6347

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

DESCRIPTIVE REPORT

Topographic / *Hydrographic* } *Sheet No.* 6347

State New York

LOCALITY
Southeast of Long Island
~~Off eastern portion of Long Island~~

Off Montauk Point

193 8

CHIEF OF PARTY

Frank S. Borden

U. S. GOVERNMENT PRINTING OFFICE

Form 537
Ed. Dec., 1930

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

G. 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. 121

REGISTER NO. 6347

State New York.

General locality ~~Long Island.~~ Southeast of Long Island

Locality ~~Off Eastern Portion of Long Island.~~ Montauk Point

Scale 1:120,000 Date of survey Aug. 19 to Sept. 28 1938

Vessel OCEANOGRAPHER

Chief of Party Frank S. Borden

Surveyed by Ship's Officers

Protracted by E. H. Kirsch

Soundings penciled by E. H. Kirsch

Soundings in fathoms ~~and feet~~ and sixths

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None

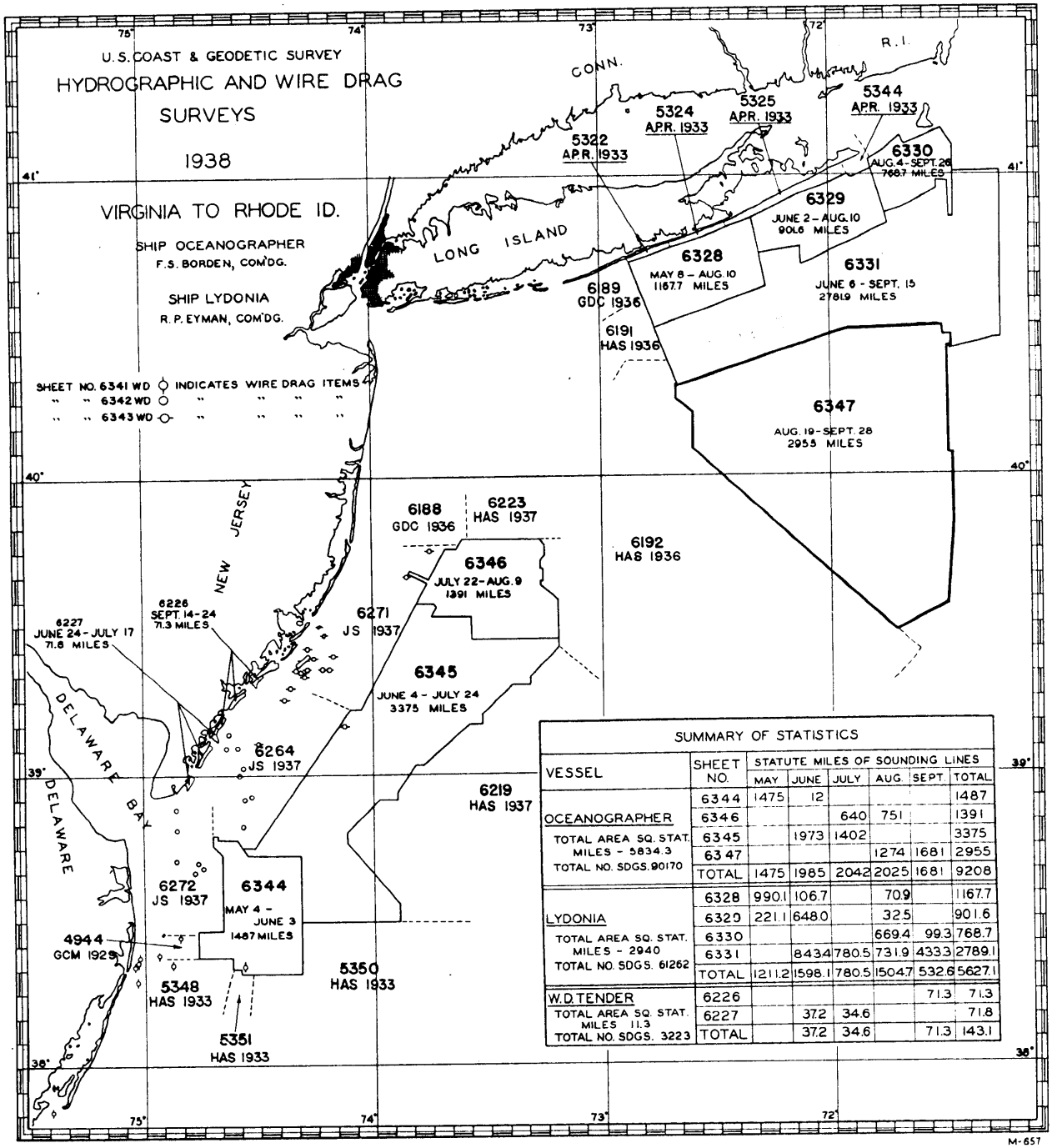
Inked by G. C. McGlasson

Verified by G. C. McGlasson

Instructions dated March 4, 19 38

Remarks:

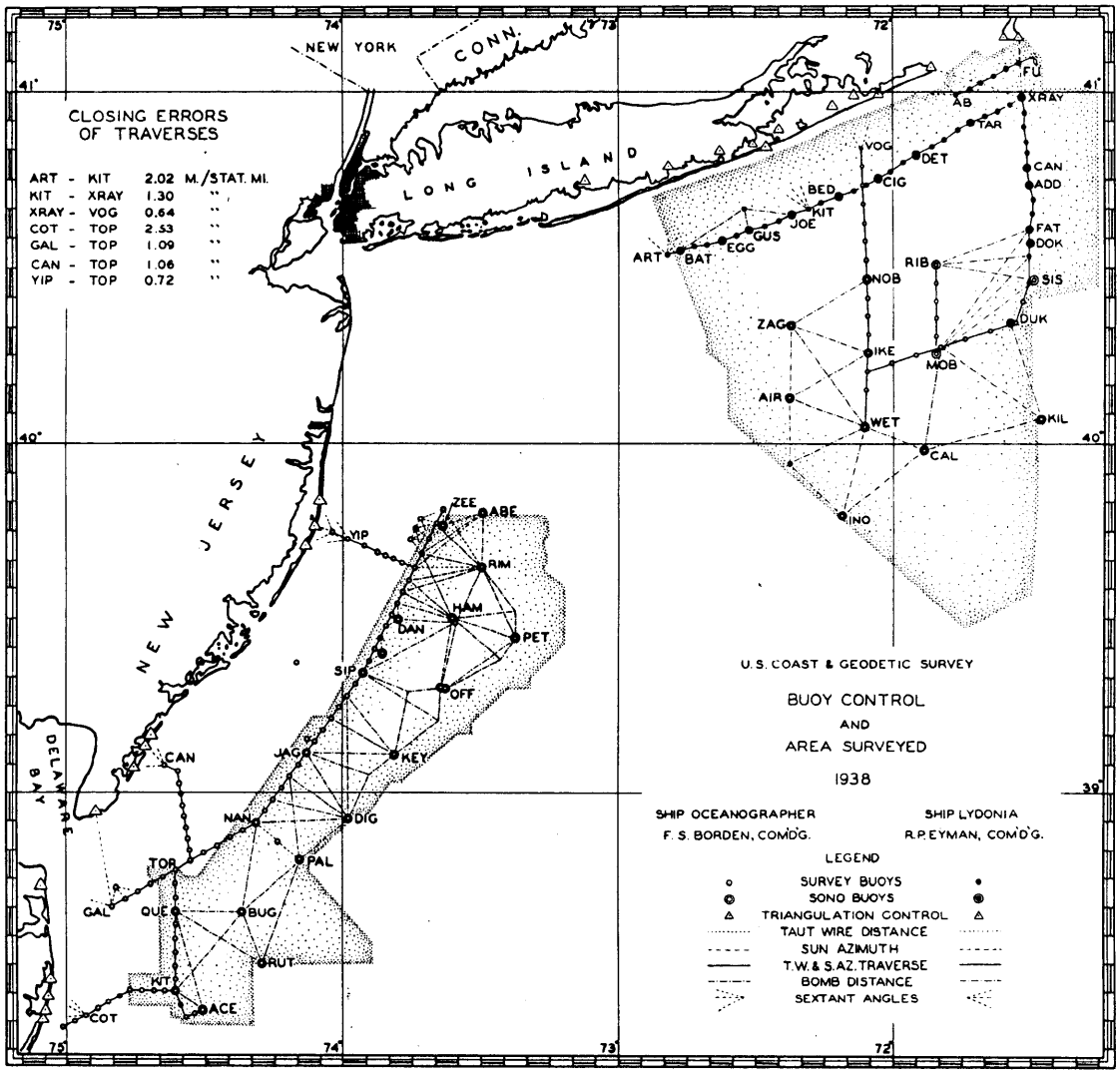
U. S. GOVERNMENT PRINTING OFFICE, 1932



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, COM'D'G.
LEGEND
SURVEY BUOYS
SOND BUOYS
TRIANGULATION CONTROL
TAUT WIRE DISTANCE
SUN AZIMUTH
T.W. & S.AZ. TRAVERSE
BOMB DISTANCE
SEXTANT ANGLES
75°
74°
73°
72°
41°
40°
39°
FU
AB
XRAY
TAR
VOG
DET
CAN
ADD
BED
CIG
KIT
JOE
GUS
FAT
DOK
ART
BAT
EGG
RIB
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ZAG
DUK
IKE
MOB
AIR
WET
KIL
CAL
INO
ZEE
ABE
YIP
RIM
HAM
DAN
PET
SIP
OFF
JAG
KEY
CAN
NAN
DIG
PAL
TOR
GAL
QUE
BUG
GRUT
KIT
ACE
COT

DESCRIPTIVE REPORT - SHEET NO. 6347

DATE OF INSTRUCTIONS:

The work on this sheet was done in accordance with instructions, Project No. HT-207, dated May 16, 1936 and supplemental instructions, Project No. HT-207, dated March 4, 1938.

LIMITS:

This sheet covers a deep water area, triangular in shape, south of the eastern half of Long Island. The area is enclosed in red on the attached sketch which shows the limits of all sheets of the 1938 season. There is no recent survey joining the eastern edge of the sheet. The southwestern edge is joined by Sheet No. 6192 (1936), H. A. Seran, ~~1936~~. The northern edge is joined by Sheet No. 6331 (1938), R. P. Eyman, ~~1938~~.

The junctions with the various sheets are discussed in subsequent paragraphs in this report.

SURVEY METHODS:

This survey was controlled by a closed taut wire - sun azimuth traverse. The traverse was started at buoy UMP, which was located by sextant fixes from triangulation stations ashore. Fixes were also obtained at the second buoy of the traverse, VAG. These fixes are recorded on page No. 2 of sounding volume No. 1. The traverse continued south to buoy HAL, thence ENE to buoy HUB, thence northerly to buoy GOB. The LYDONIA carried the traverse from buoy GOB northerly to a shore tie, except that the OCEANOGRAPHER did all taut wire work. A spur traverse was run south from buoy HAL to buoy WET. Other sono buoys were located by bomb distance from sono buoys located in the above traverse. For traverse and bombing data, geographic positions, adjustments and closures, refer to special file, Ship OCEANOGRAPHER 1938, which will be submitted in the near future with other miscellaneous data related to the season's work. Filed in Library Acc. No. S1708

Three point fixes were taken on the buoys to control the hydrography to the limit of visibility of the buoys. The greater portion of the sheet, however, was controlled by R.A.R., using sono buoys placed in the traverse line, or located by bomb distances. For the method of computing the bomb distances to these sono buoys and the distances to the hydrographic positions, refer to the descriptive report for Sheet No. 6344 (1938). The method described in that report was used to the sixty fathom curve only on this sheet. Due to the fact that there is a sharp break in the velocity curve (trip No. 9) at about sixty fathoms, the above method had to be supplemented.

The velocity of sound increased rapidly with depth from 45 fathoms to sixty fathoms, the velocity being 1497 meters per second at sixty fathoms. The velocity then remains almost constant to a depth of one hundred fathoms, having increased one meter per second. From one hundred fathoms down the velocity slowly decreases with depth. For obtaining velocities to hydrographic positions beyond the sixty fathom curve the following additional work was applied to the first described method.

A second overlay was placed on the boat sheet and average depth curves were drawn for each buoy as before, but only between the sixty and 275 fathom curves and using the 60 fathom curve as the starting point in taking out the average depths.

In computing the final distances the velocity curve was treated as a straight line from the buoy depth to 60 fathoms, and as a straight line with different slope from 60 fathoms to 275 fathoms. Beyond the 275 fathom curve a constant velocity of 1480 meters per second was used.

Between the 60 fathom and 275 fathom curves the final distances were obtained by multiplying the total distance in seconds by the velocity obtained at the 60 fathom curve. Then the distance in seconds, to the nearest second, from the 60 fathom curve to the position was multiplied by the difference between velocities at 60 fathoms and the position, as found from the second overlay. This value was then applied to the first as a plus or minus correction and was entered in the bomb record.

For positions outside the 275 fathom curve there are two corrections. The first is the product of the distance in seconds from the 60 fathom curve to the position, and the difference in velocity at the 60 fathom curve and 275 fathom curve. The correction is applied according to sign. The second correction is the product of the distance in seconds from the 275 fathom curve to the position by the difference in velocity at the 275 fathom curve and 1480. The second correction was always minus.

The traverse previously described furnished the horizontal control for this sheet with the exception of an area of approximately 300 square miles on the northeast portion of the sheet. The reason for this follows:

The entire sheet was sounded during the last three trips of the season, which were trips Nos. 8, 9 and 10. During the interval between trip 9 and 10, the severe hurricane of September 21 apparently dragged all survey buoys to the northward. To control the work for the final trip, a new six buoy, taut wire - sun azimuth traverse

was established across the remaining area to be surveyed. A position was assumed for the northerly buoy RIB, and this traverse computed and plotted on a celluloid projection. The balance of the seasons work was controlled by this traverse, plus one sono buoy SIS, bombed in from the new traverse.

The area surveyed during trip No. 10 was extended sufficiently to insure a good overlap with previously completed work on the north, east, south and west. Then by matching depth curves in this overlap the final position of the blind traverse was determined and the work on the two surveys coordinated. Before the buoys were picked up, survey buoys GOB, FAT, and HAM, of the original traverse, were bombed in by the LYDONIA to the new traverse. There were indications that perhaps one of these buoys had not dragged.

The area was smooth plotted on a separate projection which was constructed on an aluminum mounted sheet. A tracing on celluloid was made and fitted into position on Sheet No. 6347 (1938) by matching soundings and depth curves. In so doing it was noted that buoy GOB of the original traverse had not dragged during the hurricane of September 21st. The bombed position of buoy GOB, from the RIB - MOB traverse therefore gives a tie to the original traverse. The assumed position of RIB was found to be too far north by 435 meters and too far east by 981 meters. All buoys in the new traverse were corrected to sheet datum (N.A. 1927) and plotted on the sheet in correct position. The hydrographic positions were not replotted on the sheet but transferred in correct datum from the overlay on which they had been smooth plotted. Soundings were then penciled on the sheet directly from the record books.

FATHOMETER:

"A" day was started with the Dorsey No. 1 fathometer with the initial set at 14 feet. This fathometer was used through position 73 "A" day, August 19, 1938. A new line was started at position 74 "A" day using the Dorsey No. 2 fathometer with the initial set at 18 feet. This initial setting of 18 feet was used through position 21 "B" day, 7:04 O'clock, August 20, 1938. Comparisons with wire soundings were then taken and the INITIAL SETTING CHANGED FROM 18 FEET TO 14 FEET. The No. 2 fathometer with the initial at 14 feet was used for the remainder of the sheet.

SOUNDING REDUCERS:

Soundings were reduced as described in the descriptive report for Sheet No. 6344 (1938) to a depth of 200 fathoms. In depths of 200 fathoms or more the corrections for draft, settlement, index and tide were dropped. The velocity of sound correction was retained however and entered to the nearest fathom. From the mean temperature and salinity curve of trip No. 9, September 7 to September 16, the following table of deep water corrections was compiled and used.

DEPTH - FATH.	TEMP. - °C	SALINITY	MEAN TEMP. IN 200 FATH. LAYERS	MEAN SALINITY IN 200 FATH. LAYERS	MEAN VEL IN 200 FATH. LAYERS	MEAN VEL SURFACE TO DEPTH	FACTOR	CORRECTION IN FEET
0	22.2	34.3						
200	8.0	35.3	12.8	35.1	1503.5	1503.5	+ .00260	+ 3.08
400	4.2	35.1	6.1	35.2	1485.2	1494.3	- .00353	- 8.47
600	4.0	35.0	4.1	35.1	1483.6	1490.8	- .00587	- 21.13
800	4.0	34.9	4.0	35.0	1489.5	1490.4	- .00613	- 29.42
1000	3.9	34.8	3.9	34.9	1495.5	1491.4	- .00547	- 32.82
1200	3.9	34.8	3.9	34.8	1502.2	1493.3	- .00420	- 30.24
1400	3.9	34.8	3.9	34.8	1508.8	1495.5	- .00273	- 22.93

Most of the serial temperatures observed by the OCEANOGRAPHER during trip No. 9, September 7 to September 16, were taken in deep water, 50 fathoms or over. The positions of these serials were apparently far enough off shore so that some effect from the Gulf Stream was recorded. This mean curve is somewhat warmer than those of other trips in corresponding depths. This mean curve is correct and was used in correcting soundings of 50 fathoms and over. It was noted, however when smooth plotting, that the soundings under 50 fathoms when corrected from this curve, failed to cross soundings under 50 fathoms from other trips, by one to three feet. The soundings at the inshore edge of the area covered during trip No. 9, were too deep due to the warm temperature observed in deeper water.

The LYDONIA had observed a serial temperature in 43 fathoms on September 7, and one in 42 fathoms on September 12 at the inshore edge of our work. These were combined with two of our serials in less than 50 fathoms to obtain a new mean temperature curve for correcting soundings under 50 fathoms during trip No. 9. Crossings were improved so that there is no error in most cases. Soundings over 50 fathoms were corrected from our original mean temperature curve for trip No. 9.

METHODS USED IN SMOOTH PLOTTING:

Distance circles were drawn for each sono buoy at intervals of 10,000 meters. These circles were left in pencil. The distance arcs to the positions were finally traced with colored ink, each sono buoy

having a distinctive color. Gyro compass bearings were drawn with a black dashed line where used in connection with distance arcs but not shown when taken with a three point fix.

Gyro compass bearings were recorded in the sounding record as observed, but when plotted a correction of minus one degree was applied. This minus one degree was a constant correction to the gyro compass through the season. Errors in bearings due to oscillations of the gyro compass following a turn at the end of a line were as great as three degrees and therefore the bearings were not always dependable. Erroneous bearings were not plotted on the smooth sheet.

The dead reckoning notes were plotted on tracing paper for each line, and superimposed over the arcs and bearings. For small differences, the arcs and bearings were assumed to be correct, but were rejected in the sounding record where they were obviously in error.

Soundings are plotted in fathoms and feet. In penciling the soundings on this sheet, the line under the foot digit, to indicate sixths of fathoms, was omitted to avoid confusion. If this line is desired it should be added when the soundings are inked. (This line inked in office).

Bottom characteristics were recorded on the serial temperature forms. For convenience they have been copied on page No. 2 of volume No. 1.

DISCREPANCIES.

In general the crossings on this sheet are satisfactory. Discrepancies in no case exceed one per cent of the depth except on the very steep slopes on the sides of the submarine valleys.

COMPARISONS WITH ADJOINING SHEETS:

The junction with Sheet No. 6331 (1938) on the north is satisfactory. The junction with Sheet No. 6192 (1936) on the southwest is satisfactory out approximately to the ~~500~~ 200 fathom curve. Beyond this however there appears to be a gradually increasing discrepancy which attains rather large proportions at the 1000 fathom curve. Unfortunately the junctions along the outer portions of the two surveys fall in a region of very irregular bottom. Furthermore the warm pool of water which lies on the continental shelf outside of the 45 fathom curve, is covered with colder water which makes it impossible to determine exact velocities for R.A.R. work. On the 1936 survey the ship was from 35 to 50 miles from the station ships when working along the junction line where the discrepancies occur and the arc intersections were consequently very acute. On the present survey when working in this locality the ship was 25 to 35 miles from the radio sono buoys and although the arc intersections were somewhat acute it is apparent from a study of the general

directions of the arcs that very little of the discrepancy can be attributed to this circumstance. Smooth plotting has reduced the discrepancy somewhat from that indicated originally on the boat sheet but it will still be necessary to swing the outer portion of the 1936 survey about one ~~half~~ mile to the southwestward to obtain a satisfactory junction between the two surveys. This should not be done however until completion of the 1939 season when it is proposed to accomplish additional work in this locality. *See par 4 b of Review.*

Respectfully submitted,

E. H. Kirsch.

E. H. Kirsch, Lt. (jg.), C&GS.,
Ship OCEANOGRAPHER.

.....

Approved and forwarded:

Frank S. Borden

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

STATISTICS

PROJECT H. T. 207 SHEET 6347

DATE	DAY	STAT. MILES	SOUNDINGS	POSITION	TIDE STATION
Aug. 19, 1938	A	174	1574	109	Block Island standard gage - M.L.W. is 3.0 feet on staff. No time or range correction. 60th M. time.
20 "	B	197	1853	122	
21 "	C	223	2058	145	
22 "	D	270	2447	190	
23 "	E	26	171	11	
24 "	F	42	525	41	
25 "	G	99	907	64	
26 "	H	90	830	60	
27 "	J	150	1453	107	
Sept. 7, "	K	137	1277	90	Newport, Rhode Island standard gage. Heights x 0.9 to reduce to Block Island. 60th M. time.
10 "	L	90	843	76	
11 "	M	191	1761	137	
12 "	N	252	2321	191	
13 "	P	280	2789	184	
14 "	Q	293	2732	187	
			After Hurricane of Sept. 21, 1939.		
Sept. 26, "	R	42	376	28	Block Island portable gage. M.L.W. is 2.8 feet on staff. One hour correction in time to 60th M. from 75th M. No range correction.
27 "	S	277	2549	232	
28 "	T	115	1072	101	
	18	2948	27538	2075	

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

+5.0 0 -5.0 -10.0 -15.0 -20.0 -25.0 -30.0 -35.0

0 -6 -12 -18 -24 -30

CORRECTIONS IN ~~FATHOMS~~ FEET

DEPTHS IN FATHOMS

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900

(For deep water add a 0 to these figures)

PRINTED IN U.S.A.

EUGENE DIETZGEN CO. NO. 346 A

FATHOMETER CORRECTIONS
U.S. Coast and Geodetic Survey

Ship OCEANOGRAPHER
F.S. BORDEN Comdg.

These corrections are to be used between SEPT. 7 1938 and SEPT. 16 1938
in the locality
DEPTHS OVER 200 FATHOMS
for hydrographic surveys Nos. 6347

CORRECTIONS

0'	-	200 fms	To	360 fms
-6'	-	361	"	410 "
-12'	-	411	"	490 "
-18'	-	491	"	610 "
-24'	-	611	"	750 "
-30'		751	"	1270 "
-24'		1271	"	1400 "

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 6, 1939.

Division of Hydrography and Topography:

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

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 6347

Locality Off Montauk Point, Southeast of Long Island.

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:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

	Remarks	Decisions
1	For title	
2	" "	410718
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GEOGRAPHIC NAMES

Survey No. H-6347

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	
Long Island										1
Montauk Point										2
										3
										4
		Names underlined in red approved								5
		by L. Heck on 6/16/39								6
										7
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M 234

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. H.6347

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

Number of positions on sheet	2075
Number of positions checked	2
Number of positions revised	0
Number of soundings recorded	27,538
Number of soundings revised	5
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0

Date: Sept. 5, 1939

Verification by G.C. McGlasson Time: 13 days +4 hours(95 hr.)

Review by Ted Chrau Time: 19 hours

2629

HYDROGRAPHIC SURVEY NO. H6347

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 12 Vols., Wire Drag ___ Vols., Bomb 4 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 18 ; Last Date Sept. 28, 1938

Remarks

2776

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~XXXXXXXXXXXX~~ } No. H -6347
~~XXXXXX~~

{ received April 18, 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
20			
22			
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62			
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82			
83			
88			
90			

RETURN TO

82	T. B. Reed

✓ JOSR

Sept. 5, 1939.

Verification Report
Hydrographic Survey No. 6347 (1938)

1. Condition of Records.

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

2. Shoreline and Signals.

This is an offshore survey and no shoreline is shown.
This survey was controlled by a closed taut wire - sun azimuth traverse. Three point fixes were taken on the buoys to control the hydrography to the limit of visibility of the buoys. However the major portion of the sheet was controlled by "R.A.R".

3. Sounding Line Crossings.

The sounding line crossings are in general very good. Discrepancies seldom exceed one percent of the depth except on very steep slopes.

4. Depth Curves.

Within the area of the present survey the usual depth curves may be

satisfactorily drawn.

5. Junctions with Contemporary Surveys.

The junction on the north with H 6331 (1938) is excellent.
The junction on the south west with H 6192 (1936) is satisfactory out approximately to the 300 fathom curve. Beyond this area it appears to be an increasing discrepancy. Therefore this portion of the junction was left in pencil.

6. Aids to Navigation.

There are no aids to navigation on the sheet.

7. Field Plotting.

The field plotting was very good.

8 Note to Reviewer.

The soundings, as selected by the field party, were accepted and inked by the writer.

Respectfully submitted,

L. C. McGlasson

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6347 (1938) FIELD NO. 121

Off Montauk Point, Southeast of Long Island, New York
Surveyed in Aug.-Sept. (1938), Scale 1:120,000
Instructions dated March 4, 1938 (OCEANOGRAPHER)

No. 1 and No. 2 Dorsey Fathometer Soundings. 3 Point fixes on survey buoys. RAR control using Sono-radio buoys.

Chief of Party - Frank S. Borden
Surveyed by - Ship's Officers
Protracted by - E. H. Kirsch
Soundings plotted by - E. H. Kirsch
Verified and inked by - G. C. McGlasson

1. Shoreline and Signals.

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

   b. For origin of signals see pages 1, 2 and 3 of the descriptive report and Buoy Control Data filed in the Library under accession No. S-1708.

2. Depth Curves.

   The 50, 100 and 200 fathom curves can be satisfactorily drawn. A short section of the 1000 fathom curve is shown close to the southeastern limits of the survey.

3. Sounding Line Crossings.

   The agreement of depths at line crossings is satisfactory.

4. Junctions with Contemporary Surveys.

   a. The junction with H-6331 (1938) on the north is excellent.

   b. The junction with H-6192 (1936) on the southwest is satisfactory from the northern limits of H-6347 (1938) out to the 200 fathom curve. Due to conditions stated on page 5 of the descriptive report, it is not possible to obtain agreement of the soundings on these surveys between the 200 and 1000 fathom curves. The soundings are generally from 15 to 75 fathoms deeper on H-6347 (1938). In the overlapping area, between the 200 and 1000 fathom curves, the soundings from H-6347 (1938) should be charted in place of the soundings now charted from H-6192 (1936).

   c. No contemporary work joins this survey on the east at this time.

5. Comparison with Prior Surveys.

   a. H-100 (1842) and H-101 (1844).

      These old surveys on a scale of 1:400,000, cover from 80 to 90 per cent of the present survey. The method of control was undoubtedly dead reckoning and astronomic observations. The lines

are of an irregular network and spaced far apart. The depths, in general, are in poor agreement with the present survey. These old surveys have already been superseded by later surveys and are of no value in so far as future charting is concerned.

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

This is a compilation of all previous surveys. It contains no original work.

c. H-1498a (1880-84) and H-2920a (1882-87).

This work consists of deep sea soundings scattered over a wide area and plotted on a print of a 1:1,200,000 scale chart. Only four soundings on H-1498a (1880-84) fall within the limits of the present survey. The 538 fathom sounding (charted) in Lat. 39°39.3', Long. 71°36.2' is about 200 fathoms shoaler than the depths indicated on the present survey. It is undoubtedly out of position. The other three soundings are in fair agreement, but since all of these soundings fall close to the sounding lines on the present survey, they are of no future value in charting and should be disregarded. The 527 fathom sounding (charted) in Lat. 39°36.0', Long. 71°43.8' from H-2920a (1882-87) falls between sounding lines on the present survey but apparently in depths of 700 fathoms. It should be disregarded in future charting.

d. H-1558 (1882-83) scale 1:300,000.

This survey covers the entire area of the present survey. The soundings are in fair agreement north of Lat. 40°, but are in radical disagreement in depths of over 100 fathoms. They range from 30 fathoms deeper to 293 fathoms shoaler than the depths obtained by the present survey. Because of the better control and closer development on a larger scale the present survey, except for bottom characteristics, should within the common area, supersede H-1558 (1882-83).

6. Comparison with Chart No. 1108 (New Print dated January 6, 1939) Chart No. 1000 (New Print dated June 17, 1939).

Within the area of the present survey the charts are based on surveys discussed in the foregoing paragraphs and contain no other information that needs consideration in this review.

7. Condition of Survey.

a. The records are neat and legible and conform to the requirements of the hydrographic manual.

b. The descriptive report satisfactorily covers all items of importance.

c. The field plotting was very good.

d. The soundings were inked out to the 200 fathom curve in fathoms and sixths - the numerator only being shown - the denominator (6) was omitted to avoid congestion.

e. Additional bottom characteristics for charting purposes may be obtained from the later prior surveys discussed in paragraph 5 of this review.

8. Compliance With Instructions for the Project.

This survey satisfies the instructions for the project.

9. Additional Work Recommended.

This is a well developed offshore survey and no additional work is required.

10. Superseded Old Surveys.

H-100 (1842)	in part
H-101 (1844)	" "
H-670 (1859)	" "
H-1498a (1880-84)	" "
H-2920a (1882-87)	" "
H-1558 (1882-83)	" "

11. Reviewed by Leo S. Straw, September 11, 1939,

Inspected by H. R. Edmonston, September 25, 1939.

Examined and Approved:

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

K.T. Adams
Chief, Division of Charts.

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

Chief, Division of H. & T.

Applied to Chart 1108.	10/14/39	G.H.S.
" " Special chart 60	11/5/41	J.M.A.