 10.84 73 - 55.19	54	"	This sounding falls between 61-58 -57 and 60 ft with the least depth of 57 ft. about 60 meters S. E. A depth of 56 ft. is 0.2 mile N.E. ✓
	<i>From H-106 (1840) See par. 7c, review.</i>		
40. 40 - 10.82 73 - 58.90	36	"	This depth falls on a 46 ft. sounding but a 36ft. shoal is 0.2 mile west at Lat. 40°- 10.83' Long. 73°- 59.21', which is apparently this 36 ft. depth. ✓
	<i>From H-106 (1840) See par. 7c, review.</i>		
41. 40 - 10.51 73 - 52.98	33	"	The nearest sounding is 59 ft. about 75 meters S.W. with 55 ft. about 110 meters S. by E. The least depth is 54 ft. about 0.15 mile S. by W. An Officer sent ashore to enquire about this shoal from fishermen found that they didn't verify this 33' ft. depth but stated that so far as they knew it was around 52 ft. in this area. ✓
	<i>(reported) Chart letter 125 (1930). See par. 8a (7), review.</i>		
42. 40 - 10.23 73 - 55.30	52	"	The general depth at this location is 60 ft. with a moderate sized shoal area from 49 to 56 feet to the southwest and south with 49 feet at Lat. 40°- 09.80; Long. 73°- 55.90' ✓
	<i>From H-106 (1840) See par. 7c, review.</i>		

Comparison with previous surveys continued:

<u>Lat.</u> <u>Long.</u>	<u>Charted</u> <u>Depth(Ft)</u>	<u>Chart</u> <u>No.</u>	<u>Remarks</u>
43. 40° - 09.74' 73 - 57.56	42 <i>From H-106 (1840) see par. 7c, review.</i>	1215	Comex near to a ⁴³ 45 ft. depth but is verified as it is an area of 43 to 50 ft. with 39 ft. 0.55 mile W. by S. ✓
44. 40 - 09.53 73 - 58.27	44 <i>From H-106 (1840) Book agreement.</i>	"	A depth of 40 feet is found at this location with a general shoal of 36 to 44 feet in this area. 39 feet 0.05 mile north and a least depth of 36 feet 0.33 mile S. W. at Lat. 40° - 09.31', Long. 73° - 58.61' ✓
45. 40 - 09.28 73 - 53.57	54 <i>From H-106 (1840) Book agreement</i>	"	Sheet 402 verifies this sounding and also shows shoaler depths to the westward with a 43 foot depth at Lat. 40° - 09.17' Long. 73° - 54.03, About 0.37 mile W. by S. ✓
46. 40 - 09.20 73 - 53.20	54 <i>From H-106 (1840) see par. 7c, review.</i>	"	This depth is almost over a 75 ft. sounding in an area of that general depth but this charted depth is found 0.3 mile N. W. ✓
47. 40 - 09.05 73 - 54.33	50 <i>From H-3773 (1915) Recent survey good.</i>	"	This depth comes over a 48 ft. sounding on sheet 402 with a least depth of 43 ft. 0.29 mile N.E. at Lat. 40° - 09.17, Long. 73° - 54.03'. ✓
48. 40 - 08.29 73 - 58.36	40 <i>From H-106 (1840) see par. 7c, review.</i>	1216	No indication of this depth is found in this area of 54 ft. but a depth of 45 ft. is 0.11 mile S.W. ✓
49. 40 - 07.25 73 - 58.71	45 <i>From H-106 (1840) see par. 7c, review.</i>	"	The depth is in an area of 55 ft. Although a 45 ft. sounding is found 0.27 mile westward. ✓
50. 40 - 06.65 73 - 59.13	42 <i>From H-106 (1840) see par. 7c, review.</i>	"	This depth is not indicated on sheet 402 as it comes very near to 61 ft., which shoals up to 53 ft. about 0.05 mile to the W. by S. ✓

DANGERS

No off shore dangers for other than large vessels are found on this sheet. The following list of dangers are noted:

<u>Lat.</u> <u>Long.</u>	<u>Depth H-6190</u> <u>Sheet 402</u>	<u>Position</u> <u>and Day No.</u>	<u>Remarks</u>
40° - 26.36' 73 - 53.37	43 ft.	38 QQ	A depth found between 52 - 60 - 56 - 58 feet ✓
40 - 20.91 73 - 55.64	38 ft.	21-22 Q	A shoal with 39 and 40 to west and south in a general area of 43 to 55 ft. ✓
40 - 11.17 73 - 56.89	38 ft.	54 - 55 FF	A general shoal area. ✓
40 - 09.31 73 - 58.61	36 ft.	4 - 5 EE	A general shoal. ✓
40 - 09.17 73 - 54.03	43 ft.	147 - 148 MM	A general shoal. ✓

SHOALS

Attention is called to the following soundings which while not dangers are shoal soundings that are worthy of note:

The above positions and soundings were checked by L.M.

<u>Lat.</u> <u>Long.</u>	<u>Depth H-6190</u> <u>Sheet 402</u>	<u>Position</u> <u>and Day No.</u>	<u>Remarks</u>
40° - 27.80 73 - 50.09	45 ft. <small>40 ft. carried forward from H-4929 (1929) W.D.</small>	173 - 174 X	This is the least depth found in the area covered by Wire Drag sheet 4929, and a close investigation was not made as it had been wire dragged. ✓
40 - 26.87 73 - 54.02	54 ft.	38-39 QQ	Adjoining depths of 55-56 feet in a general area of 60 feet. ✓
40 - 26.56 73 - 54.74	44 ft.	16 QQ	In an area with 45 to 46 feet about 195 meters N. E. ✓
40 - 25.65 73 - 37.70	61 ft.	6 H	Small shoal indication in a general 70 foot area. ✓
40 - 25.40 73 - 51.64	47 ft.	76 - 77QQ	In a general depth of 48 feet with 47 feet 210 meters south. ✓

Shoals continued:

<u>Lat.</u> <u>Long.</u>	<u>Depth</u> <u>Sheet 402</u>	<u>Position</u> <u>and Day No.</u>	<u>Remarks</u>
40° - 22.87' 73 - 56.00	41 ft.	71 - 72P	In an area of 43-45 feet. ✓ ✓
40 - 22.47 73 - 56.37	39 ft.	99 U	Shoal area in 40-50 feet about 1/2 mile north and extending east about one mile. ✓ ✓
40 - 20.89 73 - 56.33	31 feet	95 - 96 U	Small shoal running eastward about 1/4 mile and westward to shoal water. ✓ ✓
40 - 20.42 73 - 56.64	31 ft.	109 110 U	A small shoal with 32 and 34 feet in a general area of 38 to 45 feet. ✓ ✓
40 - 20.01 73 - 56.92	37 ft.	137 V	Shoaling off to inshore. Near 43 feet depth. ✓ ✓
40 - 17.73 73 - 55.06	51 ft.	132 Z	A general shoal in an east-west direction ✓ ✓
40 - 11.18 73 - 58.41	42 ft.	66 - 67 RR	General shoal about 1/4 mile diameter. ✓ ✓
40 - 10.83 73 - 59.21	36 ft.	161 - 162 V	Small shoal. ✓ ✓
40 - 07.03 73 - 59.94	36 ft.	174-175 NN	General shoal area. ✓ ✓
40 - 02.62 74 - 00.81	49 ft.	25-26 NN	General shoal area. ✓ ✓
40 - 01.84 73 - 55.71	47 ft.	277-278 MM	General shoal. ✓ ✓

all the above soundings and important positions were checked. by C.M.
Respectfully submitted.

Glendon E. Boothe
Glendon E. Boothe
Lieut. C&GS

Approved.

Carl O. Heaton
Earl O. Heaton
Lieut. C&GS
Executive Officer
Ship LYDONIA

Forwarded.

Jack Senior
Jack Senior
Lieut. Com'dr C&GS
Commanding Ship LYDONIA

STATISTICS FOR SHEET # 402

PROJECT HT 207

Day	Date	No. of Positions	No. of Soundings	Stat. Miles	Vol. No.
A	May 13	66	411	31.7	1
B	May 18	28	210	16.1	1
C	May 27	45	252	19.4	1
D	June 18	57	300	21.3	1
E	June 20	64	399	36.2	1
F	June 21	152	935	64.4	1 & 2
G	June 22	331	1943	181.8	2 & 3
H	June 23	264	1484	130.7	3 & 4
J	June 25	115	689	59.2	4
K	June 26	204	1253	113.0	4 & 5
L	June 27	48	250	22.9	5
M	July 6	35	202	15.6	5
N	July 7	192	1189	110.9	5 & 6
P	July 8	198	1256	100.5	6
Q	July 9	136	902	58.9	6 & 7
R	July 10	105	793	74.0	7
S	July 11	130	1148	98.6	7 & 8
T	July 12	7	66	5.1	8
U	July 13	241	1456	116.5	8
V	July 14	195	1077	85.5	9
W	July 15	143	925	78.6	9 & 10
X	July 21	263	1549	132.5	10

Day	Date	No. of Positions	No. of Soundings	Stat. Mi.	Vol. No.
Y	July 22	285	1755	153.7	10 & 11
Z	July 23	193	1113	82.0	11 & 12
AA	July 24	193	1271	105.5	12
BB	July 25	262	1449	142.3	12 & 13
CC	July 26	183	1124	102.2	13 & 14
DD	July 27	148	1031	90.9	14
EE	July 28	120	678	56.9	14 & 15
FF	July 29	143	863	71.4	15
GG	Aug. 4	80	379	29.2	15
HH	Aug. 5	157	1074	89.0	15 & 16
JJ	Aug. 6	146	1025	83.8	16 & 17
KK	Aug. 7	279	1818	161.8	17
LL	Aug. 8	272	2003	151.0	17 & 18
MM	Aug. 9	288	1642	112.5	18 & 19
NN	Aug. 11	237	1358	113.8	19 & 20
PP	Aug. 12	133	741	63.8	20
QQ	Aug. 18	341	1704	135.9	20 & 21
RR	Aug. 19	237	1257	95.2	21 & 22
SS	Aug. 24	31	187	13.8	22
TT	Aug. 26	59	379	31.3	22
UU	Sept. 1	224	1321	108.2	22 & 23
VV	Sept. 28	<u>23</u>	<u>134</u>	<u>10.3</u>	<u>23</u>
	Totals	7053	42995	3577.9	23

LIST OF SIGNALS FOR SHEET # 402

Hydro. name	Description	Party & year	Page	Latitude & Longitude		
				Degrees	Minutes	Meters
TOWER	Tower, Jones Beach, 1933	Triangulation Eyman 1933	20	40 73	35 30	1443.6 ✓ 723.1
RED	Hydro Topo. signal <i>See par. 3, review.</i>	Letter from Office 4/27/36		40 73	35 33	775.0 592.0 -
PIPE	Standpipe, Long Beach, 1934	Tri. field comp. Witherbee 1934	5	40 73	35 39	1136.6 ✓ 956.7
MAR	Cupola (Nautilus) Casa del Mar 1931	Witherbee 1934 Tri. field comp. 1931	5	40 73	35 44	374.7 ✓ 187.1
CITY	Far Rockaway, Dep't of Water Supply plant City of New York. Standpipe.	Office comp. tri. 1931	98	40 73	36 45	844.2 ✓ 104.5
CON	Barren Id. incenerator, concrete chimney, 1920	Office comp. tri. 1920, 1930.	94	40 73	35 52	46.9 ✓ 940.0
SIDE	Seaside Hotel 1904	Office comp. tri. 1904, 1932.	71	40 73	35 49	146.2 ✓ 675.7
TALL	Taller tank, 1930	Office comp. tri. 1930, 1931	30	40 73	33 53	1824.2 ✓ 723.7
MOON	Coney Island Half Moon Hotel. Tall tower 1930.	Office comp. tri. 1930	83	40 73	34 59	567.7 ✓ 974.6
LIDO	Tower (single- Lido) 1926	Letter from Office 10/23/36	?	40 73	35 37	189.4 ✓ 1358.2
LIN	Tank, Franklin Hotel, 1934	Tri. field comp. Witherbee 1934	6	40 73	34 38	1850.0 ✓ 1383.1
EAST	Tower, (east twin- Lido) 1926	Letter from Office 10/23/36	?	40 73	35 38	172.7 ✓ 288.4
PARK	East tower, Jacob Riis Park. Topo. signal	Letter from Office 9/26/36	✓	40 73	33 52	1779.0 ✓ 294.0
DEE	Sign (Lido) 1926	Letter from Office 10/23/36		40 73	35 37	1187.5 ✓ 985.4

LIST OF SIGNALS FOR SHEET # 402

Hydro. name	Description	Party & year	Page	Latitude & Longitude		
				Degrees	Minutes	Meters
FAR	Far Rockaway Queens- boro G. & E. Co. Taller chimney 1926	Office comp. 1926, 1931	98	40	36	994.5 ✓
				73	45	982.7 ✓
LONG	Long Beach Fire engine house tower. 1926	Field comp. Corrected tri. C. B. Meaney 1926	2	40	35	308.6 ✓
				73	41	686.3 ✓
IN	Hammels, incenerator No. 5, chimney, 1931	Office comp. tri. 1931	97	40	35	913.6 ✓
				73	48	558.0 ✓
BLACK	Seaside, Jamaica Water Supply Co. Standpipe 1931	Office comp. tri. 1931	97	40	34	1642.8
				73	49	1336.0 ✓
" C "	"C" tower. 1918	Office comp. tri. 1918. McCarthy 1934	285	40	24	1551.3 ✓
				73	58	1183.5 ✓
BRANCH	Long Branch J. C. P. & L. Co. Concrete stack. 1934	Office comp. tri. McCarthy 1934	303	40	18	894.3 ✓
				73	59	104.1 ✓
DEAL	Deal, J. C. P. & L. Co. Aluminum stand- pipe, 1934	Tri. office comp. McCarthy 1934	299	40	15	301.9 ✓
				74	00	254.9 ✓
HOOK	Sandy Hook L. H. 1835	Office tri. comp. 1835, 1932	30	40	27	1288.9 ✓
				74	00	208.3 ✓
SEA	Seabright. 1934	Office comp. tri. McCarthy 1934	291	40	22	1144.8 ✓
				73	58	702.6 ✓
SOUTH	Navesink Light, South, 1869.	Office comp. tri. 1869. McCarthy 1934	284	40	23	1394.6 ✓
				73	59	217.7 ✓
ROCK	Rockaway Pt. tall tower, 1930	Office comp. tri. 1930, 1931	95	40	33	937.7 ✓
				73	54	42.3 ✓
SAND	Sandy Hook C. G. Sta. No. 98. Flagpole, 1930	Office comp. tri. 1930	78	40	25	1121.5 ✓
				73	59	108.0 ✓
MON	Station 11 (U.S.E.D.) 1934	Office comp. tri. McCarthy 1934	283	40	20	935.9 ✓
				73	58	677.6 ✓

LIST OF SIGNALS FOR SHEET # 402

Hydro. name	Description	Party & year	Page	Latitude & Longitude		
				Degrees	Minutes	Meters
BERK	Asbury Park, Berkley Hotel. Flagpole, 1934	Office comp. tri. McCarthy 1934	298	40	13	935.0 ✓
				73	59	1411.2 ✓
NORTH	Navesink Light (North) 1869	Office comp. tri. McCarthy 1934	293	40	23	1456.6 ✓
				73	59	249.3 ✓
AVON	Avon tank, 1933	Office comp. tri. 1933	41	40	11	1146.3 ✓
				74	01	504.2 ✓
WALL	Wall, 1934	Office comp. tri. McCarthy 1934	282	40	10	752.8 ✓
				74	02	385.5 ✓
MICH	West end, St. Michael's Church. Cross, 1934	Office comp. tri. McCarthy 1934	293	40	16	1206.3 ✓
				73	59	254.9 ✓
PARAMOUNT THEATRE	Asbury Park, Paramount Theatre, flagpole, 1934	Office comp. tri. McCarthy 1934	298	40	13	784.8 ✓
				73	59	1347.1 ✓
POWER	Asbury Park power plant stack, 1934	Office comp. tri. McCarthy 1934	290	40	13	48.7 ✓
				74	00	139.3 ✓
ME	Long Branch M. E. Church spire, 1934	Office comp. tri. McCarthy 1934	292	40	19	425.3 ✓
				73	58	1139.5 ✓
LAKE	Spring Lake, black tank, 1934	Office comp. tri. McCarthy 1934	288	40	09	449.4 ✓
				74	01	1062.8 ✓
SPRING	Spring Lake C. G. cupola, 1934	Office comp. tri. McCarthy 1934	297	40	09	1214.9 ✓
				74	01	306.5 ✓
WORKS	Pt. Pleasant water works standpipe, 1934	Office comp. tri. McCarthy 1934	294	40	05	476.1 ✓
				74	02	1168.9 ✓
GIRT	Sea Girt, 1934	Office comp. tri. McCarthy 1934	282	40	08	66.5 ✓
				74	02	724.7 ✓
APEX	Pt. Pleasant municipal tank, apex, 1934	Office comp. tri. McCarthy 1934	288	40	05	300.6 ✓
				74	02	1184.4 ✓
BAY	Bayhead water tank, 1932	Office comp. tri. 1932	27	40	04	188.4 ✓
				74	02	1048.8 ✓
BELM	Belmar, black standpipe 1933	Office comp. tri. 1933	43	40	10	1195.7 ✓
				74	01	1105.3 ✓

LIST OF SIGNALS FOR SHEET # 402

Hydro. name	Description	Party & year	Page	Latitude & Longitude Degrees Minutes Meters		
ALL	Allenhurst tank	Office comp. tri. 1933	42	40 14 74 00	192.0 723.5	✓
DOME	New Mommouth Hotel flagpole, 1934	Office comp. tri. McCarthy 1934	288	40 08 74 01	1329.6 769.3	✓
SQUAN	Squan, 1934	Office comp. tri. McCarthy 1934	287	40 06 74 02	1713.5 63.4	✓
CUP	Topo. signal	Letter from Office 9/26/36 Air photo. 5285 and 7-62166 ₁₉₃₄		40 01 74 03	1214.0 297.0	✓
POLE	Flag, 1934	Office comp. tri. McCarthy 1934	287	40 01 74 03	1219.7 268.8	✓
NIT	Topo. signal	Letter from Office 9/26/36 T-5285 and T-62166 ₁₉₃₄		40 03 74 02	134.0 1189.0	✓
CROSS	Topo. signal	Letter from Office 9/26/36 T-5285 and T-62166		40 02 74 03	199.2 176.1	✓
QUAM	Chimney on house Topo. signal	Letter from Office 9/26/36 T-5285 and T-62166		40 02 74 02	1011.0 1362.0	✓
BEACON	Manasquan River ent. beacon, 1934	Office comp. tri. McCarthy 1934	287	40 06 74 01	159.4 1287.7	✓
LIGHT	Sea Girt Lighthouse 1899	Office comp. tri. 1899. McCarthy 1934	288	40 08 74 01	354.2 956.9	✓
UP	Sandy Hook C. G. sta. No. 98, cupola 1926	Office comp. tri. 1926, 1930	219	40 25 73 59	1100.6 113.1	✓
NUT	Hydro, buoy	G. D. Cowie 1936		40 25 73 40	59 198	
MAN	" "	" " " "		40 25 73 36	373 1231	✓
LAD	" "	" " " "		40 25 73 33	664 880	
RADIO						
BUOY # 5	Radio buoy # 5	" " " "				

LIST OF SIGNALS FOR SHEET # 402

Hydro. Name	Description	Party & Year	Latitude & Longitude		
			Degrees	Minutes	Meters
ROE	Hydro. buoy	G. D. Cowie 1936	40	22	1080
			73	43	586
OME	" "	" " "	40	20	727
			73	43	1304
PAT	" "	" " "	40	18	421
			73	44	596
QUA	" "	" " "	40	16	180
			73	44	1260
TUB	" "	" " "	40	13	1288
			73	45	661
SOX	" "	" " "	40	11	897
			73	45	1224
URN	" "	" " "	40	09	61
			73	46	240
VIE	" "	" " "	40	06	1194
			73	46	818
YET	" "	" " "	40	00	270
			73	47	364
XES	" "	" " "	40	02	412
			73	47	281
WIL	" "	" " "	40	04	751
			73	46	1272

T I D A L D A T A

Sheet 402

All soundings on this sheet were referred to the standard automatic gage at Sandy Hook, N. J. ✓

For soundings outside of the ten (10) fathom curve (approx.) the tide was considered to have occurred one-half hour earlier than at the reference station. (see Director's letter August 29, 1936. 34-FL) ✓

Highest tide observed:- 8.4 feet Sept. 18, 1936.
Lowest tide observed:- 0.6 feet May 21,22, 1936.

Mean Low Water on staff at Sandy Hook is 1.8 feet (Director's letter October 13, 1936).

H-6190

The records for sheet (402) have been inspected and approved by Lieut-Commander George D. Cowie and the sheet has been inspected and approved by me. ✓

Earl O. Heaton

Earl O. Heaton
H & G Eng'r

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H-6190

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

Number of positions on sheet	70.53
Number of positions checked	38
Number of positions revised	0
Number of soundings recorded	42,995
Number of soundings revised	22
Number of signals erroneously plotted or transferred	None

Date: 17 July, 1937

Verification by B. C. McElrosson

Time: 17 Days 2 3/4 hours

Review by J. A. McCormick Sept. 8, 1937.

Time: 85 hrs.

HYDROGRAPHIC SURVEY NO. H-6190

Smooth Sheet Yes

Boat Sheet Yes

Sounding Records 23 Vols. _____

Bombing Records One Vol. _____

Buoy Locations One Vol. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes (Vol. #1)

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

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

Remarks _____

HYDROGRAPHY

44

Total Days

Last Date Sept. 28, 1936.

Remarks

Decisions

	Remarks	Decisions
1		
2		
3		
4		
5	<i>For Title</i>	
6	<i>For Title</i>	
7		
8		<i>USGB decision</i>
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. H-6190

Name on Survey	On Chart No. 1215, 1216		On previous survey No.	On U. S. Quadrangl. Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	K USCP
	A.	B.								
<u>Long Beach</u>	✓ app'd									1
<u>Rockaway Beach</u>	✓	T-4	✓				✓			2
<u>Long Branch</u>	✓ app'd									3
<u>Asbury Park</u>	✓ app'd									4
<u>New York</u>	✓ app'd									5
<u>New Jersey</u>	✓ app'd									6
<u>Cholera Bank</u>	✓	H-1578a							✓	7
<u>Bay Head</u>	✓ app'd									8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
	Names underlined in red approved									25
	by <u>JHE</u> on 5/4/37									26
										27

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

} No. H-6190
 } ~~No. 11~~

{ received April 29, 1937
 { registered May 1, 1937
 { 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
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	C. K. Green
----	-------------

✓

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 15, 1937.

Division of Hydrography and Topography:

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

Tide Reducers are approved in
23 volumes of sounding records for

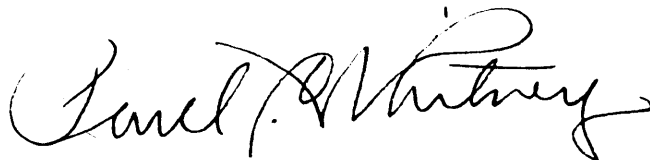
HYDROGRAPHIC SHEET 6190

Locality Approaches to New York Harbor

Chief of Party: G. D. Cowie in 1936
Plane of reference is mean low water, reading
1.8 ft. on tide staff at Sandy Hook
9.5 ft. below B.M. 2

Height of mean high water above plane of reference is 4.6 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

17 July, 1937.

Report on H 6190
Verifying and Inking

1. The records conform to the ✓ requirements of the General Instructions.
2. The usual depth curves can be completely drawn within ✓ the limits of the sheet.
3. The field plotting was completed to the extent prescribed in ✓ the Hydrographic Manual.
4. The office draftsman did not have to do over any part of drafting by field ✓ party except as noted on the statistic sheet.
5. This is an off shore sheet consequently no shore- ✓ line is shown. The topographic signals were taken from ~~F 5061 (1934)~~,

~~F 5334 (1934)~~, and T 5285 (1934).
T-6216 b (1934)

The remaining control consists of triangulation and hydrographic buoys used as signals.

6. The buoys and aids to navigation on the sheet were located by the hydrographic party and no discrepancies were noted.

7. The following positions and soundings were plotted on H 6026 (1936).

Volume	1	positions	10 F-16 F.
"	4	"	13 K-51 K.
"	6	"	19 P-47 P.
"	7	"	14 R-105 R.
"	7+8	"	15-130 S.
"	8	"	1 T-7 T.
"	12	"	19 AA-24 AA.
"	14	"	52 DD-99 DD.
"	15	"	1 HH-38 HH.
"	16	"	39 HH-124 HH.
"	16	"	129 HH-157 HH.
"	16	"	155-745 J.

8. In volume 16 - positions 124 HH - 129 HH were plotted on H 6188 (1936).

9. In the Description Report written by the field party, under paragraph "Comparison with previous surveys": There are a number of wrecks mentioned, however these wrecks were not shown on the smooth sheet as they were not described in the sounding records.

10. The junctions with contemporary adjacent ^{sheets} were satisfactory. No junction was made on the north or the adjoining sheets were not considered contemporary. However an eye inspection was made and it was found that the present survey shows a general shoaling of approximately three feet.

Junctions made. Differences average 2 feet. g.a.m.c. correct

Respectfully submitted,
G. C. McGlosson

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6190 (1936) FIELD NO. 402

Approaches to New York Harbor,
New York and New Jersey.

Surveyed in May-Sept. 1936

Scale 1:40,000.

Instructions dated April 9, 1936 (LYDONIA)

Dorsey Fathometer Soundings.

3 Point fixes on shore signals.
Buoy Control.

Chief of Party - G. D. Cowie
Surveyed by G. D. Cowie and E. O. Heaton
Protracted by - R. A. Earle
Soundings plotted by - E. B. Brown, Jr.
Verified and inked by - G. C. McGlasson

1. Condition of Records.

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

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

2. Compliance with Instructions for the Project.

The plan and extent of development are in accordance with the instructions for the project except as follows:

- a. Several shoal indications obtained on the present survey should have been more closely investigated. (See Par. 10a and 10e, this review.)
- b. Charted wrecks should have been better investigated (See paragraphs 8a (1), 8a (4), ~~8a (4)~~, 8a (5), and 8a (6), this review).

3. Shoreline and Signals.

This is an offshore survey and no shoreline is shown.

Topographic signals originate with T-5285 (1932) and T-6216b (1934).

Signal "Red," shown as a topographic signal by the field party, has been changed to a hydrographic signal. It was out in by sextant in 1935 by Commander G. D. Cowie while engaged in locating aids to navigation in this area. The position was plotted in the office and furnished the field party by letter of April 27, 1936, filed in the office of the chief, Division of Charts. The cuts are recorded in a volume entitled "Sextant Fixes, Great South Bay and Hempstead Bay, L. I.," and filed in the library under the accession number S-1141.

Buoy signals were located by three point fixes on shore signals or by taut wire and sun azimuth. The location data is filed as a cahier for the present survey under the accession number S-1457.

4. Sounding Line Crossings.

The sounding line crossings are in general very good. Several discrepancies of 3 and 4 feet are listed in the Descriptive Report, pages 2 and 3, but these are uncommon. They are probably due to an accumulation of small errors in position, fathometer and tide corrections and in reading the fathometer (See Par. 10, this review relative to Dorsey Fathometer).

5. Depth Curves.

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

6. Junctions with Contemporary Surveys.

- a. The present survey overlaps H-4792 (1927), H-4793 (1927), H-4794 (1927), and H-4797 (1927) on the north. Soundings on the present survey in the overlapping area are approximately 2 feet shoaler than those on the 1927 surveys. Part of this may be due to natural changes and part to the difference in the sounding methods used (hand lead on 1927 work, Dorsey Fathometer on the present survey). Since the later survey should control for charting, only those soundings from the 1927 work that were in general agreement with the present survey were transferred in the overlapping area. A sufficient number of soundings was transferred from the 1927 work inshore from the overlapping area to adjust the 5 fathom curve to a point where it can be continued to the 1927 surveys without further adjustment by the compiler. The present survey, including the transferred soundings, should supersede the 1927 surveys in the common area.
- b. The junctions with inshore surveys H-5371 (1933) on the north and with H-5735 (1934), H-5639 (1934), H-5616 (1934), H-5638 (1934), H-5615 (1934) and H-6136 (1936) on the west are satisfactory.
- c. The junctions with offshore surveys H-6188 (1936) on the south and with H-6189 (1936) and H-6026 (1936) on the east are satisfactory.

7. Comparison with Prior Surveys.

- a. H-47 (1835), 1:40,000; H-51 (1835), 1:20,000; H-52 (1835), 1:10,000; H-53 (1835), 1:10,000; H-54 (1840), 1:20,000; H-56 (1840), 1:20,000; H-62 (1836), 1:20,000; H-129 (1841), 1:10,000; H-526 (1855-6), 1:20,000.

These inshore surveys cover small portions of the present survey on the north and west. The lines are in general widely spaced and poorly controlled, many of the boat's positions being located by very small angles. The agreement with the present survey is fair in places but becomes poorer as the distance from shore

increases. Because of the better development and the more accurate methods employed on the present survey, it should supersede the above surveys for charting purposes.

- b. H-100 (1842), 1:400,000; H-101 (1844), 1:400,000.

These surveys cover the entire area of the present survey. The method of control is undoubtedly based on dead reckoning in the offshore portions. The agreement with the present survey is fair inshore but becomes poorer offshore. They show no outstanding features which need be retained and should be superseded for charting by the present survey which is more detailed and more accurately controlled.

- c. H-102 (1840), 1:20,000; H-103 (1840), 1:20,000; H-104 (1840), 1:20,000; H-106 (1840), 1:40,000.

The first three of these surveys are replottings on a larger scale of the work contained on H-106 (1840) and need not be considered. H-106 (1840) covers the inshore area on the west on the present survey. The lines are widely spaced and the control at the offshore limits is weak although based on shore signals. The agreement is fair inshore but becomes poor toward the offshore limits. In general the present survey is much better developed and controlled and gives a better delineation of the area. Differences between H-106 (1840) and the present survey are listed in the Descriptive Report, pages 7 and 8, as items 34-37, 39-40, 42-46 and 48-50 and are discussed below.

- (1) Item 34 is a 37 foot sounding (charted) in Lat. $40^{\circ} 12' 18''$, Long. $73^{\circ} 58.90'$ originating with Pos. 5 of Aug. 28, 1840 on H-106 (1840). It falls in depths of 44 feet on the present survey with surrounding depths in good agreement. A shoal indication of 42 feet about .08 mile south on the present survey was not developed so the 37 foot sounding has been carried forward until a proper field investigation can be made.
- (2) All other listed differences between the two surveys fall in well developed areas on the present survey. They should be disregarded in future charting.
- (3) See page 9.

- d. H-670 (1859), 1:400,000.

This is a compilation of prior surveys discussed in the foregoing paragraphs and contains no additional information that needs discussion in this review.

- e. H-1278 (1875), 1:10,000; H-1359 (1879), 1:5,000; H-1663 (1885), 1:10,000; H-1718 (1886), 1:20,000.

These inshore surveys cover small portions of the present survey on the north and west and are in fair agreement therewith. They show no outstanding features that need to be retained and should be superseded for charting.

- f. H-1498a (1880-3), 1:1,200,000; H-1558 (1882-3), 1:300,000.

These surveys contain only a few original soundings within the area of the present survey, which are of no current charting value, and should be superseded.

- g. H-1538 (1882), 1:40,000; H-1578a (1883), 1:40,000; H-1578b (1883), 1:80,000.

These surveys supplement each other and combine to cover the major portion of the present survey with which they are in general good agreement. The offshore portions of these surveys are controlled by dead reckoning. Several soundings of $10\frac{1}{2}$ to $10\frac{3}{4}$ fathoms (charted as 10 fathoms) in Lat. $40^{\circ} 23'.5$, Long. $73^{\circ} 36'$ originating with positions 32-34 O on H-1538 (1882) fall in depths of 69 to 71 feet on the present survey. There are no sounding volumes in the archives for these positions but the method of control is undoubtedly dead reckoning. The sounding line ends at position 34 O apparently without making a closed loop back to shore control. These soundings appear to be out of position and in view of the excellent shoal development which shows similar depths about 0.4 mile southwest on the present survey they should be disregarded in future charting.

Because of its better development and more accurate control the present survey should supersede the above surveys for charting purposes.

- h. H-1538a (1903), 1:10,000; H-3777a (1915), 1:40,000; H-4929 (1929) W. D., 1:20,000.

These surveys are developments of shoal areas in the vicinity of Scotland and Ambrose Light Vessels. The general delineations of the shoal areas are in fair agreement with those on the present survey but the minimum depths obtained on the shoal in Lat. $40^{\circ} 27'.8$, Long. $73^{\circ} 50'.1$ are at variance with the depth of 45 feet obtained on the present survey. H-1538a (1903) shows $5\frac{3}{4}$ fathoms; H-3777a (1915), 42 feet; and H-4929 (1929) W. D., 40 feet. The 1929 wire drag survey was made because of the reporting of a 36 foot shoal in the above position. (See chart letter 339 of 1929). The minimum depth obtained was 40 feet and the shoal was cleared with an effective depth of $38\frac{1}{2}$ feet. The shoal was also thoroughly developed with the hand lead. The 40 foot sounding and several others in the vicinity have been brought forward from the 1929 survey to the present survey. H-1538a (1903) and H-3777a (1915) contain no information which needs to be retained and should be superseded. H-4929 (1929) W. D., because of its larger scale and closer development, should be used to supplement the present survey where necessary.

- ~~i. H-3775 (1915), 1:50,000.~~

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

This survey covers a small area inshore on the west side of the present survey. Lines are spaced about 1/2 mile apart and the depths average 5 feet deeper than those on the present survey. In view of the closer development and greater detail on the present survey, it should supersede the above survey for charting purposes.

j. H-4609 (1926), 1:40,000.

This survey is a development of the shoal area east of Scotland Light Vessel. The depths average 5 feet deeper than those on the present survey. The outstanding difference is the least depth of 63 feet in Lat. 40° 25'.4, Long. 73° 51'.6 on the old survey which falls in a shoal area 3/4 mile in diameter with a least depth of 47 feet on the present survey. The present survey should supersede the above survey for charting purposes.

k. H-4610 (1926), 1:20,000.

This survey contains only a few reconnaissance lines spaced a mile apart in the inshore area west of Scotland Light Vessel. The few soundings which fall in the area covered by the present survey are in fair agreement. The present survey, because of its close development of this area, should supersede the above survey for charting.

8. Comparison with Chart 369 (New Print dated July 26, 1937)
Chart 542 (New Print dated July 13, 1937)
Chart 579 (New Print dated May 25, 1937)
Chart 1215 (New Print dated May 20, 1937)
Chart 1216 (New Print dated Oct. 7, 1936)

a. Hydrography

Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs and on additional information which is considered below.

- (1) The wreck in Lat. 40° 32'.16, Long. 73° 51'.22 originates with Chart Letter 46 (1930). The U. S. Engineer's Office in New York reported the existence of the wreck and advised that its removal was contemplated for the spring of 1930. Information regarding the removal has been requested from the Engineers. Until definite information of its removal is received, this wreck should be charted. Par. 1j.
Rev.
H-6463
Wreck not removed.
See letter attached
to Descriptive Report.
gam
- (2) Soundings discussed in the Descriptive Report, page 4, items 7, 9, 10 and 11, originate with U. S. Engineers B. P. 28897 (1935) which is a 1:40,000 scale survey of the shoal area southeast of Scotland Light Vessel. Similar shoal depths are shown on the present survey but in positions differing by 0.1 to 0.3 mile. Because of its closer development and probably more accurate control the present survey should supersede B.P. 28897 for charting purposes.

- (3) The two detached 60 foot soundings charted in Lat. 40° 24.70, Long. 73° 54.18 and in Lat. 40° 20.59, Long. 73° 52.69 fall in depths of 73 feet and 68 feet respectively on the present survey. They first appeared on obsolete Chart 120 (edition of Oct. 1894). No authority for their charting could be found and as they fall in well developed areas on the present survey they should be disregarded in future charting.
- (4) The wreck, P. D., charted in Lat. 40° 21.79, Long. 73° 56.09, discussed in the Descriptive Report, page 5, ^{Par. 11, Rev. H-6463.} page 5, item 19, originates with Chart Letter 487 (1930). The wreck is reported as that of the Barge Pocono. ^{Wreck not removed. See letter attached to Descriptive Report. gam} Pending definite information concerning its breaking up or removal it should be carried forward on the charts.
- (5) The wreck, P. D., reported, charted in Lat. 40° 17.83, Long. 73° 56.49, discussed in the Descriptive Report, ^{Wreck not removed. See letter attached to Descriptive Report. gam.} page 5, item 21, originates with Chart Letter 178 (1929). It is reported as the wreck of the Barge William B. ^{Par. 14, Rev. H-6463.} Diggs. It should be carried forward on the charts until definite information is received concerning its breaking up or removal.
- (6) The wreck, reported, charted in Lat. 40° 16.53, Long. 73° 56.00, discussed on the Descriptive Report, page 6, item 28, originates with Chart Letter 287 (1928). ^{Wreck not removed. See letter attached to Descriptive Report. gam} It is reported as the wreck of the Dredge Progress. Pending definite information concerning its breaking up ^{Par. 16, Rev. H-6463} or removal it should be carried forward on the charts.
- (7) The 33, reported, charted in Lat. 40° 10½', Long. 73° 53' discussed in the Descriptive Report, page 7, item 41, originates with Chart Letter 125 (1930). The master of the S. S. Mauretania reported striking an obstruction like a sand bank. The vessel did not ground. The depth reported was the draft at the stern of the vessel at the time of striking. The 33 falls in depths of 54 - 55 feet in a fairly well developed area on the present survey. It is entirely possible that the vessel may have struck a sunken log or other similar obstruction. In view of the uncertain nature of the obstruction; the fact that local fishermen profess ignorance of its existence (see Descriptive Report); and the development on the present survey, the 33 should be disregarded in future charting. *Answers #1570*
- (8) Many of the differences between the present survey and the charts were caused by the omission of fractions from soundings originating with surveys discussed in paragraph 7g, this review, when the early editions of the charts were compiled in fathoms. The later editions were compiled in feet by simply multiplying the soundings on the early editions by 6.

- (9) The wreck in Lat. $40^{\circ} -27'.55$, Long. $73^{\circ} 55'.36$ originates with Chart Letter 126 (1936). It has been removed subsequent to the date of the survey (N to M 25-1937) and the symbol will be expunged from the charts.

b. Aids to Navigation

- (1) The nun buoy in Lat. $40^{\circ} 27'.3$, Long. $73^{\circ} 56'.2$ was located on the present survey 0.2 mile southeast of its charted position. No change in position is recommended as the aid in either position adequately marks the feature intended.
- (2) Lighted buoy "1A" located on the present survey in Lat. $40^{\circ} 27'.55$, Long. $73^{\circ} 55'.36$ was removed subsequent to the date of the survey (N. to M. 25-1937) as the wreck which it marked has also been removed. (See Par. 8a (9), this review).
- (3) The bell buoy located on the present survey in Lat. $40^{\circ} 05'.9$, Long. $74^{\circ} 01'.5$ was removed subsequent to the date of the survey (N. to M. 33-1937) and replaced by a lighted buoy 0.6 mile to the southeast.
- (4) The location of all other aids to navigation in this area are in good agreement with the charted positions.

9. Field Plotting.

The field plotting was very good.

10. Additional Field Work Recommended.

The survey as a whole is excellent. For comments on the results obtained with the Dorsey Fathometer and recommendations for standardization of procedure, see paragraph 4 of the review of H-6189 (1936). The following additional work would add considerably to the completeness of the survey.

- a. Shoal indications listed below should be investigated at the first opportunity. An example of the uneven character of the bottom in this area is furnished by the group of consecutive soundings of 73, 54, 59, 67 and 76 feet between Pos. 113 and 115 BB in Lat. $40^{\circ} 13'.2$, Long. $73^{\circ} 52'.2$. Excellent shore control is available for this work:

- (1) 31 feet in Lat. $40^{\circ} 20'.89$, Long. $73^{\circ} 56'.33$ Par. 1h, Rev. H-6463.
- (2) 51 feet in Lat. $40^{\circ} 17'.73$, Long. $73^{\circ} 55'.06$ Par. 1e, Rev. H-6463.
- AW0151510 (3) 31 feet in Lat. $40^{\circ} 16'.76$, Long. $73^{\circ} 58'.08$ Par. 1d, Rev. H-6463
- (4) 37 feet in Lat. $40^{\circ} 20'.01$, Long. $73^{\circ} 56'.92$ Par. 1g, " "
- AW0151514 (5) 42 feet in Lat. $40^{\circ} 12'.14$, Long. $73^{\circ} 58'.96$ with 37 (charted) from H-106 (1840) .06 mile to the northeast. Par. 1b, Rev. H-6463
- (6) 62 feet in Lat. $40^{\circ} 04'.80$, Long. $73^{\circ} 54'.96$ } Cleared with
- (7) 62 feet in Lat. $40^{\circ} 02'.96$, Long. $73^{\circ} 54'.88$. } 59 ft. drag on H-6462
Par. 2a(3), Rev.

- b. The charted wrecks discussed in paragraphs 8a (1), 8a (4), 8a (5) and 8a (6) should be investigated with a wire drag and their existence proved or disproved if definite information Rev. cannot be obtained concerning their breaking up or removal. H-6463. The development on the present survey is not sufficient evidence to warrant their removal from the chart.
- c. If feasible, the 33, reported, charted in Lat. $40^{\circ} 10\frac{1}{2}'$, Long. $73^{\circ} 53'$ should be examined with a wire drag although its retention on the chart is not warranted by the meager information available concerning it. (See Par. 8a (7), this review). It is possible that the reported position is erroneous and that the vessel may have been on the shoal to the southwest where a least depth of 43 feet is shown in Lat. $40^{\circ} 09'.2$, Long. $73^{\circ} 54.0$ on the present survey. Disproved. Par. 1a, Rev. H-6463 *Always #1510*
- d. In view of the important steamer lanes which traverse the area covered by the present survey, consideration should be given to the advisability of dragging the entire area inside the 10-fathom curve particularly along the New Jersey coast where shoals are numerous. Although the prevailing bottom is sandy and is usually considered changeable, comparisons with those of the prior surveys which are fairly well controlled have shown the changes to be slight.
- e. When future work is planned in this area, consideration should be given to the development of shoal indications of 62 feet in Lat. $40^{\circ} 26'.66$, Long. $73^{\circ} 37'.44$ and 61 feet in Lat. $40^{\circ} 25'.65$, long. $73^{\circ} 37'.70$. Sounding lines in this vicinity were controlled by angles on survey buoys which have already been removed and whose replacement would involve considerable work.

11. Note to Compiler.

The compiler's attention is called to paragraph 6a, this review, relative to treatment of junctions with inshore 1927 surveys and to paragraph 12b, this review, concerning surveys not to be superseded.

12. Superseding Old Surveys.

a. Surveys to be superseded.

H-47 (1835) in part
 H-51 (1835) in part
 H-52 (1835) in part
 H-53 (1835) in part
 H-54 (1840) in part
 H-56 (1840) in part
 H-62 (1836) in part
 H-100 (1842) in part
 H-101 (1844) in part
 H-102 (1840) in part
 H-103 (1840) in part
 H-104 (1840) in part
 H-106 (1840) in part

H-129 (1841) in part
H-526 (1855-6) in part
H-670 (1859) in part
H-1278 (1875) in part
H-1359 (1877) in part
H-1498a (1880-3) in part
H-1538 (1882) in part
H-1538a (1903) entirely
H-1558 (1882-3) in part
H-1578a (1883) in part
H-1578b (1883) in part
H-1663 (1885) in part
H-1718 (1886) in part
H-3773 (1915) in part
H-3777a (1915) entirely
H-4609 (1926) entirely
H-4610 (1926) in part

b. Surveys not to be superseded.

H-4929 (1929) W.D.

13. Reviewed by - J. A. McCormick, September 8, 1937.

Inspected by - A. L. Shalowitz

Examined and approved:

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

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

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

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

Par. 7b(2). The 43 foot sounding (charted) in lat. 40°05.3, long. 74°00.8 on H-106 (1840) originates with pos. 9-10 of Sept. 24, 1840 and falls in depths of 55 feet on the present survey. Surrounding depths on the old survey are 5 to 10 feet shallower than those on the present survey. In view of this general discrepancy and considering the much closer development on the present survey it is unlikely that the 43 exists in the location shown and it should be disregarded in future charting.

*Copy of Chart
letter 782 (1937)*

Wrecks 623/6-b

Subject: Wreck of the Fishing
steamer MISTLETOE

1st Ind.

The District Engineer, New York District, New York, N. Y., October
8, 1937. -

To The Director, Department of Commerce, U. S. Coast and Geodetic Survey,
Washington, D. C.

1. The wreck of the steamer MISTLETOE, shown on U. S. C. &
G. S. Chart No. 1215, has not been removed by this office. *Rev. 8a(1), review.*

2. Wrecks shown on U. S. C. & G. S. Chart No. 1215, published
in February, 1937 at Washington, D. C., have not been removed so far *Rev. 8a(4), 8a(5)
and 8a(6), review.*
as could be determined from a study of the records of wrecks removed by
this office for the past twenty years.

1937 Oct. 11 - AM 9:14

For the District Engineer:

/s/ H. G. Fairbanks
H. G. FAIRBANKS,
Major, Corps of Engineers,
Executive Assistant.

1 Inclos.-
Wrecks 623/2 (Chart)

Washington, D. C.,
October 20, 1937

Receipt of the above information is acknowledged, with
thanks.

(Signed) J. H. HAWLEY (stamped)

Acting Director,
U. S. Coast & Geodetic Survey.

c
o
p
y

782 (1937)

CKG
KTA

Copy of Chart
Letter 782 (1937)

80-DRM

September 23, 1937.

To: District Engineer,
United States Engineer Office,
710 Army Building, 39 Whitehall Street,
New York, N. Y.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Wreck of the Fishing Steamer "MISTLETOE".

Attached is a section of chart No. 1215 on which is indicated the wreck of the Steamer "MISTLETOE".

Lettr 46 (1930)

Your letter (Wrecks 625) of January 13, 1930, addressed to this Bureau and signed by G. M. Hoffman, Colonel, Corps of Engineers, states:

"3. The removal of this vessel in accordance with the provisions of Section 19 of the River and Harbor Act approved March 3, 1899 is contemplated by this office, as soon as weather conditions permit during the spring of 1930, and it is requested that the location of this wreck be indicated on Chart 1215 until removal is completed."

No further correspondence relative to the subject has been received by this office and information is requested as to whether the wreck has been removed.

It is further requested that this office be informed if any of the other wrecks currently shown on chart No. 1215 have been removed.

(Signed) R. S. PATTON

Enclosure.

Director.

Applied to Chart 1215 - Jan 18, 1938 L.M.Z.

Applied to drawing of Chart 1216 - Jan. 24, 1938 - J.W.

Applied to Chart 1108 - Mar 10, 1938 R.M.Z.

Applied to Chart 579 - Feb 1938 R.M.Z.

" " 542 Feb 1938 R.M.Z.

" " " 1000 July 1938 Z.M.A.

Applied to extension of chart 795 Nov. 1947 F.F.R.

Added additional adys to chrt 542 6-25-54 south
of $40^{\circ}34'$ and east of $73^{\circ}50'$ R.K.D.