3801

Diag. Chy. No. 1210-2

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

11—5613

State: Rhode Island

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 3801

LOCALITY:

Narragansett Bay Eastern Passage Rhode Island

1915

CHIEF OF PARTY:

N. H. Heck

3801

The finished hydrographic sheet is to be accompanied by the following form, properly filled in, when the sheet is turned in to the office.

U. S. COAST AND GEODETIC SURVEY
Register No. 3821

STATE Rhode Island

GENERAL LOCALITY Narragansett Bay

LOCALITY Eastern Passage

Surveyed by Wire Drag Party No. 1

Chief of Party N. H. Heck

Date Oct. 6-Nov. 12, 1915

Scale 1/10,000

SOUNDINGS IN Feet

Plane of reference M. L. W.

Protracted by A.S. Millikin, W. V. Hogan, P. F. Benedict,

Soundings plotted by P. F. Benedict, N. H. Heck B.C. Freeman

Inked by P. F. Benedict

Verified by _____

The 6 foot curve is shown thus
" 12 " " " " "
" 18 " " " " "
" 30 " " " " "
} Not shown.

Descriptive report to accompany Hydrographic Sheet No. 3801

Wire Drag Party No. 1 N. H. Heck, Assistant, Chief of Party.

Narragansett Bay, Eastern Passage- Oct. 3 to November 15, 1915

Practically all the area where the depth permitted was dragged to 47-48 feet. The instructions only required 40 feet, but this part of the work was practically finished when the detailed instructions arrived.

This means that the battleship anchorage and the main channels going up the bay are clear from obstruction.

Along the eastern shore of the bay a number of places were found where the 18 foot curve projected further from shore than previously indicated.

Near the southermost anchorage spar of the Navy Department near Coddington Cove rocky bottom with 27 feet was found where 31 was previously charted.

The rocky ridge of which Halfway Rock forms a part was found to be much more extensive than charted, shoal soundings with rocky bottom being found both north and south from the Spindle.

Vessels passing between Halfway Rock and Prudence Island should note the changes on the chart.

A Naval torpedo testing barge moored to buoys just north of Gould Island sent torpedoes northward every day along a range marked with spars. There were nearly always floats attached to these spars, launches were scattered around with torpedo nets and the obstruction thus presented prevented the dragging of a long strip. All work done in this vicinity put the boats in danger of being sunk by torpedoes passing through them.

In the immediate vicinity of Newport, Harbor, the work begun last year was completed, in so far as practicable. This area is especially important. The entire Atlantic Fleet not infrequently assembles in Narragansett Bay. The Naval Training Station, the Torpedoe Station, and the War College are all equipped with launches of towboats for various purposes. This makes the number of launches or small vessels passing in and out of Newport Harbor at times very great, and makes close

dvelopment of all the shoals imperative.

The channel east and south of Gull Island was carefull examined and an extensive ridge was found to the south. Between red spar no. 8 and Rose Id. the considerable charted depth was found to be non-existent. Rocks with from 5 to 19 feet were found at intervals. This is important as torpedo boat destroyers going to their moorings have been accustomed to pass inside of this buoy. The low water line around Rose Island was found to be somewhat different from that shown on the chart, off the Lighthouse and at the northern end.

Several rocks were found in the south approach to Newport Harbor, there are depths of 17 and 18 feet on the edge of the work done by the U. S. Engineers in improvement of the harbor. A very slight extension of their work will remove these.

A careful revision of the chart was made. An officer in a small launch passed along the shore, and noted projecting or sunken rocks, indicating in his notes whether they were bare, sunken or awash. The extent and depth on the boulder area north of Gould Island were determined on U day. New wharves were located and the condition of old ones noted. All available information was obtained from the U. S. Engineers, and the Naval Engineers for the various naval establishments. All important topgrahic changes are shown on the sheet with remarks. The depths at the end of each new wharf are recorded in the sketch book under date of October 27. These soundings as well as all the others obtained in connection with the wire drag work are pencilled on the smooth sheet until the reductions for tide are verified.

Range poles for two measured miles were found to be in existence. Upon learning that no definite information was available at Newport in regard to these , the question of marking them was submitted to the Superintendent and authorized. They were determined and marked. The northern measured mile was found to be very poor, with a lack of parallelism of the ranges of nearly one degree, and the mile was one part in 30 less than a correct nautical mile. The

southern mile is very much better , the lack of parallelism being only 95 second and the length one part short in 1320. The range poles and this information ware noted on the smooth sheet.

Several prominent objects were located trigonometrically, 8 of which were used as hydrographic signals, 5 more of which are shown on the smooth sheet and 4 more not shown on the smooth sheet.

A complete preliminary report of the shoals found was made on Nov. 14, and I have avoided repeating the information contained therein.

It is my belief that the probable error of the drag on this work is reasonably low and that the soundings which were taken by a skilled officer are correct. The probable error of the drag is a subject of which too little is known at present to make absolute statements.

Newport, R. I.

3801

STATISTICS

COAST OF RHODE ISLAND.

NARRAGANSETT BAY.

Date.	Day.	Volume.	Angles.	Miles.	Drag Length.	Soundings. Number.	Angles.	Remarks.
1915.								
Oct.					4000			
6.	A	1	168	4.5	3100	8	17	
					4000			
7.	B	"	180	5.8	3000	6	12	
11.	C	"	72	1.5	3200	8	16	
13.	D	"	84	1.5	1600	2	5	
14.	E	"	132	3.0	2000	8	20	
16.	F	"	204	3.0	1600	2	6	
18.	G	2	132	3.8	1600	13	26	
19.	H	"	162	2.3	1600	4	8	
20.	J	"	270	6.7	2800	1	2	
22.	K	"	156	3.0	2000	0	0	
25.	L	"	174	2.0	2000	14	30	
26.	M	"	210	2.0	2400	11	24	
27.	N	3	214	2.0	2400	3	18	Angles on spars.
28.	O	"	228	3.3	3200	10	22	
29.	P	"	180	3.0	3200	6	12	
Nov.								
1.	Q	"	30	0.5	1600	3	6	
2.	R	"	120	1.3	2000	11	22	
4.	S	"	222	3.3	1600	14	30	
5.	T	"	240	2.8	1600	17	34	Revision of charted
8.	U	4	270	3.7	1200	21	56	shoals.
					1600			
					800			
9.	V	"	208	2.5	600	20	40	
11	W	"	84	1.6	1600	13	26	drag length 800-600
12	X	"	102	0.8	1200-600	6	22	
	Totals		4042	65.0	2000	201	454	

Total miles 65
soundings 201
angles 4496

A plain staff tide gauge was used, located on a wharf in Newport as shown on the smooth sheet. The plane of reference read 0.0 ft. on the staff.

Total area covered 15.7 sq. statute miles

VEC
Mar.11,1916

D52

HYDROGRAPHIC SHEET 3801.

Eastern Passage, Narragansett Bay, Rhode Island, by Assistant N.H.Heck in 1915.

TIDES.

	Newport ft.
Mean low water, or plane of reference on staff	0.0
Lowest tide observed " "	-1.8
Highest " " " "	5.9
Mean range of tide	3.5

Above note should be letters on the original sheet
attach to Descriptive Report E.O.T.

Hyd = 3801.

On verifying the work on this sheet a number of inaccuracies were discovered and corrected.

On several instances, (See 1/E, 8/L, 3/M, & 10/0.) shortly after the drag struck, soundings were taken and in every case the least water determined has been found greater than the depth at which the drag struck. To illustrate: at 1/E of the sounding record, a 48 foot spot was located after the drag set at 42 ft. struck. The lead line was unable to find anything shoaler than 48 ft. and the following note was inserted in the "Remark Column": "Place where drag hooked 42 ft. hung on old anchor or the like, which could not be determined with lead line". As the drag set at 42 ft. struck a shoal, it might be supposed, that a repeated examination of this spot with the drag instead of the lead line would doubtless disclose a shoal at a depth of less than 42 ft. As suggested by the chief of the party, 42 ft. minus the reduction for tides, was adopted and plotted in a place where the 48 ft. sounding was obtained. It is evident, that this shoal cannot be considered as definitely located and would require additional examination. The same applies to shoals 8/L, 3/M, and 10/0".

On plotting the field sheet considerable freedom has been exercised in rejecting areas, which on

a cursory examination might have appeared to the plotter as valueless, as far as gain in area or depth is considered, but on a final verification, it has developed that a number of splits shown on the sheet were actually covered by the drag, but the work was eliminated in plotting. On the mass and tangle of intersecting lines and curves it is an easy matter to overlook uncovered areas or plot areas of lesser effective depth in preference to those of greater depth, and I would take the liberty to suggest, that all field operations as stated in the records should be placed on the field sheet - the only record of the work done by the party.

A number of permanent buoys were located on either side of meridian 71°19'. They should all plot on areas not developed by the drag, a fact which might serve as a check on the general character of the accuracy of the work. However, some of the above buoys are shown as passed over by the drag, the splits occuring at some distance from them. By stretching the splits and slicing out some of the areas covered, the above buoys were made to fit into the splits. In one case this could be accomplished only by rejecting

an area covered by 16 to 18 M (day). It would be of great value as a check on the accuracy of the work, if the party would locate by sextant angles a cuts all the aids to navigation when passed by the drag.

On comparing this work with that done in the same locality in 1913 (Hyd ≒ 3571) it will be noticed that about 900 m S.W. of Dyer Dd., a 51 ft. drag passed over a spot where a 37 ft. sounding was obtained. The evidence on Hyd ≒ 3571 seems to indicate that the 37 ft. sounding is erroneous and should be removed from the chart.

The area surveyed was very well covered and records kept in good shape.

J.B. Shklair

April 19-1916.