



3537

Diag. Chart No. 1212-2

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

O. H. Tittmann

Superintendent.

State: Conn.

DESCRIPTIVE REPORT.

Hyd.

Sheet No. X 3537

LOCALITY:

Coast of Connecticut

Hammonasset to Menunketesuck Pts.

1913

CHIEF OF PARTY:

N. H. Heck, Assistant

11-4645

3537

3537

CONNECTICUT

Approaches Duck Island Harbor of Refuge  
Meranketesuck Point to Hammonasset Point

Wire Drag Survey

October 2 ----- October 18

1913

Chief of Party- N. H. Heck, Assistant

Work executed under direction of

John A. Daniels----- Aid

Scale; 1: 10000

Descriptive Report, Hyd sheet No 1, Duck Island Roads.

The area examined upon this sheet includes the broken ground upon the north shore of Long Island sound between Hammonasset and Menunketesuck points, including Duck Island harbor and South West Ledge. For purposes of description, this area may be divided into three parts as follows; 1 Duck Island Harbor and ~~approach~~ approaches, 2 Area around Stone Island Breakwater, 3 South west ~~ledge~~ <sup>Reef</sup>.

1 Depths of 15 ft. and 16 ft. were found 550m and 800m S and S. E. respectively of Menunketesuck Point where 17 ft. was previously charted. The channel between Menunketesuck Point and Duck Island was found to be very broken and narrower than charted. A depth of  $14\frac{1}{2}$  ft. was carried through, but the passage is very narrow, and there are indications that the sand bar in the middle is becoming more extensive. This bar is located 400m due east of the Northern point of Duck Island. It has a least depth of  $8\frac{1}{2}$  ft., and is about 200 meters in extent.  $8\frac{1}{2}$  ft. was ~~taken~~ over the charted 7 ft shoal. Upon the eastern side of the channel scattered rocks were found to extend from 100 to 150m further west than the chart indicates. Depths varying from  $8\frac{1}{2}$  to 14 ft. were found here where 13 to 17ft. were charted. The charted depths were ~~xxx~~ verified in the western part of the channel. Inside Duck Island breakwater the depths were found to be from 1 ft to 4 ft. less than charted, indicating that the area of dead water is being filled up with mud. Depths of from  $7\frac{1}{2}$  ft. to 14 ft were found where from 11 ft to 14 ft. were charted. No rocks were found inside of breakwater and the western approach was found clear as charted. Two variations from charted depths were found south of Duck Island of  $20\frac{1}{2}$  ft. and 17 ft. where 23 and 18 ~~were~~ charted.

2 The sand bar with a depth of  $9\frac{1}{2}$  ft S. E. of Kelsey's Point was found to ~~extend~~ extend 100 meters further out than indicated; 350m S. S. E. of this bar is a rock with a least depth of 16 ft. where 21 ft. is charted. The broken bottom around East Ledge was found to extend 125m further S. and E. than indicated

Descriptive Report, Hyd Sheet No 1 Duck Island Roads. (2)

~~350m~~, depths of 9 and 12 1/2 ft. being found where 15ft and 21ft. were charted.

About 500m S. S. E. of East ledge is a rock 100m in extent with a least depth of 18ft. where 22 ft was charted. 200m slightly South of west of the extremity of the Stone Island breakwater is a 16ft. rock in a previously charted depth of from 21 to 24ft., and 400 meters N. E. of this and at a distance of 250m from the breakwater is a sharp rock with a least depth of 12ft where 21 ft is charted. 650 m S. E of Hammonasset Point is a rock with a least depth of 12 1/2 ft where 13 ft was charted.

3 South West Reef was found clear to a depth of 24 1/2 ft. Only a portion of the broken area was covered, but this includes the shoalest soundings shown upon ~~the~~ the chart.

From tests made upon the working grounds the effective depth of the drag is taken as the full length of upright for lengths of 15ft or under, above 15 ft one half a foot is subtracted for lift.

Towline<sup>Base</sup> Lengths

Length of Upright	Length of towline
10 ft.	63m
15	62
20	61
25	60
30	59

Plane Table Positions, Duck Island Roads, 1913,

N. H. Heck, Chief of Party.

Men-- Hyd. Signal on <del>Manaketauzsk</del> Menunketesuck Pt.	Latitude	D. P	Longitude, D. M.
	41° 15'	1380	72° 27' 1167.5
Duck -- Ho. North Gable, Duck Island	41° 15'	729	72° 28' 750.0
Tree -- Prom. on Kelseys Pt.	41° 15'	744	72° 30' 681.0

Statistics Sheet No. 1 , Long Island Sound , Duck Island Roads.

Date	letter	Vol	Angles	Miles	Drag length	Soundings	
						No.	Angles
10-3	A	1	134	21/2	1500	2	4
6	B	1	348	8	2100	1	2
7	C	1	198	31/2	2100-1800	10	20
8	D	1	126	23/4	1800	1	2
10	E	1	312	43/4	2100	1	2
13	F	2	186	3	1200- 1500	3	6
15	G	2	192	21/2	1200- 2100	5	10
16	H	2	144	31/2	1200- 1800	0	0
17	J	2	216	23/4	1500-600-1800	14	28
18	K	2	78	1	900	3	6
Totals		2	1934	341/4		40	80

Total area dragged sq miles 6  
 Total angles 2014  
 miles 34 1/4  
 soundings 40

26337  
 35337  
 35337

H. 3537.

Wire drag sheet. There are a few holidays in the general area covered and some depths of the drag questioned.

Sheet examined in Div.  
of Hyd'y & Top'y.

MKQ  
Nov. 11, 1913.

HYDROGRAPHIC SHEET 3537.

Duck Island Roads, Long Island Sound, Conn., by  
Assistant N. H. Heck in 1913.

TIDES.

	Clinton Harbor ft.
Mean low water, or plane of reference on staff	2.8
Lowest tide observed " "	2.3
Highest " " " "	9.1
Mean range of tide	4.7



Hyd. Sheet # 3537 #

Coast of Conn. - Hammonasset to Memunketesuck Pts.

The area dragged is located at the North Shore of Long Id. Sound, between Hammonasset and Memunketesuck Pts., including Duck Island and South West ledge.

The sheet was plotted in the field and verified in the office. A tracing of the work was made, showing the max. effective depths, to which the different partial areas have been dragged. The tracing also discloses the fact, that a few small areas were missed by the drag.

Attention might be called to the following inaccuracies in plotting: Position 17c. To locate the end of the drag a men was sighted, but in plotting a Con was used.

On a number of instances the "F" end of the drag was not properly located as to distance, e. g.  $\sqrt[11]{D}$ ,  $\sqrt[8]{E}$ ,  $\sqrt[4]{E}$ ,  $\sqrt[8]{K}$ .

When gradual changes in the depth of the drag were made, the time consumed in making the changes were not taken into consideration, e. g.  $\sqrt[12]{A}$ ,  $\sqrt[8]{H}$  and others.

At  $\sqrt[16]{C}$  - "M" signals aground. The sounding boat sounds a 17' shoal, while the previous day the same spot was passed over by the drag set at an eff. depth of 18'.

At position 10K, sections N to 2 were at an eff. depth of 16'. Comparing the area covered by the 16' drag with the

previous work in this locality (See Hyd E 1603 - tracing) it is found that a number of 13' soundings were obtained at this spot during the previous survey and for this reason this area is marked on the tracing as "questionable".

For shoals, bars and dangers in general see the descriptive report.

The records throughout the work were kept in good shape

J. D. Shekarian

March 12 - 1914