

3556

1210-2

C. & G. SURVEY,
LIBRARY AND ARCHIVES
DEC 11 1913
Acc. No.



Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: _____

DESCRIPTIVE REPORT.

Hyl Sheet No. 3556.

LOCALITY:

Suzzarda Bay

191

CHIEF OF PARTY:

11-4845

3556

Massachusetts

3556

Buzzards Bay

Central Part

C. & G. SURVEY,
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WIRE DRAG SURVEY Continued From 1912

Sept. 2 ----- Oct. 3

1913.

N.H.Heck, Assistant, Chief of Party.

Geo. Olsen, W. O.

J. A. Daniels, Aid.

W.R.O'Sullivan, "

R.V.Miller, "

E.W.Eickelberg, "

R.L.Schoppe, "

M.O.Nelson, "

SCALE : - 1 : 20 000

Tide Gauge - Fort Rodman.

U. S. GOVERNMENT
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DEC 11 1913
Acc. No.

Descriptive Report of Hydrographic No. *X. 3556.*

(Buzzards Bay, Mass.)

The area examined by the Wire Drag upon this sheet includes the central portion of Buzzards Bay, west of a line from West Island to Woods Hole, extending to a line from Dumpling Rocks Light House to Penikese Island. These limits include considerable unfinished area, as work was under way upon this sheet when the 1913 season closed.

Variations from charted depth were found as follows, working westward from the eastern limit of the sheet. $2 \frac{3}{4}$ mi. SE by S ~~SE~~ ^{Mag.} $1 \frac{1}{2}$ S from south point of West Island is a least depth of 31 ft. where 47 ft. was charted. $\frac{3}{4}$ mi. W by S from this is a depth of 41 ft. where 50 ft. was ~~charted~~ Previously shown. About $1 \frac{1}{2}$ mi. N of Wepecket ^{Island} ~~Sound~~ is a ridge about $1 \frac{1}{2}$ mi. long extending NE and SW with a depth of 40 ft. About 2 mi. WSW from this ridge from $1 \frac{1}{2}$ a mi. to $\frac{3}{4}$ mi. SE of the charted 32 ft. spot, are depths of 36 and 35 ft. where 44 to 47 ft. were charted. South east of Mosher Ledge, the shoal ground was found to be more extensive than shown, 22 and 23 ft. being found where 26 was charted. $1 \frac{1}{4}$ mi. true N of Lone Rock, near 40 ft. charted, 38 ft., and about $\frac{3}{4}$ mi. true NE of this is a 39 ft. sounding in a charted 44 ft. $1 \frac{1}{2}$ mi. true NE of Penikese Id. 33 ft. was found near a previously charted 36 ft. spot. West of Wilkes Ledge, 40 ft. depth was found 300 meters further south than shown and 1 mi. true south of this sounding is one of 39 ft. in a charted 42 ft. The charted depth was verified upon the remainder of the area examined upon the sheet.

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Statistics to accompany Sheet No. 2.

C. & G. SURVEY,
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Acc. No. _____

Date	Letter	Vol	Angles H	Angles K	Miles	Drag Length	Soundings		Remarks.
							No.	angles	
Sept. 2	A	1	20	48	1.5	6000	6	12	
" 3	B	1	81	87	6.8	6000	2	4	
" 6	C	1	99	90	6.0	6000	2	4	
" 15	D	1	66	69	5.5	6000	4	8	
" 16	E	1	63	51	4.2	6000	1	2	
" 17	F						5	10	
Oct. 1	G	1	48		3.5	3000	1	2	H. Trixie
" 2	H	1	132		5.2	3000	0	0	
" 3	J	1	24		0.5	3000	5	10	

Total angles ----- 930
 Total soundings ----- 26
 No. of sq. miles ----- 24.3
 No. of lin. miles ----- 33.2

VEC
Apr. 9, 1914.

HYDROGRAPHIC SHEET 3556.

Buzzards Bay, Massachusetts, by Assistant N. H. Heck
in 1913.

TIDES.

	Clark Point ft.
Mean low water, or plane of reference on staff	1.0
Lowest tide observed " "	-0.3
Highest " " " "	7.3
Mean range of tide	3.9

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JAN 12 1915
Acc. No. _____



3556

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. A. Totten
Superintendent.

State: *Mass*

DESCRIPTIVE REPORT.

Hyd. Sheet No. *3556*

LOCALITY:

Lower Part

Buzzards Bay

1914

CHIEF OF PARTY:

3556

Diag. Cht. No. 1210-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. _____ Office No. H-3556

LOCALITY

State MASS.

General locality BUZZARDS BAY

Locality _____

194 14

CHIEF OF PARTY

N. H. Heck

LIBRARY & ARCHIVES

DATE DECEMBER 11, 1913

B-1870-1 (1)

3556

Hyd. 3556

3556

MASSACHUSETTS

BUZZARDS BAY

Lower Part

WIRE DRAG EXAMINATIONS

by

Wire Drag Party No. 2, J.H.Hawley, Chief of Party

Supplementing

Work done by N. H. Heck, Assistant,

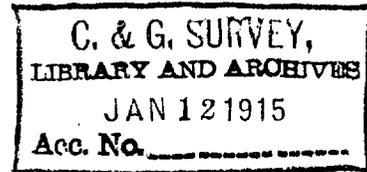
in 1912-13

July 10 - August 20,

1914

Scale - 1:20,000

Tide Gauge - Westport Hbr.



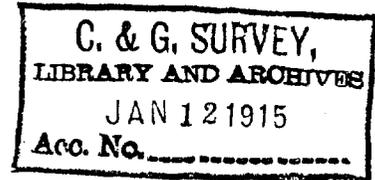
Hyd. 3556

3556

MASSACHUSETTS

BUZZARDS BAY

Central Part



WIRE DRAG SURVEY Continued from 1912-13

Oct. 7 - Nov. 3

1914

N.H.Heck, Assistant, Chief of Party.

Sheet No. 3556

Scale - 1:20,000

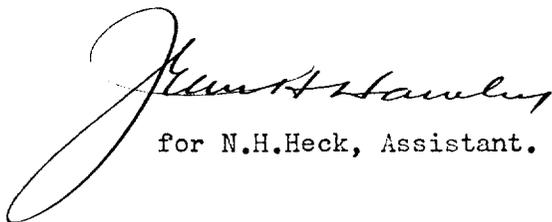
Tide Gauge - Ft. Rodman.

The work done on this sheet, in 1914, by Wire Drag Party No. 1, is in addition to work done in 1912 and 1913.

The work is distinguished from previous work by the use of blue ink for position and sounding numbers and letters.

Numerous changes in charted depths were found and are shown on the accompanying section of chart No. 249.

The soundings are shown in red and are in feet at mean low water.


for N.H.Heck, Assistant.

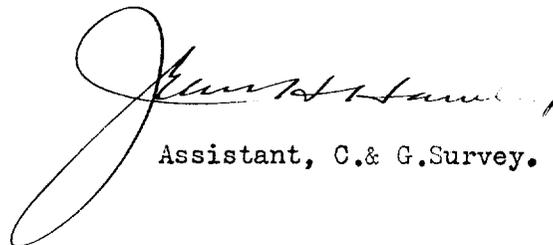
Work was done on this sheet, in 1914, by Wire Drag Party No. 2.

The work was done on the western part of the sheet in order to connect area, dragged in 1912-13, with the area covered, in 1914, on sheet 3668.

Numerous changes in charted depths were found.

Tracings of sections of chart No. 112, with these changes shown, were submitted during the progress of the work.

The usual methods of wire drag work were followed.



Assistant, C. & G. Survey.

STATISTICS.

Coast of New England, --- Buzzards Bay.

October 5, to November 4,

1914.

Sheet 2 (3556).

Date.	Day.	Vol.	Angles.	Miles.	Drag Length.	Soundings.		Remarks.
						Number.	Angles.	
Oct. 7.	A	1	96	3.0	4000	0	0	Quicks Hole. Soundings Only.
10.	B	"	216	6.2	4000 1500	5	11	
12	C	"	60	1.0	4000	14	35	
19	D	"	120	3.5	4000	7	14	
20	E	"	204	5.0	4000	9	26	
22	F	"	0	0		4	11	
23	G	"	54	0.8	4000	7	17	
Nov. 2	H	"	102	3.0	4000 1200	0	0	
3	J	"	96	2.8	4000	1	3	
			<u>948</u>	<u>25.3</u>		<u>47</u>	<u>117</u>	

SUMMARY.

Total number of Miles,	25.3
" " " Angles,	1065
" " " Soundings,	47
" " " Square Miles,..	11

E.M.

Statistics to accompany Sheet No. 3556.

WIRE DRAG PARTY NO. 2 - 1914

Date	Letter	Vol.	Angles H	Miles	Drag Length	Soundings		Remarks
						No.	Angles	
July 10	A	1	0	0	3000	3	7	
" 14	B	1	204	4	3000	1	3	
" 15	C	1	288	6	3000	0	0	
" 20	D	1	227	5	3600	0	0	
" 22	E	1	222	3½	3600	4	12	
" 23	F	2	210	4½	3000	0	0	
Aug 17	G	2	124	3¼	3000	0	0	
" 18	H	2	330	6¾	3000	2	4	
" 19	J	2	300	6¼	3000	2	5	
" 20	K	3	210	4½	3000	0	0	

Total Angles 2115

Total Soundings 12

No. of sq. Miles 12½

No. of lin. Miles 43¾

VEC
Apr. 12, 1915

L. P. S.

HYDROGRAPHIC SHEET 3556.

Approach to Buzzards Bay, Massachusetts, by
Asst. N. H. Heck in 1914.

TIDES.

	Clark Point ft.	Westport Harbor ft.
Mean low water, or plane of reference on staff	1.0	1.6
Lowest tide observed " "	-0.3	1.1
Highest " " " "	7.3	6.0
Mean range of tide	3.9	3.1

Myd^o Sheet #3556^u

The area dragged includes the central portion of Buzzards Bay.

The shoals located during the survey are described in the Descriptive Report of the Chief of Party.

The work was plotted in the field, verified and arranged in the office, and finally a tracing made, which shows the max. eff. depth, to which the partial areas have been dragged.

Attention might be called to a few inaccuracies in plotting. Sounding \checkmark_c was plotted wrong. On plotting it $44^{\circ}16'$ was used for the $\text{rt. } \angle$ instead of $45^{\circ}16'$.

Positions \checkmark_B^{20} , \checkmark_B^{21} , \checkmark_B^{22} were numbered wrong.

At \checkmark_B^9 "F" to "N" changed to 43'; Plotted "N" to "F".

At \checkmark_B^{12} a change to 42' "N" to "F" was made, but not plotted.

Position \checkmark_c plotted wrong.

Positions \checkmark_c^5 , \checkmark_c^{10} , \checkmark_c^{15} (blue) numbered wrong.

At \checkmark_D^{18} "N" to "F" changed to 42' at 2:25 to 2:43; Shown as if the entire change took place at 2:30

At \checkmark_G^5 "N" to "F" changed to 38' at 1:20 to 1:33; Plotted as if the change took place at 1:30;

At \checkmark_H^8 the length of the drag is recorded 862; should be 962 m. Left the way it was plotted by the party.

\checkmark_H plotted wrong.

At $\frac{4}{H}$ "N" to "F" changed to 43'. Change plotted wrong.

A number of spots were missed by the drag, some of which have been covered by the overlapping work of the Hyd^s sheets 3391 & 2968.

The records were kept in good shape.

A. P. Shklearin

May - 15 - 14

Myd = 3556 (Work of 1914)

The drag work of 1914 covers an area to the west of the space dragged in 1913.

The work was plotted in the field, verified in the office, and finally a tracing made, which shows the max. eff. depth, to which the partial areas have been dragged.

A few inaccuracies in plotting were noticed, of which the following might be mentioned.

Sounding $\frac{1}{8}$ plotted about 100 yd N.W. from exact position.

Sounding $\frac{4}{E}$ plotted wrong. As central object Δ Mill was used instead of Δ Mis.

Soundings $\frac{6}{E}$, $\frac{7}{E}$, & $\frac{8}{E}$ were plotted using the check angles in place of the left angles. This was done because when plotted as recorded, the additional angles did not check. On verifying it was observed that when in all these cases Δ Mill is used instead of Δ Mis (in the check angles), the original sextant readings and the check angles agree fairly well. This might indicate, that Δ^E Mill & Mis were interchanged in recording the check angles. However, with nothing definite on hand, the field work was accepted as correct and the soundings left as plotted by the party.

Day B. Drag set at N to 8 - 42' & 9 - F at 36' At 10:37

Buoys 9 to F were set at 43'. The moment buoy "9" was lowered, section 9 should have been plotted at a depth of 42' and the rest at 43'.

At V_B^{12} (11:19) a change in the length of the upright was made. Plotting shows the change commenced at 11:12.

Sounding V_B plotted wrong.

In a number of cases sectional areas as indicated by changes in the depth of individual sections of the drag were not plotted correctly. The following case will serve as an illustration.

Day G. Drag 3000', sections 300 ft long

at V_B^{14} . N to 2 set at 33' 1:41 to 1:44

3 & 4 " 30 1:47 " 1:49 etc.

Plotted - first 3 sections 33', 4th sect. - 30' etc.

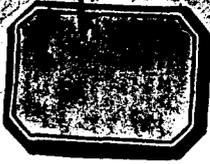
Since buoy 3 was at a lesser depth than "2" it is evident that section "3" should have been plotted at 30' & not at 33'.

The area was fairly well covered although a few spots were missed by the drag as shown in the tracing.

The records throughout the work were kept in good shape.

J.B. Shkew

May 27-15.



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

State _____

11-5613

DESCRIPTIVE REPORT.

Sheet No. 3556

LOCALITY:

1918

CHIEF OF PARTY:

Hyd. 3556,

T I T L E

Wire Drag Examination.

Coast of Massachusetts, Buzzards Bay.

September 1-30, 1913.

Scale $\frac{1}{20,000}$

B O A T S

Annie T. Mack, Newport, R.I.

Trixie. Fairhaven, Mass.

O F F I C E R S

N.H. Heck Assistant Chief of Party

Alfred S. Milliken Aid Relieving Chief of Party

P.F. Benedict Aid Angles

Bert C Freeman Deck Officer in charge "Y" tender.

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Descriptive Report to Accompany Sheet No. 3556.

ORDERS

Dated August 23, 1915.

LOCATION OF WORK

1. Approximately five square miles were dragged in Buzzards Bay and Vineyard Sound in the vicinity of Quicks Hole and in Quicks Hole .
2. A small area was dragged at the entrance to Cuttyhunk Harbor to locate a reported shoal in the channel.

SHOALS FOUND

1. Three shoals 18 1/2, 20 and 21 feet were found on the Eastern side of the passage just North of the Gas Buoy .
A 21 foot shoal just East of the 16 foot rock found in 1914.
A 23 foot shoal found about 540 meters bearing S by E of Lone Rock Buoy.
2. Near the entrance to Cuttyhunk Harbor, a ledge with 12 1/2, 15 and 19 feet was found projecting in the channel about 300 meters.

DISCUSSION

1. The shoals found in Quicks Hole narrows the channel considerably. Through the narrowest part of the channel, after the 16 and 21 foot spots were buoyed, a 900 foot drag set at 21 feet was carried through successfully.
2. The drag set at 20 feet was taken over an 18 foot spot shown on the chart just South of the center of Quicks Hole. The drag touched but on going over it again the drag went clear. This

2.

area ought to be dragged again since at the time this dragging was done the wind and tide were very strong and unfavorable to close work.

The splits made during this work are marked by cross section lines.

C O N C L U S I O N S

1. At Quicks Hole.

These results indicate that a channel exists about 850 feet wide which vessels drawing 17 or 18 feet might use but without a great deal of safety. Even if the channel were well buoyed it would not be considered good policy for boats carrying 20 feet to use it.

2. The shoal found near the entrance to Cuttyhunk indicate that it is risky for boats drawing ten feet or more to use this channel.

Plane Table Positions Of Signals.

<u>Name</u>	<u>Latitude</u>		Secs. in M.	°	<u>Longitude</u>	
	°	'			'	Secs. in M
<u>Rock</u>	41	27	112 1739	70	51	519 874
<u>Sound</u>	41	26	927 924	70	50	295 1098
<u>Bold</u>	41	29	1542 309	70	44	1358 34
<u>Gas</u>	41	26	1187 664	70	50	1054 339

Description of These Signals.

Rock, A rock known as North Rock at the Northwestern entrance to Quicks Hole. It stands three or four feet out of water and eight or ten feet in diameter.

Sound A rock known as South Rock at the Southeastern entrance to Quicks Hole. This is the same size as North Rock.

Bold A large bolder midway on the Northern shore of Naushen Island. This bolder is backed by a large white bluff.

Gas. The Gas Buoy in the middle of Quicks Hole.

S T A T I S T I C S
C O A S T O F M A S S A C H U S E T T S
B U Z Z A R D S B A Y

Date.	Day.	Volume.	Angles.	Miles.	Drag Length	Number	Soundings Angles	Remarks.
1915								
Sept. 9	A	1	22	0.5	2000	0	0	
10	B	1	294	8.0	1600	4	8	
11	C	1	204	3.5	1200	1	2	
13	D	1	342	6.5	2000	4	8	
14	E	1	42	0.5	1200	5	11	
15	F	1	30	0.2	1200	5	10	
16	G	1	342	5.0	1200	6	13	
17	H	1	144	2.5	900	0	0	
21	J	2	72	1.0	2000	0	0	
23	K	2	162	2.0	2000	2	6	
Total			1660	29.7		27	58	

VEC
Nov. 19, 1915

L.P.A.

HYDROGRAPHIC SHEET 3556.

Buzzards Bay, Massachusetts, by Assistant N.H. Heck
in 1915.

TIDES.

	Clark Point ft.
Mean low water, or plane of reference on staff	0.0
Lowest tide observed " "	-1.4
Highest " " " "	6.3
Mean range of tide	3.9

