



3380

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Department of Commerce and Labor
 COAST AND GEODETIC SURVEY

Mr. O. H. Tittman
 Superintendent.

State: Rhode Island

DESCRIPTIVE REPORT.

Hyd. Sheet No. *3380*

LOCALITY:

Block Island Sound between
 Block Island and Montauk Pt.

1912

CHIEF OF PARTY:

N. H. Heck

11-4645

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Area covered by wire drag

Montauk Pt. to Block Island,

July 7- Sept. 24, 1912

Chief of Party- N. H. Heck, Assistant

Scale 1/40,000

Officers Skip Nena Rowland Geo. Olsen, W. O. R. V. Miller D.C

Katherine H. A. Cotton W. R. O'Sullivan D.O.

U.S. GEOLOGICAL SURVEY
OCT 3 1912
No

Tide gauge Block Island New Harbor Ball's Wharf

Highest tide observed	staff reading	4.7
Lowest " " " "		0.5
Mean Low water		1.0

Block Id. New Harbor Breakwater.

Highest tide observed	staff reading	4.5
Lowest " " " "		0.9
Mean Low water		1.3

Descriptive Report to accompany Hyd. Sheet "A" CP-1

The area dragged on this sheet during the season of 1912 is included between the 10 fathom curves marking the north and south boundaries of the shoal ridge between Block and Long Islands.

Two distinct characters of bottom were found in this area.

From Block Island to a NW-SE line about $\frac{1}{4}$ mile westward of Southwest Ledge all the shoals consist of patches of boulders or one large boulder with deeper water surrounding. From this area to the western limit of the work the shoals consisted of sand ridges with very small boulders running in a SW-NE general direction.

The accompanying tracing shows the results of the work, showing both the changes in depth and the effective depths obtained over the possible deep channels. The area over which the least depth is 45 feet is indicated and it will be possible to buoy a channel suited to ships of any draft.

Between Southwest Ledge and Block Island 37 feet was the greatest effective depth obtained. It is undesirable to recommend this channel for more than 35 feet and that depth would have to be used with great caution as the tidal currents have considerable strength.

Near Block Island numerous patches of boulders were found with less than the charted depths. These are all indicated on the tracing.

Especial attention is called to the following shoals :

True Bearings from Southeast Light, Block Island, distances meters.

A patch of boulders with 26 to 28 feet 255° 4812 meters.

A ridge of boulders with 29 feet at the northern end and 32 at the southern the latter lying 198° about 320 meters from the former. The 29 ft. spot is 1300 meters 253° from Block Id. L. S. S. flag staff.

A small group of boulder with 27 feet and 33 ft 285° 280 from it. The 27 ft. spot is 220° 5040 from the L. S. S.

A boulder with 29 feet 219° 6080 from same.

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The ridge charted NNW'ly from Southwest Ledge extends a little farther west than charted with depths of 45 feet. The westernmost is 230° 7160 from the Life Saving Station.

Depths of 47 and 48 feet were found on the charted 8 fm ridge lying 264° 5280 from L. S. S. These depths were found for a distance of 1000 meters in a N-S direction. The ridge is covered with boulders.

A sand ridge about 520 long in ESE-WNW direction lying 53° 11,840 from Montauk Pt. L. H. depths 42 to 44 ft.

A sand ridge with very small boulders about 320 long in NE-SW direction depths 37 to 40 feet 69° 11,840 from Montauk Pt. L. H.

A mile NE of this shoal 31 feet was found where the chart shows 5 fms. depths of 34 and 40 feet were found respectively 107° 240 m. and 87° 840 from the 31 ft. spot. Sand with small boulders.

The ridge of sand lying about $4 \frac{1}{3}$ miles 95° from Montauk Pt. L. H. was examined but no important changes from the charted depths were found.

It was necessary to vary the no. of cedar floats on the drag according to the character of bottom. For example in the boulder region sufficient floats had to be used to keep the wire clear from the surrounding bottom when the drag struck. Otherwise it was almost impossible to clear it. In the sandy region the drag with the larger number of floats would not hold the strain due to the current on the boats and the drag slipped off. By reducing the number of floats there was little further trouble though it was necessary to watch the drag continuously for indications of striking. When working in a very strong tide the drag could not be made to hold on the sand ridges long enough to sound but it gave sufficient indication before coming clear so that nothing was missed. ~~A drag used for this purpose~~

Bottom of this character represents the limit of usefulness of the wire drag.

Statistics to accompany Hyd. sheet "A"

Day	Vol	Angles		Miles	Drag length	Soundings		
						No.	Angles	
A	1	1	96	00	0.5	4000	5	10
B	1	1	114	72	7.5	4000	0	0
9 C	1	1	36	0	1.5	4400	1	2
12 D	1	1	33	63	1.2	3600	1	2
13 E	1	1	37	30	2.0	4000	1	2
17 F	1	1	16	18	1.0	4400	1	2
20 G	1	1	54	75	2.0	3600	0	0
22 H	1	1	23	21	1.5	3000	0	0
25 J	1	1	97	144	6.0	3900	7	14
26 K	2	1	54	54	2.5	3900	3	6
27 L	2	1	68	81	2.5	3900	3	6
29 M	2	1	32	0	4.0	3900	0	0
30 N	2	1	49	45	4.0	3900	0	0
31 O	2	2	50	14	1.5	3900	2	4
8-1 P	2	2	84	87	4.5	3300	4	8
2 Q	2	2	70	69	3.5	3300	0	0
5 R	2	2	111	129	6.5	3600	0	8
7 S	2	2	47	21	2.0	3900	2	4
8 T	3	2	90	75	4.5	4200	3	21
17 U	3	2	111	135	8.8	3900	0	0
19 V	3	2	135	151	7.0	3900	1	2
21 W	3	2	94	18	7.5	4500	3	6
28 X	3	2	73	99	5.0	4500	0	0
29 Y	3-2,3		90	- 72,15	6.0,1.0	4500	0	0
9-3 Z	3	3	54	51	4.0	4500	0	0
4 A	3	3	82	66	9.0	4500	1	4
7 B	4	3	41	18	5.0	4500	0	0
9 C	4	3	36	33	8.0	4500	4	11
13 D	4	3	68	141	8.0	5100	5	10
14 E	4	3	99	108	7.0	3900	1	2
17 F	4	3	86	78	3.0	4500	4	8
18 G	4	3	37	42	2.0	3000	0	0
19 H	4	3	35	63	2.0	3000	0	0
23 I	4	3	78	93	5.5	4100	0	0
24 J	4	3	38	36	1.5	3000	0	0
8-5 K	2	2	75	93	3.75	3600	0	0
			2393	2310	154.00		49	134

No. of miles 154

No. of angles 14703

No. of soundings 49

No. of sq. miles 46

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C. & G. SURVEY.
 LIBRARY AND ARCHIVE
 OCT 3 1916
 No. No

VEC
Oct.10,1912

HYDROGRAPHIC SHEET 3380.

Block Island Sound, Rhode Island, by Asst.

N.H.Heck in 1912.

TIDES.

	Ball Boys Wharf ft.
Mean low water, or plane of reference on staff	1.0
Lowest tide observed " "	0.5
Highest " " " "	4.7
Mean range of tide	2.6

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Hyd Sheet No 3380

Oct 12 1912

Three soundings were found to be out of position - 33 ft. L4P, 33 ft. L1-0, + 32 ft. L1C. As the ~~signals~~ ^{signals} recorded at L1C are evidently wrong the positions of the sounding was left as plotted by the field party. Hence, these signals throws the position several meters away from the location of the drag when it struck.

H. L. Simmons

Applied to new chart 269 1951 L.A.M.