



3521

C. & G. SURVEY,  
LIBRARY AND ARCHIVES  
JUN 30 1913  
Acc. No. ....



Diag. Chy. Nos. 1211-2 & 1210-2

3388

3521 - 3388

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

.....  
*Superintendent.*

State: *R.I.*

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DESCRIPTIVE REPORT.

#-3521  
*Sheet No. T-3388*

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LOCALITY:

*Point Judith*  
*Harbor of Refuge*

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191*3*

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CHIEF OF PARTY:

*J.B. Boutwell*

11-4645

C. & G. SURVEY,  
LIBRARY AND ARCHIVES  
JUN 30 1913  
Acc. No. ....

# 3521

HYDROGRAPHIC SHEET No. \_\_\_\_\_

Point Judith, Harbor of Refuge, Rhode Island.

Table of Statistics.

Date: 1913	Letter	Vol.	Pos.	Sdgs.	Miles	Vessels
June 5	A	1	172	406	13.2	"Endeavor"
9	B	1	203	679	26.5	"
10	C	1	80	344	11.5	"
10	C	2	89	446	12.0	"
11	D	2	81	338	8.0	"
17	E	2	20	71	1.7	"
11	a	3	34	202	4.5	Launch 44
12	b	3	165	1249	23.5	"
13	c	3	85	801	8.0	"
13	c	4	48	177	5.0	"
16	d	4	66	393	8.0	"
17	e	4	121	585	11.5	"
			1164	5691	133.4	

Soundings are recorded in fathoms and feet and reduced to feet and tenths.

Tide guage was placed near the shore end and inside of the East Breakwater and referred to Benchmark No. 1 of the Corps of Engrs. U.S.A. 1903-4. The soundings are reduced to Mean Low Water 9.017 feet below B.M. No. 1 as stated in the office data and by the U.S.E. data at Newport.

# POSITIONS.

*State*

AZIMUTH. ° / ' "	BACK AZIMUTH. ° / ' "	TO STATIONS.	DISTANCE. Meters.	LOGARITHMS.

Do not write in this margin.

# GEOGRAPHIC

Locality Pt. Judith, Harbor of Refuge, 1913.

Datum.

STATIONS.	LATITUDE.			Seconds in Meters.	LONGITUDE.			Seconds in Meters.
	°	'	"		°	'	"	
Pt. Judith Lighthouse	41	21	39.88	1230.5	71	28	54.73	1272.2
Breachway	41	22	34.63	1068.3	71	30	55.46	1288.6
Rock	41	22	23.83	735.2	71	32	22.50	522.8
Main Breakwater Center Light "C" in hydro <sup>s</sup> record	41	21	15.53	479.1	71	30	27.74	644.7
East Breakwater Light "A" in hydro <sup>s</sup> record	41	21	32.40	999.6	71	29	36.64	851.6
Main Breakwater East Light "B" in hydro <sup>s</sup> record	41	21	35.42	1092.7	71	29	54.52	1267.3
Main Breakwater West Light "D" in hydro <sup>s</sup> record	41	21	41.17	1270.1	71	30	49.21	1143.8
Church, cupola	41	<del>21</del> <sup>22</sup>	27.42	845.9	71	32	28.18	654.8
House, chy.	41	22	33.34	1028.6	71	30	42.86	996.0
Pole (Old Light)	41	21	56.31	1737.2	71	30	54.76	1272.7
House, chy. Pt. Judith	41	22	13.50	416.5	71	29	09.66	224.5

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# POSITIONS.

State

Rhode Island

*To accompany Descriptive  
Report of Hydrog. Sheet  
Pt. Judith Harbor of Refuge  
1913*

AZIMUTH. " "	BACK AZIMUTH. " "	TO STATIONS.	DISTANCE. Meters.	LOGARITHMS.
301 02 06.7	121 03 26.5	Pt. Judith Lt.Ho.	3275.0	3.51521 ✓
260 38 11	80 39 09	Breachway	2050.1	3.31178 ✓
285 39 46	105 42 03	Pt. Judith Lt.Ho.	5015.7	3.70033 ✓
128 18 59	308 17 43	Rock	3399.4	3.53140 ✓
165 12 44	345 12 26	Breachway	2523.9	3.40208 ✓
112 23 21	292 21 31	Rock	4169.1	3.62004 ✓
136 21 23	316 20 31	Breachway	2653.9	3.42388 ✓
51 32 06	231 31 44	M.B. Center Light	986.2	2.99397 ✓
142 13 13	322 12 33	Breachway	2311.5	3.36390 ✓
121 15 46	301 14 44	Rock	2536.4	3.40422 ✓
174 58 05	354 58 09	Breachway	1655.6	3.21896 ✓
264 06 03	84 07 05	Breachway	2166.2	3.33570 ✓
308 22 43	128 24 03	M.B. Center Light	3571.7	3.55287 ✓
351 40 14	171 40 24	M.B. Center Light	2425.9	3.38488 ✓
82 47 23	262 46 17	Rock	2334.3	3.36815 ✓
112 36 23	292 35 25	Rock	2208.9	3.34418 ✓
179 12 42	359 12 42	Breachway	1182.2	3.07269 ✓
45 25 41	225 24 49	M.B. Center Light	2547.8	3.40616 ✓
104 51 48	284 50 38	Breachway	2543.7	3.40546 ✓

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(Over)

# GEOGRAPHIC

Locality Pt. Judith, Harbor of Refuge, R.I.

Datum.

11-576

STATIONS. Determined by Plane Table, position scaled from topog. sheet.	LATITUDE. ° ' "	Seconds in Meters.	LONGITUDE. ° ' "	Seconds in Meters.	
Barn, cupola	41 22	762	71 29	619	
House, center chy.	41 22	727	71 29	635	
Barn, cupola	41 22	509	71 29	278	
Large House, center chy.	41 21	1511	71 29	134	
Tide Gauge, 1913	41 21	1310	71 29	409	

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ALB  
July 16, 1913.

HYDROGRAPHIC SHEET 3521

Point Judith, Harbor of Refuge, R. I. by Asst. J. B.  
Boutelle, in 1913.

TIDES.

Mean low water, or plane of reference on staff		East Breakwater. ft. 2.2
Lowest tide observed	" "	N 1.3
Highest " "	" "	6.4
Mean range of tide		3.1

## Hyd. Sheet # 3521#

The positions on this sheet were plotted in the office, although a number of them were transferred from the boat sheet.

A few soundings, e.g. at  $\frac{127}{c}$  which appeared to be of doubtful nature were rejected, without however, any material injury to the general character of the work.

There is some doubt as to the exactness of the  $\frac{113}{A}$ ,  $\frac{119}{B}$  and  $\frac{124}{d}$ .

Previous work (see Hyd. 2691 + Eng. Rg. 12852) indicate shoal spots, whose existence the party failed to confirm. There is no evidence to show that ~~during~~ during the progress of the work these spots were investigated by the party. These soundings are shown on the sheet in pencil.

The entire area was developed by a system of parallel sounding lines, and no attempt was made to run cross lines, which would furnish a general check on the work of the party.

With the above exceptions the work has been systematically arranged and executed well.

J. D. Shkleari.

9/4/13

Verified, J. D. Torrey. 11/1/13  
See Notes and Framing.



Sheet (Hedl.) 3521

Note.

Soundings on line 65-66 C (Ship) day transposed. This is a short independent line between  $41^{\circ} 20' 30'' + 41^{\circ} 21' 00'' - 71^{\circ} 29' 00'' + 71^{\circ} 29' 30''$

Sounding 20 ft added at buoy 6.S.#1

" 13 ft " " " B.R.W.S.

" 36 ft " " bell buoy

" (1) " " rock between  $41^{\circ} 21' 30'' - 41^{\circ} 22' 00''$   $71^{\circ} 29' 30'' - 71^{\circ} 30' 00''$

" (-2) " " " near shore  $41^{\circ} 21' 30'' - 41^{\circ} 22' 00'' - 71^{\circ} 29' 00'' - 71^{\circ} 29' 30''$

Made 4 rocks awash instead of sunken with soundings near above.

sounding at 127 A (Ship) day changed from 27 to 28

" bat 90-91 6 (Lowe's day) omitted (missed sounding)

See tracing for changes in curves at east entrance to breakwaters.

J. D. Torrey 11/1/13

Department of Commerce and Labor

3388

DESCRIPTIVE REPORT

to Accompany Hydrographic Sheet No.

POINT JUDITH, HARBOR OF REFUGE

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C. & G. SURVEY,  
LIBRARY AND ARCHIVES  
JUN 30 1913  
Acc. No. \_\_\_\_\_

ON NOV  
JUN 30 1913  
LIBRARY AND ARCHIVES  
C. & G. SURVEY,  
REFUGE

METHOD OF SURVEY: The triangulation station Breachway was recovered and from this station and Point Judith Light House triangulation was extended to determine the lights on the Breakwater and several other points. The topography of the shore line from Point Judith to Rocky Point was run with the plane table, the hydrographic fair sheet being used for this purpose.

Sounding lines were run with the ship for about a mile outside the Breakwater, the lines being run about 100 meters apart. Lines were first run north and south of the south entrance to the breakwater but owing to the strong tidal currents running east and west, making it extremely difficult to keep the ship on any desired line, the direction of the lines was changed so as to run with and against the current. Inside the breakwater the sounding was done with Launch No. 44, lines being run about 50 meters apart. A blue print is sent herewith showing soundings made by the Corps of Engineers, U.S.A. in 1906 over the area enclosed by the breakwater.

There is very little good anchorage inside the breakwater the bottom being either hard or rocky with the exception of a small area inside the triangle formed by the main breakwater.

TIDAL DATA: A tide gauge was set near the shore end of the east breakwater and connected with B.M. No. 1 of the U.S.E. and described in the data sent from the office and the soundings have been reduced to the plane of Mean Low Water as determined by the U.S.E. and stated in the C. & G.S. data which corresponds to that in the U.S.E. office in Newport.

Respectfully submitted,

*J. S. Boutelle*  
Assistant C. & G. S.  
Comdg. Str. Engineer