

# 6782

## WIRE DRAG

6782  
WIRE DRAG

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No. 1001	Office No. H6782
LOCALITY	
State	Maine
General locality	Casco Bay
Locality	Hussey Sound
1942	
CHIEF OF PARTY	
C. D. Meany	
LIBRARY & ARCHIVES	
DATE	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.

WIRE DRAG  
**H6782**

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. 1001 WD

REGISTER NO. **H6782**  
WIRE DRAG

State MAINE

General locality Casco Bay

Locality Hussey Sound

Scale 1:10,000 Date of survey May, June & August, 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

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, 1942; May 19, 1942; July 15, 1942

Remarks:

DESCRIPTIVE REPORT  
to accompany  
WIRE DRAG SHEET FIELD NO. 1001  
HUSSEY SOUND, MAINE  
Scale 1:10,000

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 and supplemental instructions dated March 11 and May 19, 1942. No dragging was done under supplemental instructions dated July 15, 1942 as the proximity of mined areas made it inadvisable.

SURVEY METHODS:

Standard dual control wire drag methods were employed using the wire drag launches MARINDIN and RODGERS. The extension of the area dragged to 40 feet required that the drag be kept very close to the bottom. Due to this fact some of the buoys "bumped" in a number of instances. Inasmuch as the area had been wire dragged in 1941 to slightly shoaler depths some of these "bumpings" were not further investigated on this survey. No attempt was made to drag to depths shoaler than 40 feet except in the vicinity of Lower Basket Ledge and southwest of Clapboard Island where depths of 35 feet and 20 feet respectively were dragged at the request of naval officials.

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 but were not copied into the smooth tender record. The lift was entered directly in the wire drag record to tenths of feet except on V and W days when it was entered to half feet. Effective depths were entered to the next shoaler half foot. No allowance was necessary for swell or chop as the dragging was done in smooth water.

Due to the fact that the end launch would not run as slow as the guide launch it was necessary for the end launch to be thrown out of gear occasionally on some lines in order to keep both launches abreast. During these times a strain was always maintained on the drag by the guide launch so that the line is continuous.

In a number of instances the drag was pulled up on shoals due to current or to not stopping the launches soon enough. The bottom was soft and gradually sloping and permitted the drag to continue in motion. The line was considered ended when the drag went aground and this accounts for soundings being plotted ahead of the end of the line.

GROUNDINGS:

The 23 foot sounding at Latitude 43° 41.98' Longitude 70° 12.09' was obtained at the request of the navy to verify the 21 foot spot shown on Chart No. 201. The least depth found was 23 feet after a leadline investigation of 65 minutes using one leadline, two leadlines, and a leadline and grapnel. No bottom samples other than soft gray mud could be obtained but the soundings of 23 feet were on something hard. In feeling with the lead the object felt less hard than rock and did not batter the lead like rock. In drift sounding the soundings were sometimes alternately soft and hard giving rise to the conjecture that the object might be a sunken wooden wreck with some of the planks missing. This object was cleared with a maximum drag depth of 21½ feet. The drag hung when set at an effective depth of 23 feet. It should be noted that these effective depths have had a maximum lift applied. If less lift were applied the effective depths would be slightly greater. It is recommended that the charted depth be changed to 23 feet.

*Recommend retaining 23 ft on H-6663 (1941) WD. Drag definitely hung at 23 ft. cleared by 21½ ft. Possible unnatural obstruction.*

Naval officials in Portland were advised that the above obstruction had been dragged to an effective depth of 21½ feet. If an additional report is made to the Navy Department it should be brought out that anchoring on the spot is not advisable. An anchor might be fouled and lost or planks might be loosened and fouled in a propellor provided, of course, the obstruction is a wreck.

Soundings of 39 and 40 feet east of Clapboard Island (positions 4g and 5g) were covered to a depth of 41½ feet on a previous day (E day). The bottom here is soft mud. It is believed these shoal soundings on G day were on a pile of mud caused by a vessel weighing anchor shortly before on the same date.

*← drag bumped H-6663 (1941) WD has 40 ft grounding here. Review 79 5a.*

DISCREPANCIES:

In some cases where one of the end buoys grounded, the drag was pulled around so that the adjacent intermediate buoy grounded in approximately the same spot as the end buoy grounding. When the drag came clear before a position and sounding could be taken at the intermediate buoy the plotting of the buoy "bumping" is inaccurate. An example occurs at position 16H where No. 1 buoy bumped in Latitude 43° 41.3' Longitude 70° 10.4'. If the buoy were plotted on a normal bight it would be in water deeper than the 41 foot drag depth (see 1941 hydrographic Sheet H-6728) and in an area dragged to 42 feet on L day.

*N-41 buoys in 40 ft depths. Grounding omitted.*

No indication of grounding was noticed when the 20 foot rocky sounding (pos. 1u) at Latitude 43° 43.1' Longitude 70° 12.35' was passed over with a 21½ foot drag on R day. The 18½ foot "bumping" at Latitude 43° 42.9' Longitude 70° 12.55' was covered by the same 21½ foot drag on R day when no bumping was noticed. Lift tests and the 23 foot soundings at 11r and 12r where the drag was aground both verify the depth of the drag.

*A7D sheet adjusted to this sounding and H-6728 (1941)*

It should be noted that the rough tender record contains a record of the tender's work on wire drag sheet Field No. 501 as well as the work on this sheet. *registered with H-6781(1942)WD*

AREA AND DEPTH DIAGRAM:

The area and depth diagram was submitted in accordance with supplemental instructions dated May 19, 1942. This diagram has been found to be in error in Latitude  $43^{\circ} 43\frac{1}{2}'$  Longitude  $70^{\circ} 10\frac{1}{2}'$ . Where the 41 foot depth should be bounded on the northwest by the line joining guide launch positions 10E and 11E. The  $40\frac{1}{2}$  foot depth should extend west of end launch position 29L to the bight about 50 meters west thereof. *corrected*

The  $36\frac{1}{2}$  foot sounding at Latitude  $43^{\circ} 43.8'$  Longitude  $70^{\circ} 09.0'$  is shown as having been covered with a 37 foot drag. This has been revised on the smooth sheet and should be changed on the area and depth diagram. *corrected*

The 41 foot "bumping" at position 16H mentioned under discrepancies should be removed from the area and depth diagram and made to agree with the smooth sheet. Another 41 foot bumping immediately adjacent there to should be changed to 42 feet to agree with the smooth sheet. *groundings not plotted, as in comparative hydro. depths*

SPLITS:

The  $33\frac{1}{2}$  foot and 38 foot soundings at Latitude  $43^{\circ} 42.05'$  Longitude  $70^{\circ} 11.15'$  were not covered on this survey but were covered in 1941 to  $30\frac{1}{2}$  feet.

The vacant space between 28, 29 and 30H day and the beginning of the line at 17H (Latitude  $43^{\circ} 41.5'$  Longitude  $70^{\circ} 10.4'$ ) was covered to 45 feet in 1941.

The narrow overlap at Latitude  $43^{\circ} 43.4'$  Longitude  $70^{\circ} 09.7'$  between position 4D and 37P was covered to 36 feet in 1941. *40 meter overlap not marked for insufficiency. area considered as covered.*

Dragging was not possible over the ledge rock area at Latitude  $43^{\circ} 42.2'$  Longitude  $70^{\circ} 09.8'$  because of dredging operations. Soldier Ledge and the ledge at Latitude  $43^{\circ} 42.1'$  Longitude  $70^{\circ} 10.6'$  were also scheduled for removal and were not dragged.

RECOMMENDATIONS:

Dragging in this area was done as close to the bottom as is practical. No further wire drag is recommended. *Review 97*

The relationship between mean low water and extreme low tide is not appreciated by some chart users. Several instances where intelligent persons confused the two terms have been noted by the author of this report. It is recommended that a more conspicuous note be placed on charts showing wire dragged areas calling attention to the fact that allowance must be made for minus tides.

TIDES:

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

STATISTICS:

Statute miles of wire drag	47.3
Area of wire drag (sq. st. mi.)	4.4
Number of soundings	150

Respectfully submitted,

*Clarence R. Reed*

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

Norfolk, Va.  
December 11, 1942

Approved and forwarded,

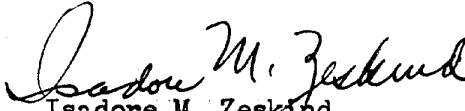
*C. D. Meaney*

C. D. Meaney  
Chief of Party

ADDENDUM  
100/  
WIRE DRAG ~~521~~ (Field)

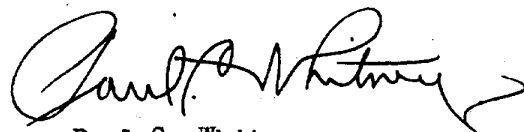
This sheet was partially processed at this office.

Respectfully submitted,

  
Isadore M. Zeskind  
Assoc. Cartographic Engr.

Norfolk Processing Office  
December 31, 1942

Approved and Forwarded

  
Paul C. Whitney  
Supervisor Southeastern District

XAC  
HAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 9, 1943.

Division of Hydrography and Topography:

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

Tide Reducers are approved in  
5 volumes of sounding/records for <sup>and wire drag</sup>

HYDROGRAPHIC SHEET 6782

Locality Hussey Sound, Casco Bay, Maine.

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:



Chief, Division of Tides and Currents.



GEOGRAPHIC NAMES

Survey No.

**H6782** WIRE DRAG

Name on Survey

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

	A	B	C	D	E	F	G	H	K	
<u>Casco Bay</u>										1
<u>Hussey Sound</u>										2
										3
										4
										5
										6
Portland										7
										8
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										27

Names underlined in red corrected  
 by Lo Heckler 3/15/43

Remarks.

Decisions

	Remarks.	Decisions
1	For title	
2	" "	
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6		
7	Location of tide staff	
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6782**  
**WIRE DRAG**

Records accompanying survey:

Boat sheets ~~two~~; sounding vols. (1)..; wire drag vols. (2)..;  
 bomb vols. ....; graphic recorder rolls .....;  
 special reports, etc. ~~2 overlay tracing~~ (Combined <sup>AND sheet H6782</sup> ..... <sup>H6782 + H-6643</sup>)  
 .....

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

Number of positions on sheet	.....
Number of positions checked	..313.
Number of positions revised	...2.
Number of soundings recorded	..150.
Number of soundings revised (refers to depth only)	....9
Number of soundings erroneously spaced	.....
Number of signals erroneously plotted or transferred	.....
Topographic details	Time .....
Junctions	Time .....
Verification of soundings from graphic record	Time .....

Verification by *G. F. Jordan*..... Total time *.66<sup>1</sup>/<sub>2</sub>* Date *1/30/43*...

Review by ..... *G. F. Jordan*..... Time *- 20.* Date *1/30/43*...  
*combined AND sheet - 20*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H **H6782**  
~~No. H~~ **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
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Pg 2		
88			
90			

RETURN TO

82	<b>R.W.Knox</b>
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DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6782 W.D.

Field No. 1001 W.D.

Maine, Casco Bay, Hussey Sound  
Surveyed May - August 1942; Scale 1:10,000  
Instructions dated May, June and August 1942

Soundings: Hand Lead

Control: Three Point Fix on  
Shore Signals

Chief of Party - C. D. Meaney  
Surveyed by - C. R. Reed  
Protracted by - A. B. Brownell  
Subdivision of Wire Dragged Areas by - A. B. Brownell  
Inked 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 previously established triangulation stations, from T-6843a, T-6844, T-6846 and T-6847a.

Only the high water line is shown. Complete topographic and hydrographic detail is shown on the contemporary hydrographic survey 6728 (1941).

2. Junctions with Contemporary Surveys

The present survey is in the same area as H-6663 (1941) W.D., and supplements that survey. The dragged areas are extended and the effective depths increased. There are no disagreements.

3. Comparison with Hydrographic Surveys

(a) H-6728 (1941) developed the area of the present survey very closely. This close development assisted in disposing of nearly all the groundings and bumpings of the drag, most of which occurred in depths comparable to the effective depths of the drag.

- (b) A general discrepancy occurs in the vicinity of Lat.  $43^{\circ}42.8'$ ; Long.  $70^{\circ}11.0'$  which was dragged, with bumping, to 41ft. and 41-1/2ft. where H-6728 shows 40 and 41-ft. soundings. The A & D sheet has been adjusted by showing a 40-ft. area and by changing the limit lines of the adjacent 41.0-ft. and 41.5-ft. areas.
- (c) It is also to be noted that a large number of soundings on the present survey fall in slightly deeper water on H-6728 at Lat.  $43^{\circ}43.4'$ ; Long.  $70^{\circ}10'$ . This is a minor discrepancy and only noted because the soundings on H-6728 are from the portable fathometer. It has been observed that other individual soundings on the present survey are one foot shoaler than on H-6728 and H-6663 (1941) W.D., in 20-ft. to 40-ft. depths.
- (d) No other discrepancies remain plotted. The disposal of certain groundings which conflict with H-6728 is listed below.
- (1) A 35-ft. uncharted grounding from position 3R at Lat.  $43^{\circ}43.77'$ ; Long.  $70^{\circ}10.0'$  fell in 50-ft. depths 100 meters west of the 30-ft. curve. This grounding is considered erroneous and has been removed from the smooth sheet. The F-buoy was recorded as bumping (50-ft. depths) by the guide launch but was not confirmed by the end launch. The guide launch itself was in 35- to 36-ft. depths, and it is believed the N-buoy, not the F-buoy, was bumping.
  - (2) A 41-ft. grounding from position 22J at Lat.  $43^{\circ}42.98'$ ; Long.  $70^{\circ}10.62'$ , charted on 201 from the present unverified survey, falls in 44 feet on H-6728. This grounding is considered erroneous and has been removed from the smooth sheet. The F-buoy was reported as bumping (44-ft. depths) by the guide launch but was not confirmed by the end launch. At the same time the drag was grounded in the 39-ft. area 350 meters southwest of F-buoy. The 41 was cleared by two 41-ft. and one 41-1/2-ft. strips, without bumping.
  - (3) A 44-ft. grounding from position 16P at Lat.  $43^{\circ}42.45'$ ; Long.  $70^{\circ}09.7'$ , charted on 201, from the present unverified survey falls in

58 feet on H-6728. However, there is a 52-ft. shoal sounding 100 meters southwest on that survey. This grounding is considered erroneous and has been removed from the smooth sheet. The grounding is from a remark by the end launch which records the F and No. 1 buoy as tipping. A correction note by the officer in charge considered the remark should have been F and No. 5 buoy. In correlating the clock time of the two launches by a 2-minute correction, the end launch remark corresponds with a guide launch remark of grounding by N and No. 1 buoys. Considering that the N-buoy was aground in 39-ft. depths and that the F-buoy was in 58-ft. depths, with additional note by the end launch that F to No. 2 buoy was in straight line, it is believed the original note by the end launch should have been N and No. 1 buoy. A 40-1/2-ft. strip covered the area in question on N-day.

- (4) A 41-ft. grounding, charted on 201, from position 9N at Lat.  $43^{\circ}41.95'$ ; Long.  $70^{\circ}09.5'$  and simultaneous uncharted groundings at No. 1 and No. 3 buoys, 90 meters and 270 meters northwest, are considered erroneous and have been removed from the smooth sheet. They fall in a closely developed area of 49-ft. depths on H-6728. A definite time is given for the groundings which occur at the recorded end of the drag strip. The F-buoy was aground in 35- to 40-ft. depths, 450 meters northwest. The boat sheet continues the strip, swinging to tender positions 1 to 6N, where the N-No.1 buoys grounded (unrecorded) on the charted 30-ft. shoal. The development on H-6728 is considered adequate to disprove 41-ft. depths. It is assumed from the boat sheet that the recorded time of the groundings was incorrect.
- (5) A 40-ft. grounding from position 31N at Lat.  $43^{\circ}41.9'$ ; Long.  $70^{\circ}09.42'$  charted on 201 from the present unverified survey, falls in 47-ft. depths on H-6728. This grounding is considered erroneous and has been removed from the smooth sheet. This bumping by the F-buoy was recorded by the guide launch but was not confirmed by the end launch which notes F to No. 1 buoy in straight line at this time, which is due to the N-No. 1 buoys being

aground on Mariner Ledge. H-6728 shows no indication of shoaling at the 40-ft. grounding which falls 90 meters outside the 40-ft. depth curve.

4. Comparison with Chart 325 (latest print of 1- 2-43)  
201 ( " " " 10-28-42)

The present survey has been applied to chart 201 before verification. Certain corrections are listed below. Conflicts with other charted soundings will be eliminated when the reviews of contemporary overlapping surveys have been applied to the charts.

Chart 201

- (a) A 40-ft. grounding from position 4D at Lat.  $43^{\circ}43.37'$ ; Long.  $70^{\circ}09.4'$ , charted on 201 from the present unverified survey, falls in 49-ft. depths on H-6728. This grounding at F-buoy was recorded by the guide launch. In correlating the time of the two launches a 2-1/2-minute correction places the grounding in 40-ft. depths. The grounding has been removed from the smooth sheet, and the charted 40 should be disregarded.
- (b) A 21-ft. grounding from position 42S at Lat.  $43^{\circ}41.61'$ ; Long.  $70^{\circ}12.44'$ , charted on 201 from the present unverified survey, falls in 22-ft. depths on H-6728. This is not a definite grounding and has been removed from the smooth sheet. The launches stopped immediately after the "bumping" note, because of motor trouble, and the records say there was rubbish in the drag when it was picked up. The 21 should be disregarded.
- (c) The 18-ft. shoal at Lat.  $43^{\circ}42.3'$ ; Long.  $70^{\circ}09.8'$  and the 36-ft. shoal at Lat.  $43^{\circ}42.15'$ ; Long.  $70^{\circ}10.55'$  have been dredged to 40 feet according to chart letter 660 (1942). Chart 201 has been hand corrected to show 40 feet at the 18-ft. shoal with no drag clearance.

5. Condition of Survey

- (a) The 39-ft. and 40-ft. soundings at Lat.  $43^{\circ}42.9'$ ; Long.  $70^{\circ}10.85'$  are commented on in the D.R. They are from two strips which hung with effective depths of 41 and 41-1/2 feet. Four other strips of 41 ft. and 41-1/2 feet bumped in this area.



The fact that H-6663 (1941) W.D. shows a bumping at 40 feet disproves the contention that the obstruction occurred during the present survey. The strip on E-day did not clear without bumping, as noted in the D. R. It is considered that 38 feet can be safely shown clearing this area, and the A and D sheet has been so adjusted. Considering that this area had been dragged to 40 feet, with 40-ft. grounding, on H-6663 (1941) W.D., it is unfortunate that the present survey did not definitely clear this area with a 38- or 39-ft. strip, instead of running continuous 41- and 41-1/2-ft. strips where H-6728 shows 40- and 41-ft. depths.

- (b) An undesignated dolphin at Lat.  $43^{\circ}42.25'$ ; Long.  $70^{\circ}09.6'$ , charted on 325 and 201 from the present survey, falls in 30-ft. depths. This is from a single fix at position 21'K, with no check angle. A remark at position 28.6K places the dolphin 5 meters from the guide launch and 80 meters northwest of the position given at 21'K. An explanation of the two positions for the dolphin and the reason for its existence in this area would have been desirable.
- Considered to be  
Temporary  
Installation.  
Not found by  
Investigation on  
H-6728(1943)ADNR.  
G.F.J.  
8/23/43  
Disregard.*
- (c) All groundings should have been plotted on the boat sheet and adequately disposed of by the field party where they fell in deeper water. Reference is made to paragraphs 3 and 4 of this review.
- (d) The wire drag records are neat and legible. Proper consideration was not given to correlating the clock time of both launches. No regular comparison of clocks is recorded. A few notes are interspersed in the records regarding discrepancies of 1-1/2 to 18 minutes. The only correction which had been applied to the positions was the 18 minutes. It was found that this correction should have been 16 minutes according to check angles H-F. The recorded time has now been corrected based on the H-F angles.
- (e) Smooth Sheet
- (1) The discrepancy in the time between the launches was not recognized and the check angles H-F disregarded in plotting.

- (2) The beginning of drag strips should have been plotted between corresponding positions of the end buoys so that the whole drag starts at the same time, except where otherwise noted by the officer in charge.
- (3) Soundings and groundings should not have been inked. It is unsatisfactory to erase groundings and extended green circles in a maze of overlapping drag strips.
- (4) The recorded bottom characteristics were not plotted.
- (5) It was not considered expedient to correct all the plotting due to inaccuracies noted in paragraphs (1) and (2). All groundings misplotted because of time discrepancies have been disposed of. Appreciable corrections to depth and tide change curves have been made. Other changes, mostly short connecting lines, do not affect the A and D sheet and have not been made.

(f) The descriptive report is satisfactory.

6. Compliance with Instructions for the Project

Satisfactory.

7. Additional Work

No additional work is recommended.

It might be advisable to obtain a check position and a definition of the dolphin noted in paragraph 5(b).

8. Depth Units of One Half Foot

The fact that a 21-ft. strip cleared a 20-ft. sounding and that 41- and 41-1/2-ft. strips cleared 39-, 40-, and 41-ft. soundings discredits the implied accuracy of the present survey in showing areas dragged in units of one-half foot. The additional tide change curves added both to the smooth sheet and the A and D sheet due to the one-half-foot unit add to the confusion of the plotted material and detract from the simplification of the A & D sheet. It is considered that wire drag surveys are not this accurate where 200 and 300-ft. sections are used, especially in an area of strong and irregular currents.

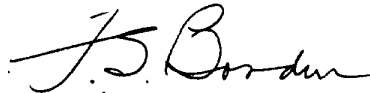
*contained in  
Apr. 2, 1943  
Instructions  
letter of  
EOT*

In addition, the plotting of soundings in one-half-foot units is considered unsatisfactory. The soundings were obtained by leadline in units of whole feet. The plotted one-half-foot unit soundings are due to tide reducers. The plotted soundings erroneously indicate depth measurements in one-half-foot units.

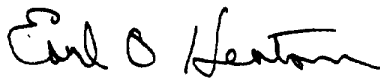
Examined and approved:



Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of  
Coastal Surveys

Applied to Chart Correction 315 (before Review) Jan 20, 1943 W.E.M.  
Applied to Cor. proof cor. 325 (May 3, 1943) W.E.M. 5/5/43.  
Chart 201 - Review read - Nov. 2, 1943 - J.T.W.  
Chart 325 - Re-applied 6-23-71 HR