

6781

WIRE DRAG

6781

WIRE DRAG

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No.	501
Office No.	H6781
LOCALITY	
State	Maine
General locality	Portland Harbor
Locality	Spring Point
1942	
CHIEF OF PARTY	
C. D. Meaney	
LIBRARY & ARCHIVES	
DATE	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6781

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. 501 W/D

REGISTER NO. **H6781 WIRE DRAG**

State MAINE

General locality Portland Harbor

Locality Spring Point

Scale 1/5,000 Date of survey June, 1942

Vessel LYDONIA (MARINDIN & RODGERS)

Chief of Party C.D.Meaney

Surveyed by C.R.Reed

Protracted by A.B.Brownell

Soundings penciled by A.B.Brownell

Soundings in fathoms feet feet

Plane of reference Mean low water

Subdivision of wire dragged areas by A.B.Brownell

Inked by A.B.Brownell

Verified by _____

Instructions dated May 7, 1941; March 11, & June 13, 1942, 1942

Remarks: _____

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET FIELD NO. 501

PORTLAND HARBOR, MAINE

Scale 1:5,000

Project CS-265 1942 LYDONIA Sub-party

LAUNCHES MARINDIN, RODGERS & NO. 72

INSTRUCTIONS:

Instructions for the work executed on this sheet are the original project instructions dated May 7, 1941, supplemental instructions dated March 11, 1942 and additional instructions dated June 13, 1942.

SURVEY METHODS:

Standard dual control wire drag methods were employed using the wire drag launches MARINDIN and RODGERS. Lift tests were made with the floating type of tester which has been standard for several years. These tests were recorded in the rough tender record and were copied into the guide launch record. The lift was entered in the wire drag record to tenths of feet with the effective depth computed to the next shoaler half foot. No allowance was necessary for swell or chop.

In making this survey current was found to be excessive except at slack water and difficulty was encountered in making the drag go aground on the 29 foot spot which was to be dragged. The drag would hang momentarily and then slip off. After the shoal was located a thorough hand lead investigation was made using the current to drift the tender over the shoal.

GROUNDINGS:

The least depth found in the hand lead investigation of the charted 29 foot spot was $30\frac{1}{2}$ feet at position 4b. (Latitude $43^{\circ} 39.15'$ Longitude $70^{\circ} 13.10'$). It is believed that this was the least depth on the ledge as the immediate vicinity was sounded carefully while drifting on ranges for more than half an hour (on B day). An increase in current halted the drift sounding. Work on the obstruction found on A day (see second paragraph following) occupied the afternoon of B day. It was planned to resume drift sounding on the ledge on the following day but upon reaching the working grounds it was found that a large clamshell dredge had begun operations on the spot. It was later learned that this dredge had been in Portland for some time undergoing repairs preparatory to taking up this dredging.

Drags set deeper than $30\frac{1}{2}$ feet passed over the ledge five times without hanging, once as deep as 33.0 feet (effective). Drags hung for a short while and then slipped off in four instances. No drag hung hard and fast and none parted. This seems strange in view of the fact that blasting was supposed to have taken place here. Later in the season when dragging over blasted ledge in the Kennebec River the drag repeatedly hung and parted.

An obstruction at Latitude $43^{\circ} 39.25'$ Longitude $70^{\circ} 13.3'$ was discovered while executing the instructed work. On C day the drag cleared with an effective depth of 23 feet but hung at the shoaler depth of $22\frac{1}{2}$ feet. The position and depths obtained on B day (June 24) were reported to local naval authorities and to the Director of the Coast and Geodetic Survey. On June 27th the Coast Guard placed a buoy near the obstruction. A Navy diver determined the obstruction to be a mine probably dragged in accidentally from nearby mine fields by some ship. The obstruction and buoy were removed during the week of June 29th.

DISCREPANCIES:

A discussion of drags deeper than $30\frac{1}{2}$ feet passing over the ledge without hanging has been taken up under "GROUNDINGS". *not included with D.R.*

Position 18D on the obstruction (mine) is about 90 meters south of the first positions. This is because the mine was apparently dragged to this new position by the wire drag.

The bumping of F buoy at Latitude $43^{\circ} 39.15'$ Longitude $70^{\circ} 13.3'$ probably extends too far to the east. The note that F buoy was clear is believed to be slightly late. *Grounding disregarded. Drag was caught on obstruction to the north.*

The rough tender record for this sheet is included in the rough tender record for sheet Field No. 1001 -(1942) Hussey Sound.

AREA AND DEPTH DIAGRAM:

On the area and depth diagram a small area at the $30\frac{1}{2}$ foot sounding obtained on the ledge does not show any depth. The effective depth is 33 feet here but as this is obviously too deep it has been omitted. (See discussion under "GROUNDINGS") *five 31.0 to 31.5 ft strips cleared this shoal*
not included with report

RECOMMENDATIONS:

Inasmuch as further dredging has taken place it is not recommended that the charted 29 feet be changed until the dredging is completed. Any further surveys to check the dredged depth should include a thorough leadline investigation. This might well be undertaken with a launch equipped with a depth recorder to supplement leadline soundings.

U. S. ENGINEERS METHODS:

It may be interesting to note one of the drag methods used by the U. S. Engineers in the Portland area. Two scows each 25 feet long are secured together end to end. An angle iron is suspended from one side of these scows using chains marked off in feet. The scows are propelled sideways by means of outboard motors and the area to be dragged is covered by the use of ranges established ashore. In order to tell when an obstruction to the drag is hit the chains supporting the bar are held in the hand. The Engineers report very good results using this equipment.

TIDES:

Tides used were from the Portland, Maine, standard tide gage.

STATISTICS:

Statute miles of wire drag	6.3
Area of wire drag (sq. st. mi.)	0.4
Number of soundings recorded	13

Respectfully submitted

Clarence R. Reed

Clarence R. Reed
H. & G. Engineer
U.S.C.&G. Survey

Approved & Forwarded,

C. D. Meaney


C. D. Meaney
Chief of Party

ADDENDUM

WIRE DRAG 501 (Field)

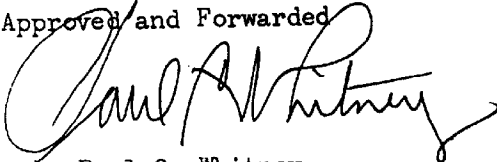
This sheet was partially processed at this office.

Respectfully submitted,


Isadore M. Zeskind
Assoc. Cartographer Engr.

Norfolk Processing Office
December 31, 1942

Approved and Forwarded


Paul C. Whitney
Supervisor Southeastern District

Remarks

Decisions

1	Remarks	Decisions
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GEOGRAPHIC NAMES

Survey No.

H6781
WIRE DRAG

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
Portland Harbor										1
Spring Point										2
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MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT }
~~PHOTOGRAPHIC~~

No. H **H6781**
~~XXXX~~ **WIRE DRAG**

{ received **Jan. 4, 1943**
 registered **Jan. 6, 1943**
 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
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✓ 83	Pa 182		
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90			

RETURN TO

82	R. W. Knox
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H.6781**
WIRE DRAG

Records accompanying survey:

Boat sheets ~~two~~.; sounding vols. (2)....; wire drag vols. (2)....;
bomb vols.; graphic recorder rolls;
special reports, etc. overlay tracing.....
.....

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

Number of positions on sheet
Number of positions checked	..46.
Number of positions revised	...1.
Number of soundings recorded	...13.
Number of soundings revised (refers to depth only)	...0.
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time ...0.
Junctions	Time ...0.
Verification of soundings from graphic record	Time ...0.

Verification by *G.F. Jordan*..... Total time *17 1/2*. Date *1/12/43*.....

Review by *G.F. Jordan*..... Time *8*. Date *1/21/43*.....

see
file

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 8, 1943.

Division-of-Hydrography-and-Topography:

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

Tide Reducers are approved ⁱⁿ wire drag
4 volumes of sounding/records for

HYDROGRAPHIC SHEET 6781

Locality Spring Point, Portland Harbor, Me.

Chief of Party: C. D. Meaney in 1942
Plane of reference is mean low water reading
8.6 ft. on tide staff at Portland
19.0 ft. below B.M. 31

Height of mean high water above plane of reference is 8.9 feet.

Condition of records satisfactory except as noted below:

C. F. Green
Chief, Division of Tides and Currents.

DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6781 W.D.

Field No. 501 W.D.

Maine, Portland Harbor, Spring Point
Surveyed in June 1942; Scale 1:5,000
Instructions dated May 7, 1941;
March 11 and June 13, 1942

Soundings: Hand Lead

Control: Dual Control of Wire
Drag; Three-point Fix on Shore
Signals

Chief of Party - C. D. Meaney
Surveyed by - C. R. Reed
Protracted and inked by - A. B. Brownell
Subdivision of wire dragged areas by - A. B. Brownell
Verified by - G. F. Jordan
Reviewed by - G. F. Jordan
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The signals are from recent triangulation and topographic surveys T-6846 (1941) and T-6853a (1941).

The shoreline has been omitted as it is shown in detail on H-6672 (1941).

2. Junctions with Contemporary Surveys

There are no contemporary wire drag surveys. This is a special investigation of a charted 29-ft. shoal.

3. Comparison with Other Surveys

The 29-ft. sounding at Lat. $43^{\circ}39.15'$; Long. $70^{\circ}13.1'$, charted on 325, 201 and 315, had been carried forward on H-6672 (1941) from H-3677 (1914) W.D. H-6672 (1941) shows least depths of 31 feet on this shoal. The present survey shows a least depth of $30\frac{1}{2}$ feet.

The D. R. refers to the discrepancy in clearing this shoal with deeper depths. Eight wire drag strips with effective depths of 31 to 33 feet covered the shoal without any record of even temporary grounding.

Four other strips with depths of 33 to 34-1/2 feet grounded. These drags were operated in four directions, with and against the current, and included dragging near slack water. Chart letter 341 (1942), submitting advance information on the present survey, states that the ledge was too smooth to hold the bottom wire.

Inasmuch as the D. R. states that dredging operations had started on this shoal before completion of the survey, further consideration of the above discrepancies is unnecessary. The 29-ft. sounding should be retained.

The 31-ft. sounding on H-3677 (1914) W.D., 40 meters south of the above 29-ft. sounding was apparently cleared by 34-1/2 feet on the present survey and falls in 40 feet on H-6672 (1941). Considering the difference in scale of the surveys, 1:20,000 on H-3677 against 1:5,000 on the present survey, and the adequacy of H-6672, it is believed that the 31-ft. sounding was actually nearer the 29 and should be disregarded.

Except for the above, there are no other conflicts with H-3677 (1914) W. D. or H-6672 (1941).

4. Comparison with Chart 325 (latest print of 7-17-42)
- | | | | | |
|-----|---|---|---|----------|
| 201 | " | " | " | 8-10-42) |
| 315 | " | " | " | 6- 3-42 |

The 32-ft. sounding charted on 325 at Lat. 43°39.12'; Long. 70°13.1' originates from advance information on H-3677 (1914) W.D., contained in chart letter 321 (1914). This sounding was superseded by the 31-ft. sounding discussed in the above paragraph.

There are no charted floating aids to navigation within the limits of the survey. The nun buoy was placed on the last day of the survey to mark the temporary obstruction and was subsequently removed.

5. Condition of Survey

- (a) The sounding records and D. R. are satisfactory.
- (b) The smooth plotting was satisfactory, except that the starting bight of the drag disregarded the difference in time of the positions taken by the two launches.

6. Compliance with Instructions for the Project

Satisfactory.

7. Additional Field Work

In accordance with the Recommendations in the Descriptive Report, it is recommended that the 29-ft. shoal in Lat. $43^{\circ}39.15'$; Long. $70^{\circ}13'$ be re-examined with hand lead drift sounding and fathometer.

It is possible that an after dredging survey has been made by the U. S. Engineers, but none has been received in this office to date.

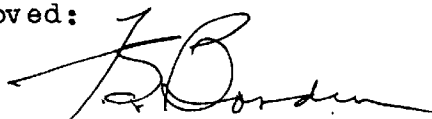
8. Obstruction

The 46-ft. soundings at tender positions 6(a) and 9(b) at Lat. $43^{\circ}39.25'$; Long. $70^{\circ}13.30'$ are noted as wreckage in the tender record. Five drag strips grounded with effective depths from 22-1/2 to 34-1/2 feet. Five drag strips cleared the obstruction with effective depths from 20-1/2 to 27-1/2 feet. The movement of the obstruction may account for the 27-1/2-ft. clearance. As the Descriptive Report notes the removal of the obstruction, it is recommended that the 46-ft. soundings, which fall in 55 feet on H-6672 (1941), be disregarded. The groundings have not been plotted.

Examined and approved:



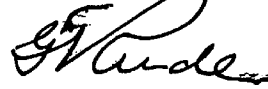
Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of
Coastal Surveys

Examined in connection with the Chart Cor. 315 1/19/43 W.S.M.

Examined in connection with Dsg. 201 2/11/43 No correction. 3/23/43 W.S.M.