

# 6609

## WIRE DRAG

6609  
WIRE DRAG

Form 504  
Rev. Dec. 1933  
DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

### DESCRIPTIVE REPORT

~~TERRACON~~  
Hydrographic } Sheet No. WD 1006

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

DEC 21 1940

Acc. No. ....

State Massachusetts

#### LOCALITY

~~Atlantic Coast-Boston Harbor~~

The Graves Lighthouse to Nantasket Roads

19340

1940

CHIEF OF PARTY

Fred. L. Peacock

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WIRE DRAG  
HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. WD 1006

H6609 Wire Drag

REGISTER NO.

State Massachusetts

General locality Atlantic Coast - Boston Harbor

Locality <sup>The</sup> Graves Lighthouse to Nantasket Roads

Scale 1:10,000 Date of survey June-September, 19 40

Vessel Sub-Party of the Ship OCEANOGRAPHER

Chief of Party Fred. L. Peacock

Surveyed by H. E. Finnegan and F. R. Gossett

Protracted by D. DeBiasi, S. C. Diliberto, and F. R. Gossett

Soundings penciled by D. D. B., S. C. D., & F. R. G.

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by D. D. B., S. C. D., & F. R. G.

Inked by \_\_\_\_\_

Verified by Harold F. Stegman

Instructions dated February 17, 19 40

Remarks: All of area included in limits of sheet layout not completed.

## DESCRIPTIVE REPORT TO ACCOMPANY WIRE DRAG SHEET NUMBER 1006

## INSTRUCTIONS.

This survey was executed in accordance with Director's Instructions for Project HT-246, dated February 17, 1940. ✓

The wire dragged area shown on this sheet extends from the Graves, outside of the Brewster Islands, including Nantasket Roads east of Georges Island to Allerton Point, and also including Ultonia Ledge. The area called for west of the Graves and the Brewster Islands, the Narrows and the western part of Nantasket Roads was not reached by the wire drag survey this season. ✓

## SURVEY METHODS.

In general, survey methods used were standard practice for "dual control" as described in Special Publication No. 118. The launch MARINDIN was used as Guide launch and the launch RODGERS as End launch. A 26 foot motor-self-bailing surf-boat which was formerly the property of the U. S. Coast Guard was used as a tender. ✓

Due to shortage of officers and trained personnel, no regular drag-master was used. A. Pearson, Bos'n, did most of setting of the drag, and E. Moran seaman, coxwain of the tender did the remainder of setting of the uprights, and testing and patrolling the drag. The officer-in-charge of the Guide launch directed operations of the tender and went aboard to investigate groundings and take their positions. ✓

Groundings and shoals were investigated using the hand-lead. Positions were also taken occasionally at various drag buoys to show the location of the bight of the drag around a shoal. Soundings taken at these buoy positions are not necessarily the shoalest in the vicinity. ✓

H-6608 (1940) W.D.

The tester used was described in report for sheet 1005. Lifts were entered to  $\frac{1}{2}$  foot in the same manner as tide reducers. ✓

Communication system used is described in report for sheet 1005. H-6608 ✓

The towline consisted of two or three 100 foot units of bottom wire plus the bowline. The average distance from the sweep-hooks to the point where angles were taken was about 30 feet making effective towline lengths of 230 feet (70 meters) and 330 feet (100 meters). ✓

An overlay tracing of hydrographic sheet 1006 was used over the wire drag boat sheet in laying out drag strips. Sounding on 1006 was in progress at the same time as wire drag operations. ✓

H-6643 (1940) ←

Some slight changes in shape of drag strips around shoals at beginning and end of strips may be necessary after comparison depth curves with hydrographic smooth sheets 1006 when <sup>they are</sup> it is complete. ✓

H-6642, H-6643, H-6644 all of 1940. Accomplished H.F.S.

In general, most drag strips were run inshore to ground, and where buoys grounded in same effective depths as shown by the hydrographic boat sheet, no additional investigation was made. ✓

Many of the green circled grounding soundings at inner ends of lines shown on the field overlay sheet probably can be eliminated when compared with the completed hydrographic sheet 1006, and found to be on their depth curves. H-6643 (1940)

Sources of principal control and signal locations are: 1934 triangulation survey of Boston Harbor Area; 1940 triangulation of P. L. Bernstein, (signals GREEN and REW only); air-photo compilations Nos. T-5774 and T-5775; field inspection by hydrographic party using compilations; and sextant fixes. Signal RED from T-5775 was found to be in error and was reinspected by the hydrographic party and relocated on the smooth sheet. Narrows Beacon and Narrows Light-house\* are confusedly labelled on T-5775. Narrows Lighthouse, as used by the field party is the SW'ly of the two objects. Triangulation Stations shown on the sheet were recovered in 1939 by the air-photo field inspection party of L. W. Swanson in preparation for the current hydrographic survey. These stations were identified by the hydrographic party in the field, but no additional recovery notes were made. Field party correct as regards Narrows Light. Recovery cards submitted to Div. of Geodesy renaming Narrows Bn, Narrows Light DISCREPANCIES. and Narrows Light, Narrows Bell.

There are several notes in the records that N and F buoys are bumping on the bottom while the drag is proceeding ahead. It should be noted that the big weight on the end buoys hangs down over a foot below the bottom wire, and in cases where a grounding is shown at N or F equal to the effective depth of the drag, the actual depth is about one foot deeper. In such cases eff. depth has been shown as the actual depth is uncertain. HFS

In the area SE of Allerton Point extending toward Harding Ledge, numerous lobster pots were encountered especially on C day which was the first line in this area. The tender and lobstermen were able to move most of the pots that had surface floats, but many of the pots were on "trawls" and some floats were water-logged and submerged. Kelp was also found to be unusually long and heavy in this area. Whenever the drag was picked up the bottom wire and weights had large streamers of kelp leaves hanging on them. Discrepancies in this area between groundings on some drag strips and coverage with greater effective depths by other strips is believed due to lobster pots and kelp pulling the bottom wire down below the drag depth, and possibly by the bottom wire riding up on the kelp above the drag depth. These cases are noted in more detail in this report under "Groundings".

The obstruction which the drag hung on on 2P was found to be a small submerged spar buoy. This was brought to the surface and removed. See note on 14 q. Cleared at 28 ft.  $\phi-42^{\circ}-19.35'$   
 $\lambda-70^{\circ}-53.75'$

The obstruction which the drag hung on on 9 JJ was a submerged buoy on steel cable. This was removed. See notes on 10 JJ. Cleared at 15 1/2 ft.  $\phi-42^{\circ}-22.45'$   
 $\lambda-70^{\circ}-51.75'$

The 20 1/2 foot grounding at 14 V is not recommended for charting as it is believed caused by lobster pot, and had been covered by 23 feet. Cleared at 14 ft.  $\phi-42^{\circ}-19.0'$   
 $\lambda-70^{\circ}-55.0'$

20 1/2 ft Not shown as drag probably hung on 17 1/2' shoal Shown on H-6643 (1940), between pos 14V-15V

The 23 foot ground on 17 U occurred with strong current running. There was usually considerable fluctuation in lift with strong currents. It is possible that this drag grounded below its reduced effective depth. This point was covered by two other 23 foot effective depth drags without grounding. 18V and 2W

✓  
✓  
p-42-1905  
A-70-548  
Probably hung  
on 25 ft shoal  
100 meters  
before pos 170  
(25 ft - pos 34)

DANGERS.

Hardings Ledge which is also common to this sheet was described in the report on sheet 1005. H-6608 (1940) WD

Position	Least Depth	Latitude	Longitude
✓ 7jj	✓ 13 $\frac{1}{2}$ *	42 - 22.37 ✓	70 - 51.63 ✓
✓ 3m	✓ 21 $\frac{1}{2}$ #	✓ 19.10	51.93 ✓
✓ 3u	25 24 $\frac{1}{2}$ #	19.08 ✓	54.75 ✓
✓ 1lt	✓ 22 $\frac{1}{2}$ #	19.09 ✓	53.39 ✓
2u	19 $\frac{1}{2}$ #	18.96	54.50 ✓

\* This is point on which SS City of Salisbury was wrecked. Diver working on wreck claims the vessel itself had slid off into nearby deep water.

# These positions are in and near entrance channel to the Narrows.

CHANNELS.

The principal channel in the area surveyed is Nantasket Roads entrance to Narrows channel from Georges Island to Point Allerton. Least depths found in and near this channel are listed above under "Dangers".

COMPARISON WITH PREVIOUS SURVEYS.

This survey has not been compared with the 1940 hydrographic survey. At the time this report is written, smooth plotting of 1940 hydrographic sheet No. 1006 is in progress in the Norfolk Processing Office. *(H-6643(1940) Compared. See Review. H-6642 H-6643 1940 H-6644)*

This survey was compared with the small section of the bromide of No. 2167 which it overlaps. Least depths on shoals were less than those discovered by the 1893 survey.

This party's prints of H-2146 and H-2425 are being used at the Norfolk Processing Office and are not available for comparison at the time this report is written. *Considered in process of reviewing H-6643 (1940)*

This survey was compared with the bromide of the area and depth diagram of wire drag sheet 3780 of 1915. The bromide furnishes a somewhat uncertain comparison because the effective depths and least depth soundings all print in the same color. ~~The following appear to be shoal soundings on A and D sheet 3780.~~

Considered. See Review.

~~Sub-~~  
~~investigated~~  
~~thereafter.~~

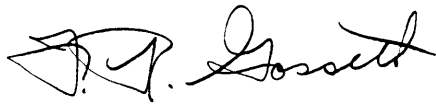
AREA AND DEPTH SHEET

A field area and depth overlay sheet on tracing cloth is attached to the sheet. ✓

Boston Harbor Sub-Party of the Ship OCEANOGRAPHER was in immediate charge of H. E. Finnegan. ✓

This sheet was surveyed by H. E. Finnegan and F. R. Gossett.

Respectfully submitted,



F. R. Gossett  
Lieut.(j.g.)USC&GS

STATISTICS, WIRE DRAG SHEET NO. 1006

H6609

Date	Letter Day	Vol. No.	Drag Length	Positions	Soundings	Miles, Statute	*Boat	Used
			Feet					
5/30/40	A	1	1500	12		0.6	Marindin	Rodgers
6/12/40	B	1	2000	21		1.0	"	"
7/31/40	C	1	2400	72		2.6	"	"
8/1/40	D	1	2400	63		2.6	"	"
8/3/40	E	1	2400	58		3.7	"	"
8/5/40	F	1	3000	53		2.4	"	"
8/6/40	G	1	2400	31		2.1	"	"
8/8/40	H	2	2400	43		2.4	"	"
8/12/40	J	2	2700	27		1.5	"	"
8/13/40	K	2	1800	39		2.3	"	"
			2400					
8/15/40	L	2	2700	42		1.7	"	"
8/16/40	M	2	2100	61		2.8	"	"
8/20/40	N	2	2700	24		1.3	"	"
			2100					
8/21/40	P	2	2100	20		1.7	"	"
8/22/40	Q	3	2400	43		2.4	"	"
			2100					
8/23/40	R	3	1500	12		0.8	"	"
8/24/40	S	3	2100	38		2.4	"	"
			1800					
8/26/40	T	3	2100	41		2.4	"	"
			2400					
8/27/40	U	3	1500	37		2.0	"	"
			2400					
8/28/40	V	3	1500	42		2.5	"	"
			2100					
8/29/40	W	3	1200	44		2.4	"	"
			1500					
8/29/40	W	4	2100	18		0.6	"	"
8/30/40	X	4	1500	23		1.1	"	"
9/4/40	Y	4	2100	31		1.3	"	"
9/5/40	Z	4	2400	24		1.3	"	"
9/6/40	AA	4	1200	34		1.8	"	"
			1500					
9/7/40	BB	4	2100	14		0.4	"	"
9/9/40	CC	4	2400	57		3.1	"	"
9/10/40	DD	4	1500	60		3.7	"	"
			2100					
9/11/40	EE	5	1500	85		3.1	"	"
			1800					
			3000					
9/12/40	FF	5	2100	34		2.7	"	"
9/13/40	GG	5	1800	56		2.3	"	"
			2100					
9/17/40	HH	5	2100	44		2.1	"	"
			3600					
9/18/40	JJ	5	1800	32		2.0	"	"
			3600					
9/19/40	KK	5	2100	41		1.2	"	"
			2700					
Totals-----				1376		70.3		

\*Marindin used for Guide Launch--Rodgers for End Launch

Date	Letter	Vol.	Positions	Soundings	Miles,	Boat Used
Day		No.			Statute	
5/30/40	a	6	1	1		Wire Drag Tender
6/12/40	b	6	3	3		" " "
7/31/40	c	6	1	1		" " "
8/1/40	d	6	6	5		" " "
8/3/40	e	6	8	9		" " "
8/5/40	f	6	2	2		" " "
8/6/40	g	6	1	0		" " "
8/8/40	h	6	2	1		" " "
8/12/40	j	6	4	3		" " "
8/13/40	k	6	2	2		" " "
8/15/40	l	6	9	8		" " "
8/16/40	m	6	6	6		" " "
8/20/40	n	6	3	2		" " "
8/21/40	p	6	7	6		" " "
8/22/40	q	6	14	14		" " "
8/23/40	r	6	0	0		" " "
8/24/40	s	6	3	3		" " "
8/26/40	t	6	14	16		" " "
8/27/40	u	6	14	14		" " "
8/28/40	v	6	4	4		" " "
8/29/40	w	6	3	2		" " "
8/30/40	x	6	1	0		" " "
9/4/40	y	7	7	7		" " "
9/5/40	z	7	6	5		" " "
9/6/40	aa	7	7	7		" " "
9/7/40	bb	7	1	1		" " "
9/9/40	cc	7	9	9		" " "
9/10/40	dd	7	4	7		" " "
9/11/40	ee	7	7	6		" " "
9/12/40	ff	7	0	0		" " "
9/13/40	gg	7	13	10		" " "
9/17/40	hh	7	5	3		" " "
9/18/40	jj	7	6	3		" " "
9/19/40	kk	7	2	2		" " "
Totals			175	162		



RAC  
H.E.

# TIDE NOTE FOR HYDROGRAPHIC SHEET

January 17, 1941

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston.

Plane of reference approved in  
11 volumes of sounding <sup>and wire drag</sup> records for

HYDROGRAPHIC SHEET 6609

Locality <sup>The</sup> Graves Lighthouse to <sup>asket</sup> Nantucket Roads, Boston Harbor.

Chief of Party: Fred. L. Peacock in 1940  
Plane of reference is mean low water reading  
3.0 ft. on tide staff at Boston Light  
25.3 ft. below B. M. 1

Height of mean high water above plane of reference is 9.0 feet.

Condition of records satisfactory except as noted below:

  
Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H6609**  
(Wire Drag)

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
<u>Boston Harbor</u>												1
<u>The Graves Lighthouse</u>												2
<u>Nantasket Roads</u>												3
Names in text or on sheet:												4
												5
<u>Brewster Islands</u>												6
<u>Pt. Allerton</u> ✓												7
<u>Uthania Ledge</u>												8
<u>The Narrows</u> ✓												9
<u>Georges I.</u> ✓												10
<u>Harding Ledge</u>												11
<u>Boston Light</u>												12
<u>Hull</u>												13
<u>Windmill Pt.</u>												14
<u>Pemberton</u>												15
<u>Fort Warren</u>												16
<u>Fort Strong</u>												17
<u>Long I.</u> ✓												18
<u>Gallups I.</u> ✓												19
<u>Lovell I.</u> ✓												20
												21
<u>Thieves ledge</u>												22
												23
												24
												25
												26
												27

Names underlined in red approved  
by L. Heck on 2/3/42

Remarks

Decisions

1		
2	U.S.G.B. decision = The Graves (su used in Light List for No. 171)	423708
3		423709 U.S.G.B
4		
5		
6		423708
7	Not Allerton Pt.	"
8		"
9		423709
10		" U.S.G.B
11		423708 "
12	Location of tide staff.	"
13		423709
14		"
15		"
16	on Georges I.	"
17	on Long I, N. part.	"
18		"
19	Not Gallop's	" U.S.G.B
20	Not Lovell's.	"
21		
22		423708
23		
24		
25		
26		
27		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H.C.C.09** (Wire Drag)

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	1551 .....
Number of positions checked	...193.
Number of positions revised	...0.
Number of soundings recorded	...162.
Number of soundings revised	...3 plus numerous groundings
Number of soundings erroneously spaced	.....
Number of signals erroneously plotted or transferred	None .....

Date: *July 22, 1941*

Verification by *H.F. Stegman*

Time: *118 hrs*

Review by *J.A. Mc Cormick* 12/31/41 Time: *50 hrs.*

HYDROGRAPHIC SURVEY NO. H6609 Wire Drag

Smooth Sheet One

Boat Sheet One

Records; Sounding 2 Vols., Wire Drag 9 Vols., Bomb     Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service Yes 1940  
(Circular Nov.30, 1933)

Hydrography: Total Days 34 ; Last Date 9/19/40

Remarks 2 volumes Rough Tender Soundings filed with H-6608-

Wire Drag:(vols. 1 & 2)

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
 PHOTOSTAT OF

No. **HH6609**  
~~No. 1000~~ (Wire Drag)

received Dec. 20, 1940  
 registered Jan. 11, 1941  
 verified  
 reviewed  
 approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓	HH	Page 3 Dangerous
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

✓ TBReed

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6609 W.D.

FIELD NO. 1006 W.D.

Massachusetts; Boston Harbor;  
Graves Lighthouse to Nantucket Roads  
Surveyed in June - September 1940, Scale 1:10,000  
Instructions dated February 17, 1940 (OCEANOGRAPHER)

Wire Drag

Dual Control

Chief of Party - F. L. Peacock  
Surveyed by - H. E. Finnegan; F. R. Gossett  
Protracted by - D. DeBiasi; S. C. Diliberto; F. R. Gossett  
Subdivision of wire dragged areas - D. DeB.; S.C.D.; F.R.G.  
Inked by - D. DeB.; S.C.D.; F.R.G.  
Verified by - H. F. Stegman  
Reviewed by - J. A. McCormick, December 31, 1941  
Inspected by - H. R. Edmonston

1. Shoreline and Signal Sources

The necessary data are given in the Descriptive Report, page 2, par. 2.

2. Adjoining Wire Drag Surveys

Satisfactory junctions were effected with H-6608 (1940) W.D. on the southeast and with H-3780 (1915) W.D. on the east and northeast. A 24-ft. sounding (charted) in Lat. 42°19.5', Long. 70°50.3' on H-3780 W.D. was disproved by effective depths of 27 to 30 feet on the present survey. Several splits on H-3780 were satisfactorily covered by the present drag and similarly the larger splits on the present work are in the area covered by H-3780.

3. Latest Hydrographic Surveys

H-6642 (1940), H-6643 (1940), H-6644 (1940)

The present survey has been compared in detail with the 1940 hydrography. All drag soundings have been added to the hydrographic surveys and it is probable that the compiler will find it easier to apply the soundings from those surveys rather than struggle through all the ramifications of the drag. One or two minor discrepancies between effective depths and soundings have been ignored because they could very easily be due to chop, swell, or kelp.

4. Comparison with Chart 246 (New Print of May 20, 1941)  
Chart 1207( " " " Sept. 17, 1940)

Drag work on the present survey disproves the following charted features:

- a. Fourteen feet in Lat.  $42^{\circ}18.9'$ , Long.  $70^{\circ}53.3'$  from H-2146 (1892); 18 feet effective depth of drag.
- b. Obstruction reported struck with a depth of 19 feet in Lat.  $42^{\circ}18.9'$ , Long.  $70^{\circ}52.0'$  (Chart Letter 713 of 1938); 21 feet effective depth of drag.
- c. Eighteen feet reported in Lat.  $42^{\circ}20.15'$ , Long.  $70^{\circ}51.9'$  from Chart Letter 518 of 1915; 23 feet effective drag depth.

Similar depths have been found on this survey or on H-6643 (1940) close to the charted features.

5. Compliance with Project Instructions

Satisfactory. The project is to be continued on the west.

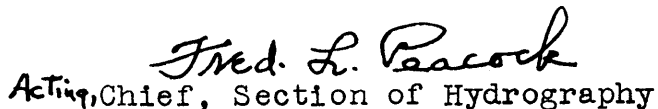
6. Additional Field Work Recommended

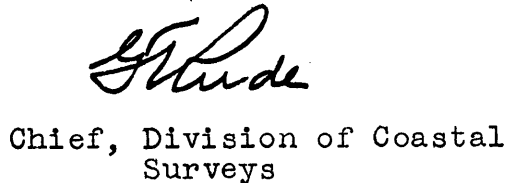
The small \*split between work of the present survey <sup>\*covered by H-7059(1945)WD</sup> and H-3780 W.D. in Lat.  $42^{\circ}22.7'$ , Long.  $70^{\circ}51.7'$  should be covered when the project is resumed. Additional dragging outside the limits of the present survey has been recommended in the review of H-6644 (1940).

Examined and Approved:

  
Chief, Surveys Section

  
Chief, Division of Charts

  
Acting Chief, Section of Hydrography

  
Chief, Division of Coastal Surveys



Applied to Chart Correction 50 March 9, 1943 *A.S.M.*

Partially applied to chit. 246 3/20/43 G.R.  
" " " " 1207 3/20/43 "

Completely applied to Reconst 246 by G.H.S. (Date?) - J.W.

Compared chart 1207 with print of chit. 246 (48- $\frac{1}{2}$ ) for critical changes. Oct '48 J.M.A.

Applied to chart 1106 11/4/44 K. Reynolds.

Applied to chart 1107 5/28/53 J.A.M.

Chart 1207 - Fully applied thru chart #246 Helmer 3/23/60