

6442

6442

Form 504  
Rev. April 1935

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

*Topographic* } Sheet No. H - 6442  
*Hydrographic* }

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**U. S. COAST & GEODETIC SURVEY**  
LIBRARY AND ARCHIVES

APR 1 1940

Acc. No. ....

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State Rhode Island

LOCALITY

Block Island

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193 9

CHIEF OF PARTY

Raymond P. Eymari

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. H - 6442

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. 11

REGISTER NO. H - 6442 **H6442**

State Rhode Island

General locality Block Island East of Long Island

Locality Block Island

Scale 1 : 10,000 Date of survey July 11 - Aug. 1, 1939

Vessel LYDONIA Launch

Chief of Party Raymond P. Eyman

Surveyed by Fred. A. Riddell

Protracted by Robert M. Rader

Soundings penciled by Robert M. Rader

Soundings in ~~metres~~ feet

Plane of reference M L W

Subdivision of wire dragged areas by

Inked by

Verified by J. A. Mc Cormick

Instructions dated March 4, 1938

Remarks:

X.W.W. 11/1/81

## DESCRIPTIVE REPORT

to accompany

SHEET H - 6442

### DATE OF INSTRUCTIONS

The work on this sheet was done in accordance with Instructions, Project HT-207, dated May 16, 1936, and Supplemental Instructions, Project HT-207, dated March 4, 1938. ✓

### LIMITS

This sheet covers the inshore area between the beach and the ship hydrography on the east, south and west sides of Block Island, R. I. A resurvey was also made of the changeable area in the vicinity of Sandy Point to the north of the island and the entrance to the Great Salt Pond on the west side of the island. ✓

The survey extends from a junction with sheet 3562 (1915) on the east at about Latitude  $41^{\circ} 12'$  southward and westward around the island to a junction with sheet 4022 (1918) on the west side in about Latitude  $41^{\circ} 10'$ . The survey joins sheet H-6443 (1939) off shore with the exception of a small section southeast of Block Id. S. E. Lighthouse where a junction is made with sheet H-6330, 1938. ✓

The resurvey of the shoal to the north of Sandy Point joins sheet H-6443 on the west, north and east sides and sheets 3562 and 4022 on the south. ✓

The limits of the sheet are outlined in red on the sketch attached to this report. ✓

### SURVEY METHODS

This sheet was controlled by sextant fixes on shore signals that were located by triangulation or topography. For the work in the vicinity of Sandy Point two survey buoys were planted and located by three point fixes and used in conjunction with shore signals to strengthen the control. ✓

The soundings were all taken with the hand lead. ✓

The LYDONIA'S launch was used for the hydrography. ✓

### DISCREPANCIES

No discrepancies were found on this sheet. ✓

### DANGERS

Along the south coast of the island are a large number of sunken rocks and rocks awash. Those found extending a sufficient distance off shore to be a danger to small craft are listed as follows: ✓

W  
25

<u>Lat. and Long.</u>		<u>Position Number</u>	<u>Depth over rock</u>
41° 09.35'	71° 32.60'	118g ✓	5 ft. ✓
" "	" "	119g ✓	awash ✓
" 08.65	" 35.67 ✓	173g	" ✓
" "	" "	174g ✓	5 ft. ✓
" 08.66	" 35.98 ✓	177-178g	5 " ✓
" 09.55	" 36.94 ✓	202g	awash ✓
" 08.97	" 33.30 ✓	100-101j	awash ✓
" 08.86	" 34.02	118-119h	1 ft. Plotted as awash M.L.W.

The wreck of an oil tanker lies southeast of Block Island S. E. Lighthouse in Latitude 41° 08.95', Longitude 71° 32.90'. The bow and stack were located by topography and used as signals "BOW" and "STAK".

A charted sounding of 15 ft. in Latitude 41° 08.75', Longitude 71° 36.9' was not verified by this survey. Apparently the charted sounding lies between two lines on this sheet as the shoalest sounding in this vicinity is 28 feet.

15 from H-4041 (1918-19) W.P. Carried forward.

A least depth of 14 feet was found on the shoal north of Sandy Point in Latitude 41° 14.80', Longitude 71° 34.34'. This is the same depth as shown on sheet 3562 but about 200 yards to the northeast.

CHANNELS

The least depth leading into the harbor on the east side of Block Island was 15 1/2 ft.

The least depth found in the entrance to Great Salt Pond on the west side of the island was 19 ft.

21 ft. Controlling depth.

COMPARISON WITH PREVIOUS SURVEYS

In the resurvey of the changeable area in the vicinity of Sandy Point it was found that the 1 fathom curve had moved to the north-northeastward about 300 yards as compared with the survey on sheet 3562. The shoal depth of 14 ft. was mentioned under DANGERS. In general the depths of over 30 ft. agree satisfactorily.

The junctions with sheets 3562, 4022, 6330 and 6443 are satisfactory.

TIDES

The tide reducers for sheet H-6442 are based on the tide gage at Block Island, R. I., maintained by the Ship LYDONIA throughout the field season. No time or range corrections were applied. The tide curves were drawn from tabulated hourly heights referred to a datum plane of 2.8 feet on the tide staff.

30  
✓

Respectfully submitted,

*John H. Brittain*  
John H. Brittain,  
Jr. H. & G. Engr.,  
Norfolk Processing Office.

The work on this sheet was accomplished with the Lydonia's launch by a sub-party under the direction of Fred A. Riddell while casing at Block Island. The progress of the work was inspected at intervals by the chief of party when the Lydonia was at Block Id. The smooth sheet was processed at the Norfolk Processing office.

Strong currents and moderate weather to rough weather prevailed during most of the period of this work.

Approved and forwarded,  
Raymond P. Gynan,  
Comdg. Str. Lydonia.

STATISTICS FOR SHEET H - 6442

LYDONIA LAUNCH

H6442

Project HT - 207  
1939

Day Letter	Date	Statute Miles	Soundings	Positions	Vol. No.
a	July 11	16.0	588	155	1
b	" 12	18.3	845	204	1
c	" 13	20.6	835	191	1 & 2
d	" 14	7.1	274	73	2
e	" 15	9.3	311	75	2
f	" 17	13.7	503	138	2
g	" 18	18.5	729	203	2 & 3
h	" 19	14.9	686	173	3
j	" 20	17.7	1151	223	3 & 4
k	" 21	9.7	374	118	4
l	" 25	6.9	243	72	4
m	" 26	7.7	304	79	4
n	" 28	21.8	755	198	4 & 5
p	" 31	6.9	308	68	5
q	Aug. 1	13.9	470	134	5

Totals for sheet                      203.0                      8376                      2101                      5

Total square statute miles 10.0



Field Records Section (Charts)

HYDROGRAPHIC SHEET NO **H6442**

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

Number of positions on sheet	.2191.
Number of positions checked	...25.
Number of positions revised	...1.
Number of soundings recorded	.8376
Number of soundings revised	...36.
Number of soundings erroneously spaced	.....17
Number of signals erroneously plotted or transferred	.....0

Date: May 2, 1940

Verification by } J.A. Mc Cermick  
Review by

Time: 46 hr.

Time: 24 hr.



HYDROGRAPHIC SURVEY NO. H6442

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 5 Vols., Wire Drag     Vols., Bomb     Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party No

Recoverable Station Cards (Form 524) None

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

Hydrography: Total Days 15 ; Last Date Aug. 1, 1939

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

H-6442

	Remarks	Decisions
1		411715-716
2		"
3		"
4		"
5		"
6		"
7		"
8		413715
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GEOGRAPHIC NAMES

Survey No.

**H6442**

Name on Survey

	A	B	C	D	E	F	G	H	K
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
<u>Block Island</u>									1
<u>Block Island (town)</u>									2
<u>Great Salt Pond</u>									3
<u>Grace Point</u>									4
<u>Old Harbor Point</u>									5
<u>Southwest Point</u>									6
<u>The Harbor</u>									7
<u>Sandy Point.</u>									8
									9
									10
Names underlined in red approved									11
by L. Heck on 5/10/40									12
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# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H **H6442**  
~~No. H~~

received 4/1/40  
registered 4/3/40  
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	✓ Capt. Eysman	P.B.	
24			
25	✓	HBC	Pages 1 and 2
26			
30	✓	✓	Page 3
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	Lt. Reed
----	----------

✓ JBR

RAC  
HLE

## TIDE NOTE FOR HYDROGRAPHIC SHEET

April 11, 1940

Division of Hydrography and Topography:

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

Plane of reference approved in  
5 volumes of sounding records for


HYDROGRAPHIC SHEET 6442

Locality Block Island

Chief of Party: R. P. Eyman in 1939  
Plane of reference is mean low water reading  
2.8 ft. on tide staff at Block Island Harbor  
11.4 ft. below B. M. 2

Height of mean high water above plane of reference is 3.0 feet.

Condition of records satisfactory except as noted below:

  
Acting Chief, Division of Tides and Currents.

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6442 (1939) FIELD NO. 11

Rhode Island, Block Island  
Surveyed in July - August 1939, Scale 1:10,000  
Instructions dated March 4, 1938 (LYDONIA)

Soundings:  
Hand Lead

Control:  
Three point fixes on shore  
signals and buoys.

Chief of Party - R. P. Eyman.  
Surveyed by - F. A. Riddell.  
Protracted by - R. M. Rader.  
Soundings plotted by - R. M. Rader.  
Verified and inked by - J. A. McCormick.  
Reviewed by - J. A. McCormick, May 3, 1940.  
Inspected by - H. R. Edmonston.

1. Shoreline and Signals.

Shoreline and topographic signals are from T-6557 and T-6558 of 1939. Hydrographic signals "RID" and "DEL" were located by a computed three point fix.

2. Sounding Line Crossings.

Effects of current, heavy swells and relatively weak control at the north end of the island were readily discernible at crossings before the survey was verified. Selection and adjustment of soundings during the verification have smoothed out the differences considerably.

3. Depth Curves.

Closer spacing of lines would have been desirable over most of the survey for accurate drawing of 5-, 3- and 2-fathom curves.

4. Junctions with Contemporary Surveys.

- a. The junction with H-6330 (1938) on the southeast is satisfactory. Junctions with H-6443 (1939) on the north, east, south and west will be considered in the review of that survey.
- b. Instructions for the project called for junctions with H-3562 (1915) and H-4022 (1918) on the north,

northeast and west sides of the island. Overlaps with these surveys are satisfactory as are also the resurveys of changeable areas north of Sandy Point and at the entrance to Great Salt Pond, the latter also previously surveyed on H-4030 (1918). The shoal off Sandy Point has shifted somewhat, the principal change being the extension of the 1-fathom curve about 300 meters further north than shown on H-3562 (1915). The entrance to Great Salt Pond has not changed appreciably.

5. Comparison with Prior Surveys.

a. H-89 (1839), 1:20,000; H-1312 (1874) 1:20,000.

H-89 encircles the island but shows little information close to shore. H-1312 shows a single line of soundings running from the east side of the island to a shoal beyond the limits of the present survey. Depths on the old surveys are in fair agreement with the present survey but are superseded by the latter in the common area.

b. H-1396a and b (1878) 1:10,000.

This is a single survey plotted in two sections and covering the area within one to two miles of the island on all sides. Major differences between old and new surveys are in rock detail close to the beach. Shoreline on H-1396 is as much as 100 meters in error, the hydrographic survey having been made 8 years in advance of T-1735 (1886). Consequently rocks and soundings which were located only by reference to shore are very much open to question. It is very probable that the present survey has missed some rocks sighted on H-1396 but it is not considered advisable to burden the new survey with such dubious information when it falls within a more or less well defined danger line. Nothing has been carried forward from H-1396 and within the common area, it is superseded by the present survey.

c. H-3380 (1912) W.D.; H-4041 (1918-19) W.D.

A considerable number of shoal soundings has been transferred to the present survey from the above wire drag surveys. The records for H-4041 are in such a state of confusion that in several cases it was impossible to check soundings when such was desired. Some are slightly questionable but

have been carried forward regardless, when they were obviously the results of groundings. On the east side of the island several soundings obtained from the guide launch were omitted because it seemed improbable that random soundings should fall on shoals. In no case was any omitted sounding more than 3 feet shoaler than development on the present survey. There are no conflicts between effective drag depths and sounded depths.

6. Comparison with Chart 276 (New Print of Aug. 15, 1939).  
Chart 1210 (New Print of Dec. 14, 1939).  
Chart 1211 (New Print of Aug. 1, 1939).

a. Hydrography.

Hydrography charted in the area covered by the present survey is mostly from surveys discussed in the foregoing paragraphs. The harbor on the east side of the island, and the entrance to Great Salt Pond are charted from U. S. Engineers' surveys. The 4 foot spot charted in lat.  $41^{\circ}10.56'$  long.  $71^{\circ}33.37'$  is from blueprint 23312 of 1930. Development on subsequent blueprints or on the present survey are not sufficient to disprove absolutely its present existence.

The Harbor is surveyed by the U. S. Engineers' every year or two, the latest on file in this office (blueprint 33033 of 1939) having been made about the same time as the present survey and showing similar depths. The entrance to the Pond is not surveyed quite so frequently, the latest Engineers' survey being shown on blueprint 28211 of 1934.

The three sunken rocks charted in lat.  $41^{\circ}11.95'$  long.  $71^{\circ}35.38'$ , though outside the actual limits of the present hydrography, have been identified as the compiler's representation of two soundings of 2 feet and one of 3 feet, all on boulders, on H-4030 (1918).

The wreck charted in lat.  $41^{\circ}13.35'$ , long.  $71^{\circ}33.32'$  is from Chart Letter 637 of 1936 and is undoubtedly the same one shown about 350 meters to the southwest on the present survey.

The 37 foot depth in lat.  $41^{\circ}11.13'$ , long.  $71^{\circ}32.80'$  on Chart 276 is the cleared drag depth over an obstruction and not the effective depth at striking. The latter is shown on H-4041 (1918-19) W.D. as 42 feet and was so transferred to the present survey.



b. Aids to Navigation.

Navigational aids on the present survey differ in some cases from the charted positions but the differences are usually along the channel axes. The exception is buoy "C3" in lat.  $41^{\circ}10.70'$ , long.  $71^{\circ}33.32'$ , which is shown on the present survey as being about 90 meters northwest of the charted position and in mid-channel. The survey position is substantiated on blueprint 33033 of 1939.

7. Condition of Survey.

Field protracting and plotting were satisfactory. The descriptive report, written in the Norfolk Processing Office, is a little brief but covers most of the essentials. Depths over sunken rocks were estimated by the field party and were not actual soundings. This is mentioned only because the depths were treated the same as soundings in the office verification and future surveys of the area may find such depths to have been underestimated, which is usually the case.

8. Compliance with Instructions for the Project.

The instructions seem to have been taken a little too literally as regards spacing of inshore lines. Split lines would have been desirable, particularly inside the 6-fathom curve south and southwest of the island (see par. 3).

9. Additional Field Work Recommended.

See preceding paragraph.

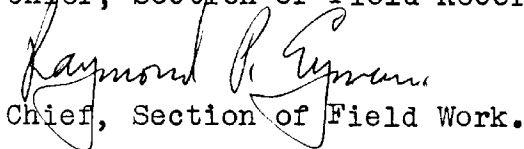
10. Superseded Surveys.

H-89 in part	H-3562 (1915) in part
H-1312 in part	H-4022 (1918) in part
H-1396a & b in part	H-4030 (1918) in part

Examined and approved:



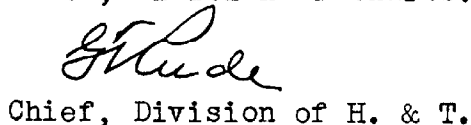
T. B. Reed,  
Chief, Section of Field Records.



Chief, Section of Field Work.



Chief, Division of Charts.



Chief, Division of H. & T.

Applied to chart 276 — 9/18/40 P.B.L.

Applied to chart 1210 Nov. 13, 1940 G.H.S.

" " " 1211 Nov. 26, 1940 G.H.S.

" " " 70 July 23, 1941 J.M.A.

" " " 1108 Aug. " J.M.A.

" " new chart 269 <sup>in part</sup> via 276 1951 L.A.M. J.M.A.

Applied to recorr. of chart 1210 9-22-61 thru chart 269 W.S.

Applied to extension of chart 1210 6-21-64 thru chart 269 & 1211 by G.R.M./PKD