

6732

6732

Form 504  
Rev. April 1935

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**DESCRIPTIVE REPORT**

~~Photographic~~ } Sheet No. ~~6470~~  
Hydrographic }

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U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

MAY 8 1942

Acc. No. \_\_\_\_\_

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State MAINE

**LOCALITY**

CASCO BAY

---

BROAD SOUND & VICINITY

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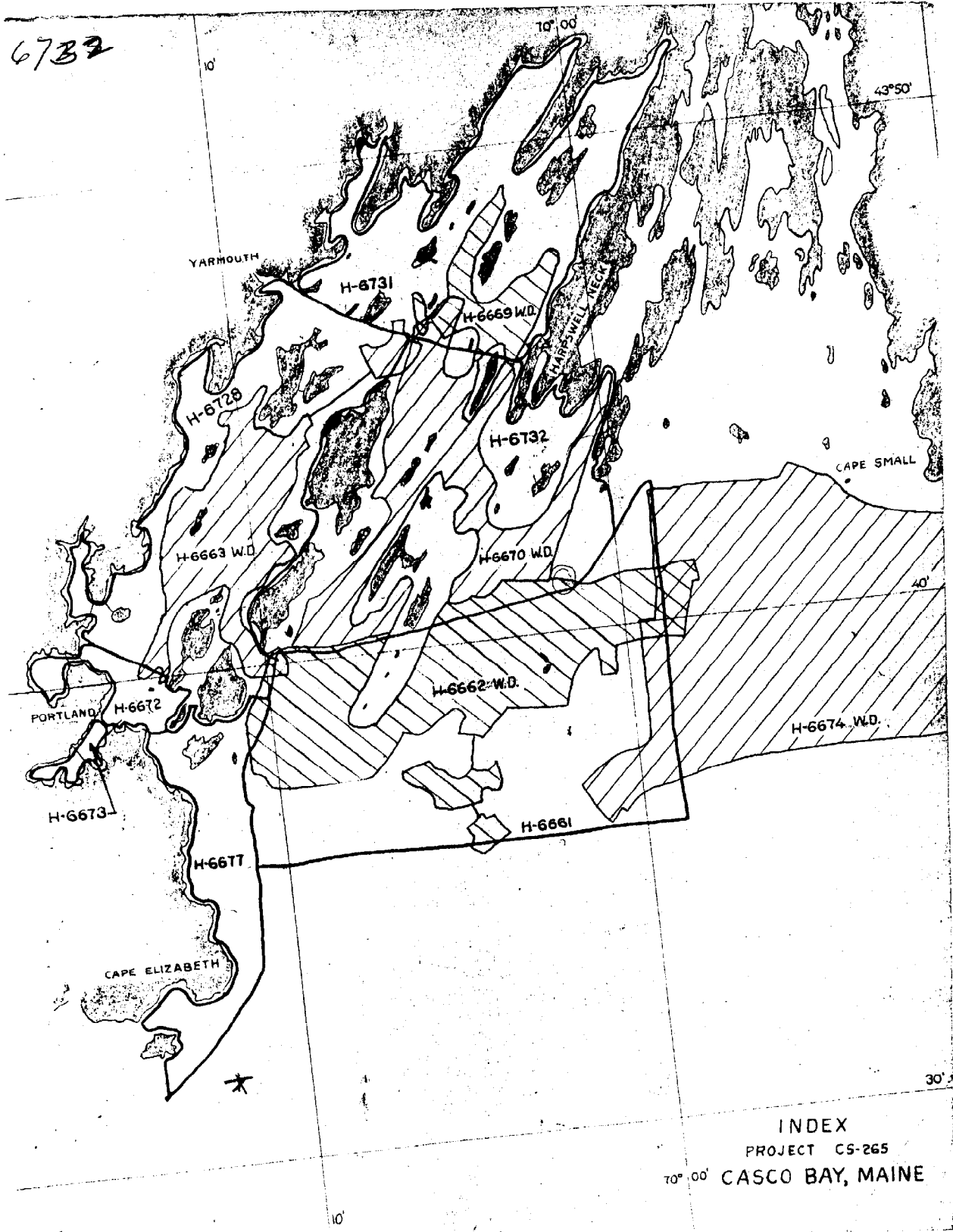
193.41

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**CHIEF OF PARTY**

Fred. L. Peacock

6732



INDEX  
PROJECT CS-265  
CASCO BAY, MAINE

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. H6732

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. 1002

REGISTER NO. ~~1002~~ H6732

State MAINE

General locality CASCO BAY

Locality ~~Meriden Sound, Potts Harbor, Basin Cove, Hussey Sound, Lucke Sound, Broad Sound, S. E. Cas, Harpswell Harbor & Mackerel Cove.~~

Scale 1 - 10,000 Date of survey May 28 - Oct. 16, 1941

Vessel U.S.C. & G. S.S. OCEANOGRAPHER

Chief of Party Fred.L. Peacock,

Surveyed by Ship's Officers,

Protracted by C.H. Crawford - J.T. Burke,

C.H. Crawford, R.F. Carr, C.H. Bishop, M.A.A. Kelton,  
Soundings penciled by H. Bozzo and A. Brownell

Soundings in ~~fathoms~~ feet and 1/2 ft.

Plane of reference M.L.W.

Subdivision of wire dragged areas by Lt. Gossett (1941 Field No. 1002)

Inked by P.H. Andras

Verified by P.H. Andras

Instructions dated May 7, 1941

Remarks: Plotted and soundings penciled at the Norfolk Processing Office under the supervision of Lieut. H.O. Fortin

DESCRIPTIVE REPORT

TO ACCOMPANY

**H6732**

HYDROGRAPHIC SHEET NO. ~~1-6576~~  
(Field H-1002)

INSTRUCTIONS:

This survey was executed under authority of the Director's Instructions for Project No. C.S. 265, dated May 7, 1941.

LOCALITY:

This survey covers approximately the area from latitude  $42^{\circ} 38.5'$  to  $43^{\circ} 47.0'$  and from longitude  $69^{\circ} 59.0'$  to  $70^{\circ} 10.0'$ , and includes the following bodies of water, - Luckse Sound, Broad Sound, Mericoneag Sound, Potts Harbor and Basin Cove.

CONTROL & SIGNALS:

Triangulation control previously established furnished the primary control, while natural objects, banners, flags and tripods established by the 1941 topographic parties furnished additional control.

SURVEY METHODS:

The usual visual control method of three-point fixes was used throughout this survey, - fixes being obtained between one and two minute intervals. The Submarine Signal Co. No. 808-A type Depth Recorder was used to obtain depths, which were recorded on the 15 Q or 15 U fathograms. Soundings were scaled to the nearest half-foot every  $7 \frac{1}{2}$  seconds on the 15 U type fathogram and every 9.4 seconds on the 15 Q type. The depths were of such a nature that only the foot scale on the fathograms was used, except in the area at latitude  $43^{\circ} 41.5'$  and longitude  $70^{\circ} 03.5'$ , where the fathom scale had to be used to record the deepest soundings.

The fish of the 808-A Fathometer was rigged by means of two by four braces and brass tubing to the outer hull of the launch, and set at a depth of two feet below the surface of the water. This depth of 2 feet was used as the initial throughout this survey.

At the beginning of the season, the hydrographic party consisted of an officer in charge who did the plotting, two officers as right and left anglers, an engineer, a coxswain, a recorder and a depth recorder tender whose sole duty was to see that the fathometer ran correctly and to record all the numbers for fixes, make pertinent notes while the survey was under way and to record any irregularities in operation that might occur to the fathometer. Later on in the season, the officer in charge took the right angle and plotted, the rest of the party functioning as above outlined.

Angles were taken close to the "fish" in order to correlate the correct positions for recorded depths.

At the beginning of the survey an attempt was made to record the soundings from the fathometer while the survey was in progress; however, this practice had to be discarded due to the irregularity of the bottom and to the fact that the depth scales were constantly changing. While this method was in progress, the fathometer man could not tend the machine properly and frequently made errors in reading the fathograms. As a result the fathograms had to be scaled after working hours and all soundings placed on the boat sheets by a night crew.

The main system of sounding lines was run in a northeasterly - southwesterly direction, with a maximum spacing of one hundred meters. In close development, and especially around prominent points and islands, lines were spaced <sup>100 to</sup> twenty-five meters or closer. Where graphic control surveys had been made, lines were run close enough inshore to delineate the mean low water line. The mean low water lines were also determined at the head of bays and in rivers.

#### DANGERS:

There are a number of shoals appearing in this area, the least depths of which have been indicated by notes, or, where this was not possible, the depth curves indicate their positions. A number of reefs or ledges also appear in this area.

#### CHANNELS:

No new channels were found during this survey.

#### ANCHORAGES:

Large vessels can enter the area of this survey through Luckse, Broad or Mericoneag Sounds and select anchorages on the leeward side of the many islands found in this area. This area has been wire dragged, but vessels should proceed with caution on account of the existing shoals and reefs.

#### GEOGRAPHIC NAMES:

The geographic names for the area covered by this survey are the same as appear on charts Nos. 201 and 315, or, as given in the descriptive reports for the 1941 graphic control surveys.

#### JUNCTIONS:

Junctions were made on the northwest with H-<sup>6731 (1941)</sup>6669, on the southwest with H-<sup>6731 (1941)</sup>6674 and on the south and east with the 1941 hydrographic survey of Lieut. Commander I.E. Rittenberg's party, H-6661.

Junctions were also made in the vicinity of Jaquish Island and Harpswell Harbor with H-820<sup>(1902)</sup>, H-837<sup>(1917)</sup> and H-839<sup>(1863)</sup>. Comparison of junctions of the above surveys with the present survey could not be made as these surveys were not available at this office. Prior Surveys in Review

DISCREPANCIES:

In general, crossings and adjacent hydrography are in excellent agreement. However, in a few instances the sounding lines appear to be slightly displaced, but due to the irregular bottom and the sharp drops in contour around shoals, the positions of apparently displaced soundings as shown on this survey may exist. It is suggested that the verifier check the spacing of soundings at the beginning of lines near shoreline with regard to speed of boat.

Attention is called to the following apparent discrepancies:

Lat. ~~42~~<sup>3</sup> ~~02.0'~~<sup>4</sup> and Long. 70 07.8; 1 b to 3 b (red).

Soundings between these positions are 3 to 4 ft. shoaler than soundings on cross lines. Investigation of records discloses no errors. These discrepancies may be due to faulty operation of the fathometer. *misplotted. Agreement now satisfactory.*

Lat. 43 41.85' and Long. 70 02.2', development.

There is an apparent discrepancy between adjacent soundings on this development. Line 153 bb - 154 bb (red) if moved westward would be in better agreement with the surrounding hydrography. *unimportant. On edge of slope.*

Wire Drag Soundings. (H-6670 (1941) W.D.)

Lat.	Long.	W .D. Sounding in feet	Survey Sound- ing in feet.
43 46.25	70 04.98	steep slope 26 (not transferred)	40 fathometer line at toe of slope
43 45.20	70 02.50	43	49 not a discrepancy ✓
43 44.45	70 04.37	42 <sup>1</sup> / <sub>2</sub> (grounding deleted)	55 37 to 40 ft shoal ✓
43 44.66	70 03.50	(three) 30 ft soundings	38 undeveloped shoal ✓
43 44.35	70 03.70	42 <sup>1</sup> / <sub>2</sub>	78 42 ✓
<del>43 44.80</del>	<del>70 05.68</del>	<del>46<sup>1</sup>/<sub>2</sub></del>	<del>89 replotted ✓</del>
43 43.20	70 05.41	31	36 30 ✓
43 42.08	70 02.22	38	45 ✓
43 41.97	70 02.04	replotted 35 <sup>1</sup> / <sub>2</sub> (grounding deleted)	64 ✓
43 41.14	70 01.95	" 45 "	65 ✓
43 40.93	70 06.45	" 43 "	50 ✓
43 40.54	70 07.58	42 <sup>1</sup> / <sub>2</sub>	58 noted in Review of H-6670 (1941) W.D. ✓

The positions of the above wire drag soundings either coincided with the survey soundings or were in close proximity to them. These discrepancies do not include the effective depths where the drag hung up and slipped off before hand lead soundings could be taken. Some of these discrepancies may be due to slight displacement of soundings. *disagreements disposed of in verification and review*

MISCELLANEOUS:

All bathograms were re-scaled; however, corrections, alterations or additions were not rechecked at this office. ✓ ✓

Bottom characteristics, averaging about 5 or 6 to the square mile, were taken by means of a hand lead armed with soap, or, in a number of cases, by an improvised snapper type specimen apparatus which was attached to the end of the lead line. <sup>very good coverage</sup> ✓

All soundings were plotted in feet, except on shoals or M.L.W. delineation, where they were plotted in half feet. ✓ ✓

The abstract of temperatures and salinities, and data pertinent to bar checks, salinity, temperature and phase curves are included in a separate report. (Cahier H-6731-32) ✓ ✓

Since the recent topography done in this area was not available at this office during the processing of this survey, it was not possible to check the references to the topography in the sounding records. <sup>accomplished</sup>

In a number of instances a jump in the soundings was noted when the "No Direct Signal" was switched back to the "Initial" of the "A" scale. Allowance for this error was made when it could be detected. ✓

Soundings in parenthesis signify doubtful or interpreted soundings. No correction was made for change of gain, although experiments made by Lieut. Commander Hoskinson proved that a change of a few points in sensitivity caused an appreciable change in the depth of soundings. An attempt was made at the beginning of the work to keep a record of this change of gain, but since no record was kept the latter part of the season, it was decided not to correct for the recorded gain notes, as this would cause a disagreement between the corrected and uncorrected gains. ✓

Respectfully submitted,

*Isadore M. Zeskind*  
Isadore M. Zeskind,  
Associate Cartographic Engr.

May 5, 1942.  
Norfolk Processing Office.

Respectfully forwarded.

*H.C. Warwick*  
H.C. Warwick,  
Lt. Comdr., U.S.C. & G.S.

H6732

ADDENDUM

The foregoing descriptive report was partially written from notes left at this office by Lieut. H.O. Fortin, who supervised the plotting of this sheet, and who was detached from this office before the descriptive report was written.

A portable tide gage was established and maintained on dock on East Shore of Potts Harbor, as instructed. Tides Division reports observations so closely agreed with the standard gage at Portland that the latter was used for tide reductions for this survey.

Reviewer



# H6732

## STATISTICS

SHEET FIELD NO. 1002

DATE	VOL. NO	DAY LETTER	STAT. MI.	NO. SDGS.	POSITIONS	BOAT
MAY						
28	1	a(Red)	0.0	3	4	81
29	1	b	30.6	1750	156	"
JUNE						
2	1 & 2	c	42.3	2153	183	"
3	2	d	12.1	661	61	"
4	2 & 3	e	11.6	570	60	"
5	3	f	34.0	1712	158	"
6	4	g	26.9	1372	153	"
13	4	h	14.3	739	68	"
18	5	j	22.6	1252	143	"
19	5 & 6	k	38.7	1962	192	"
20	6 & 7	l	29.9	1551	155	"
23	7	m	22.3	1462	172	"
25	7 & 8	n	18.4	1325	174	"
26	8 & 9	p	27.0	1719	199	"
27	9	q	30.0	1762	159	"
30	10	r	4.0	312	35	"
JULY						
1	10	s	6.3	417	57	"
2	10 & 11	t	33.5	1645	161	"
3	11	u	34.0	1750	159	"
7	12	v	8.0	477	62	"
8	12	w	1.5	96	10	"
9	12	x	7.0	518	66	"
10	12 & 13	y	31.0	1544	174	"
11	13&14	z	22.5	1347	144	"
15	14	aa	19.0	1169	107	"
16	14 & 15	bb	43.5	1750	187	"
18	15	cc	2.2	129	20	"
22	16	dd	17.4	944	133	"
23	16 & 17	ee	31.2	1766	189	"
24	17	ff	10.2	50	52	"
25	18	gg	17.0	1273	164	"
28	18	hh	26.0	66	66	"
29	18 & 19	jj	37.5	129	129	"
Aug.						
7	19	kk	41.0	2063	199	"
8	20	ll	8.0	32	32	"
11	20	mm	17.2	1297	140	"
7-12	21	nn	19.3	1560	151	"
13	21 & 22	pp	21.9	1426	174	"

H6732

STATISTICS

SHEET FIELD NO. 1002

DATE	VOL. NO.	DAY LETTER	STAT. MI.	NO. SDGS.	POSITIONS	BOAT
AUG.						
14	22 & 23	qq(RED)	18.0	1111	159	81
15	23	rr	18.2	878	126	"
18	23 & 24	ss	19.8	1254	160	"
19	24	tt	6.5	402	53	"
20	24 & 25	uu	16.7	1178	138	"
21	25	vv	19.7	1641	150	"
22	26	ww	10.7	1178	120	"
25	26 & 27	xx	14.8	1003	136	"
26	27	yy	18.6	1481	145	"
27	28	zz zz	26.7	1216	159	"
28	28 & 29	a'	21.6	1594	146	"
29	29 & 30	b'	22.1	1758	175	"
SEPT.						
5	30	c'	3.9	439	46	"
11	30 & 31	d'	28.3	2005	152	"
12	31 & 32	e'	30.2	1879	151	"
13	32	f'	6.5	477	63	"
16	32 & 33	g'	24.2	1908	176	"
17	33	h'	9.6	709	79	"
18	33 & 34	j'	26.5	1531	133	"
19	34 & 35	k'	25.0	1816	188	"
OCT.						
2	35 & 36	l'	21.6	1775	187	"
3	36	m'	14.0	1061	113	"
6	36 & 37	n'	13.2	1250	118	"
7	37	p'	16.0	1291	136	"
10	37	q'	1.4	66	7	"
13	37 & 38	r'	22.1	1527	160	"
14	38	s'	12.7	1303	121	"
15	38 & 39	t'	10.5	912	144	"
16	39	u'	0.0	15	15	"
JUNE						
12	40	a(BLUE)	28.3	1695	155	82
Sept.						
30	40 & 41	b	13.8	1325	160	"
OCT.						
2	41 & 42	c	25.0	1930	240	"
3	42	d	13.5	1207	127	"
6	42 & 43	e	16.8	1271	156	"

H6732

-3-

STATISTICS

SHEET FIELD NO. 1002

DATE	VOL. NO	DAY LETTER	STAT MI.	NO. SDGS.	POSITIONS	BOAT
SEPT.						
17	44	a(PURPLE)	11.2	988	83	75
18	44 & 45	b	18.2	1562	148	"
19	45	c	5.8	515	51	"
30	45	d	10.6	1001	107	"
OCT.						
2	46	e	15.3	1543	157	"
3	46 & 47	f	8.0	736	80	"
6	47	g	8.2	954	120	"
7	48	h	9.4	896	105	"
AUG.						
1	49	a(GREEN)	0.0	46	53	Port Dinghy
SEPT.						
11	49	b	4.9	185	46	"
16	49	c	0.0	5	5	"
OCT.						
2	49	d	1.5	228	30	"
TOTALS	<u>49</u>		<u>1,489.5</u>	<u>87,692</u>	<u>10,127</u>	

Area in SQ. STAT. MI.\* 36.3

	Remarks	Decisions
1		437700
2		436701
3	Spelling pending with USGB	437700
4		"
5		"
6		"
7		"
8		437701
9	Apply pending USGB decision	436701
10		436700
11	Pending with USGB: leave space after Chebeag to add letters "ue" if Board approves that form	437701
12		436701
13		437700
14		"
15		"
16		"
17		"
18		"
19	Apply pending USGB decision	"
20		436701
21		"
22		437700
23		"
24		436701 U.S.G.B.
25		437700
26	For title	436700 U.S.G.B.
27	Location of tide staff	
M 234		

# GEOGRAPHIC NAMES

Survey No. H-6732

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<u>Broad Sound</u>											1
<u>Luckse Sound</u>											2
<u>Mericoneag Sound</u>											3
<u>Basin Cove</u>											4
<u>Potts Harbor</u>											5
<u>Whaleboat Island</u>											6
<u>Haskell Island</u>											7
<u>Hope Island</u>											8
<u>Crotch Island</u>											9
<u>Jewell Island</u>											10
<u>Great Chebeag Island</u>											11
<u>Long Island</u>											12
<u>Harpwell Neck</u>											13
<u>Ash Point Cove</u>											14
<u>Upper Flag Island</u>											15
<u>Bates Island</u>											16
<u>Ministerial Island</u>											17
<u>Stave Island</u>											18
<u>Little Bangs Island</u>											19
<u>Inner Green Island</u>											20
<u>Outer Green Island</u>											21
<u>Stockman Island</u>											22
<u>Little Whaleboat Island</u>											23
<u>Vaill Island</u>											24
<u>Eagle Island</u>											25
<u>Casco Bay</u>											26
<u>Portland</u>											27

Names underlined in red approved  
by L. Heck on 5/14/43

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6732**

Records accompanying survey:

Boat sheets ~~four~~; sounding vols. (49); wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls ~~(75)~~<sup>74</sup> in envelopes  
 special reports, etc. 1. Cahier of "Record of Temperatures and Salinities"  
filed with H-6731-32  
 .....

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

Number of positions on sheet	10,127
Number of positions checked	..960.
Number of positions revised	..70.
Number of soundings recorded	87,692
Number of soundings revised (refers to depth only)	..225.
Number of soundings erroneously spaced	..85.
Number of signals erroneously plotted or transferred	..0.
Topographic details	Time .132.
Junctions	Time ..75.
Verification of soundings from graphic record	Time ..50.

Verification by *P.H. Andreas* ..... Total time *1280* Date *3-29-43*  
*G.F. Jordan* <sub>32</sub>

Review by ..... *G.F. Jordan* ..... Time *1534* Date *5-20-43*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTATIC~~

No. H **H6732**  
~~XXXXX~~

received **May 8, 1942**  
 registered **May 11, 1942**  
 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 283		
88			
90			

RETURN TO

82	R. W. Knox
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L.C.C.

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 14, 1942

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
49 volumes of sounding records for


HYDROGRAPHIC SHEET 6732

Locality Broad Sound and Vicinity, Casco Bay, Maine

Chief of Party: Fred L. Peacock in 1941  
Plane of reference is mean low water reading  
8.6ft. on tide staff at Portland  
19.0ft. 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.



20 4/16  
22 Co  
80  
82 Reat  
821 HME

POST OFFICE ADDRESS: U. S. Coast and Geodetic Survey  
Orrs Island, Maine

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

1943 JUN - 14 - AM 8:35

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

June 11, 1943

To: The Director  
U. S. Coast and Geodetic Survey  
Washington, D. C.

From: Henry J. Healy  
Lieut. Comdr., USCGS  
Orrs Island, Maine

Subject: Investigation of rock awash (H-6732)

In accordance with request from Lieut. Comdr. L. P. Raynor, Commanding Officer of the Ship LYDONIA, an investigation was made for the rock awash shown on T-6732, Latitude 43° 45.10' and Longitude 69° 59.55'.

On Friday June 4, 1943, the vicinity of this questionable rock awash was completely covered using an 808 Fathometer installed in a 25 ft. skiff. The area was completely covered and no indication of this rock could be found. It is recommended that this rock awash be deleted from the records. The Hydrography proving the non-existence of this rock will be contained in the work on Field Sheet No. 7, being completed this year.

A tracing of the Hydrography accomplished is attached to this report.

*Henry J. Healy*  
Henry J. Healy  
Lieut. Comdr., USCGS  
Chief of Party

HJH:KFJ

Copy to:  
Commanding Officer of Ship LYDONIA

*Mr. MacEwen and Mr. Walker were told about this 6/15/43*

*development shown  
on H-6809 (1442-1443)*



70-001  
43° 46' 11"

49° 29'

H-6809  
TRACED FROM BOAT SHEET No. 7  
Soundings reduced for predicted tides only.

41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1  
50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

43° 45'

+

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY }  
 DESCRIPTIVE REPORT } No. H **H6732**  
 PHOTOSTAT OF } No. T Additional work

{ received July 27, 1943  
 { registered July 27, 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.

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22			
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40			
62			
63			
82			
✓ 83	129 2	✓ 101.	
88			
90			

RETURN TO

82	R. W. Knox
----	------------

✓ R. W. Knox

DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6732  
Field No. 1002

Maine, Casco Bay, Broad Sound and Vicinity  
Surveyed May to October 1941; Scale 1:10,000  
Instructions dated May 7, 1941

Soundings:

808A Fathometer  
Hand Lead

Control:

Three-point Fix on Shore Signals

Chief of Party - Fred L. Peacock  
Surveyed by - Ship's Officers  
Protracted by - Norfolk Office  
Soundings plotted by - Norfolk Office  
Verified and inked by - P. H. Andros  
Reviewed by - G. F. Jordan  
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The signals are from previously established triangulation stations and from the following graphic control surveys:

T-6845b	T-6847a	T-6849a
T-6846	T-6848a	T-6851

The shoreline is from planimetric drawings

T-5958	T-5960	T-5963
T-5959	T-5962	

The ledge detail on these drawings has been adjusted so as to be in agreement with the low water features of the present survey.

2. Sounding Line Crossings

Excellent.

3. Depth Curves

General depth curves and curves delineating the important shoals are excellent.

4. Junctions with Contemporary Surveys

The junctions with H-6731 (1941) on the north, H-6728 (1941) on the west and H-6661 (1941) on the south and southeast are excellent. Surveys on the east have not been received in the office.

5. Comparison with Prior Surveys

The original and only prior surveys were accomplished 80 years ago and were supplemented by small developments and investigations in 1902 and 1903. The general agreement in depths is very good. The agreement in the positions of numerous detached ledges is also very good. The differences in the delineation and extent of the ledges is considered to be due to closer development and better tidal reductions on the present survey.

a. T-757 (1858) 1:10,000

- (1) The prior islet charted on 201 at Lat.  $43^{\circ}43.23'$ , Long.  $70^{\circ}04.85'$  should be disregarded, as the present surveys show the ledge to be awash at MHW.
- (2) The prior islet charted on 201 at Lat.  $43^{\circ}43.5'$ , Long.  $70^{\circ}02.1'$  should be disregarded, as T-5960 shows gravel awash at MHW.

b. H-664 (1858) 1:40,000

A slight overlap is made with this prior survey on the south.

c. H-726 (1859) 1:20,000

- (1) The small development of the uncharted 7-ft. shoal, made in 1879, plotted on the prior survey at Lat.  $43^{\circ}39.25'$ , Long.  $70^{\circ}07.20'$  should be disregarded. The 7-ft. depth falls in 50 feet, both on the prior and present surveys. As the present survey shows an 8-ft. shoal 200 meters southwest, it is considered the control for the 1879 development was erroneous.
- (2) The uncharted 15-ft. prior sounding, falling in 60-ft. depths at Lat.  $43^{\circ}40.5'$ ; Long.  $70^{\circ}06.4'$ , should be disregarded. The present survey discredits any such depth. As the position of the single shoal sounding is not alterable into comparable depths, the error is considered due to the leadsman calling the unreduced 4-fm. sounding for 9-fm., both having the same leadline marking.

- (3) The 1-ft. prior sounding, charted as a sunken rock on 201 at Lat.  $43^{\circ}39.58'$ , Long.  $70^{\circ}06.68'$ , should be disregarded. This shoal sounding on line is considered to have actually been on the long narrow ledge on the present survey. This is substantiated by the following soundings on the prior line, which show 18-ft. depths falling on the present low water ledge.

d. H-754 (1862-1902) 1:20,000

- (1) The uncharted 4-3/4-fm. prior sounding at Lat.  $43^{\circ}45.65'$ , Long.  $70^{\circ}05.55'$ , falling in 45-ft. depths, should be disregarded. This sounding falls on a line considered to be controlled by an erroneous position too far from shore. Other soundings on the same line are shoaler than adjacent prior soundings.
- (2) It is recommended that the 58-ft. prior sounding charted on 201 at Lat.  $43^{\circ}45.22'$ , Long.  $70^{\circ}04.55'$  be disregarded. It is considered that the undeveloped 63-ft. shoal 80 meters west on the present survey is adequate for charting.
- (3) The sunken rock charted on 201 as a rock awash at Lat.  $43^{\circ}45.78'$ , Long.  $70^{\circ}04.00'$  should be disregarded. The rock could not be verified in the records. Three prior lines developing this area made references to the rocks east and southwest, which are shown on the prior and present surveys. It is believed the rock was erroneously plotted from one of these reference notes. The position falls in 14-ft. depths on both prior and present surveys.
- (4) The uncharted 4-ft. sounding, rocky, previously charted on 201, has been carried forward at Lat.  $43^{\circ}44.48'$ ; Long.  $70^{\circ}05.38'$  off the south end of Goose Nest Ledge. This sounding supplants a 10-ft. sounding on the undeveloped 8-ft. shoal on the present survey.
- (5) The 57-ft. sounding charted on 201 at Lat.  $43^{\circ}45.0'$ , Long.  $70^{\circ}04.6'$ , west of Whaleboat Ledge, should be disregarded. The position of this sounding falls in a 90-ft. hole on the present survey. It is considered the sounding actually fell 150 meters south in comparable depths adjacent to the present 44-ft. shoal. The present survey is considered adequate.

- (6) It is recommended that the uncharted 7-3/4-fm. (47 ft.) prior sounding, falling in 58-ft. depths at Lat. 43°43.95', Long. 70°04.54', be disregarded. As neither H-2655 (1903) nor the present survey show comparable depths, it is considered this unreduced 8-fm. sounding was in error.
- (7) The uncharted 15-ft. prior sounding at Lat. 43°43.13', Long. 70°04.17' is considered to be an error in recording and should be disregarded. This sounding falls in a closely developed area of 40-ft. depths on the present survey. It is believed that this unreduced 3-fm. sounding on line, after 9fm. and preceding 7fm., was actually only part of the value of the sounding, the fathom unit not being heard by the recorder and the 3-ft. being recorded as the 3-fm.
- (8) The 4-1/2-ft. prior sounding charted on 3201 at Lat. 43°42.4', Long. 70°07.87' has been carried forward. The present survey shows numerous closely spaced development lines, in addition to a detached position on this rock, with repeated least depths of 11 and 12 feet. It seems improbable that shoaler prior depths were obtained; but the prior survey also shows soundings of 5-1/2 and 9 feet, which now can be disproved only by the use of wire drag. *Disregard 4 1/2, 5 1/2 9 ft. This survey and H-6732 (1943) Ad. Wk. show 11 ft as least depth G.F.J. 9/6/43*
- (9) The uncharted 16-ft. prior sounding at Lat. 43°42.8', Long. 70°06.3' should be disregarded. This sounding, falling in 40-ft. depths on a steep slope, is on a line considered to be too far offshore. Comparable depths on the present survey are 50 meters inshore.
- (10) The uncharted 5-ft. prior sounding at Lat. 43°42.1', Long. 70°05.5' has been carried forward. This sounding, falling in 12-ft. depths on the present survey, is substantiated by a similar sounding and reference to a kelp patch on the prior survey. Investigation of this shoal was started on the present survey but actually centered on the previously uncharted shoal 200 meters north. *5 ft superseded by 3 ft on H-6732 (1943) Ad. Wk. G.F.J. 9/6/43*

- (11) The uncharted 3-ft. prior sounding at Lat.  $43^{\circ}42.25'$ , Long.  $70^{\circ}05.45'$  should be disregarded. This single shoal sounding on line is considered to be superseded by the exceedingly well developed 6-ft. shoal on the present survey.
- (12) The uncharted 9-3/4-fm. prior sounding at Lat.  $43^{\circ}41.45'$ , Long.  $70^{\circ}07.2'$  should be disregarded. This unreduced 11-fm. sounding, falling on a slope in 80 to 120 ft. depths, is considered to be a leadsman's error in reading 11fm. for 16fm., both having the same leadline marking.
- (13) The uncharted 5-3/4-fm. prior sounding at Lat.  $43^{\circ}40.66'$ , Long.  $70^{\circ}07.1'$  should be disregarded. Falling in 60-ft. depths, this unreduced 7-fm. sounding is considered a recorder's error in mistaking 7fm. for 11fm. The position of this sounding was cleared by an effective depth of 43 feet on H-6670 (1941) W.D.
- (14) The 37-ft. prior sounding charted on 201 at Lat.  $43^{\circ}44.36'$ , Long.  $70^{\circ}04.4'$  has been carried forward. A wire drag strip with 42-1/2-foot effective depths on H-6670 (1941) W.D. was bumping in this area. Although the drag did not stop, it is considered advisable to retain the 37 in this undeveloped shoal area when the present survey shows 40 feet. The plotting of the end section of the drag has been adjusted.

e. H-820 (1862-1902) 1:20,000

- (1) The uncharted 9-3/4-fm. prior sounding at Lat.  $43^{\circ}43.8'$ , Long.  $70^{\circ}00.8'$  should be disregarded. This unreduced 10-fm. sounding on a line of 11-fm. soundings falls on smooth bottom of 62-ft. depths. A limited development on the present survey shows no shoaling in this area. The sounding is considered relatively unimportant.
- (2) It is recommended that the ledge on the prior survey at Lat.  $43^{\circ}43.78'$ , Long.  $70^{\circ}01.72'$ , charted as a sunken rock on 201, be disregarded. The present survey shows least depths of 3 feet. The present sounding line 54 to 55a (purple) crossed over this feature at 1-ft. tide. The development



is considered adequate to disprove any low water feature.

- (3) An uncharted 2-ft. prior sounding, previously charted on 201, has been carried forward on the present 12-ft. shoal at Lat.  $43^{\circ}43.53'$ , Long.  $70^{\circ}01.84'$ , 50 meters SSW of its plotted position. The prior position of this sounding is considered disproved as it falls in a natural channel of 15 feet on the present survey. The prior sounding, substantiated by a 3-ft. sounding on the same prior survey, is considered to have actually fallen on the present undeveloped 12-ft. shoal.
- (4) The uncharted 6- and 13-ft. prior soundings at Lat.  $43^{\circ}43.04'$ , Long.  $70^{\circ}02.35'$  have been carried forward. The fathogram on the present survey, positions 86 to 87d (purple) indicates shoaler depths, possibly side reflections at and northeast of the 21-ft. shoal sounding. The same reflections occur near position 87d abeam the rock awash 150 meters northeast. It is believed the prior 6 and 13, from different lines, are actually closer to each other.
- (5) The 10-ft. prior sounding charted on 201 at Lat.  $43^{\circ}42.79'$ , Long.  $70^{\circ}00.77'$  has been carried forward. This sounding, falling on a 20-ft. shoal in 40-ft. depths and supplanting a 23-ft. sounding on the present survey, was not investigated. A rock awash is 100 meters SSW.
- (6) An uncharted 19-ft. prior sounding has been carried forward at Lat.  $43^{\circ}42.93'$ , Long.  $70^{\circ}00.34'$ . This unreduced 3-fm. 1-ft. sounding, preceded by 7-fm. 0-ft. and followed by 6-fm. 3-ft. is accompanied by the notation "hrd." Neither adjacent regular lines on the present survey indicate shoaling in the 40-ft. depths, making the 19 appear erroneous. However, there is no feasible explanation of how this sounding could be in error.
- (7) The two uncharted 3-1/4-fm. prior soundings at Lat.  $43^{\circ}42.44'$ , Long.  $70^{\circ}00.3'$  should be disregarded. These soundings, falling in 60 feet on the present survey, are incorrectly spaced on the sheet and actually fall within 50 meters of comparable depths on the present survey.

- (8) The two uncharted 9-1/2-fm. prior soundings at Lat. 43°42.3', Long. 70°01.3' should be disregarded. These soundings falling in 115-ft. depths on the present survey were not plotted according to the recorded spacings and actually fall 250 meters east, near comparable depths.
- a
- (9) Two 45-ft. and 51-ft. uncharted prior soundings at Lat. 43°42.5', Long. 70°02.5' should be disregarded. These soundings falling in 100-ft. depths were controlled by an erroneously plotted position, actually falling adjacent to Whale Rock.
- (10) The sunken rock, charted on 201 at Lat. 43°41.47', Long. 70°05.58, has been carried forward to indicate the southern end of a long narrow ledge shown on the prior survey but not developed on the present survey. The rock awash 200 meters northeast corresponds to the northern end of the prior ledge.

f. H-839 (1863) 1:10,000

It is recommended that the uncharted 12-ft. prior sounding at Lat. 43°45.65', Long. 70°00.3' be disregarded. This unreduced 2-fm. 2-ft. sounding, soft bottom, after 2-fm. 5-ft. and preceding 3-fm. 2-ft., is believed to have been 3-fm. 2-ft. A crossline on the prior survey and the present survey show unbroken bottom in this area.

g. H-2655 (1903) 1:10,000

The 27-ft. prior sounding charted on 201 at Lat. 43°43.2', Long. 70°05.4' has been carried forward. The present close development shows a least depth of 30 feet, but the prior 27 is a result of close hand lead investigation. The 27-1/2-ft. clearance by H-6670 (1941) W.D. is not considered as disproving the prior 27 and has been changed to 27-ft. clearance to make agreement.

- h. Other disagreements have been equally considered but have not been discussed on these pages as the discrepancies are apparent on the prior surveys. In these cases a line of soundings or several soundings on line disagree with crosslines or adjacent lines. This is particularly noticeable in the deeper areas where difficulty was apparently experienced in obtaining correct depths with lead line.

At the request of the Nautical Chart Branch a preliminary review was made prior to the compilation of the recent charts from the present unverified survey. Many of the prior shoal soundings, noted as uncharted on the latest prints, were not charted as a result of this preliminary review.

In addition to the above mentioned nine soundings and rock, fourteen other prior soundings have been carried forward in red ink, with identifying survey number.

6. Comparison with Wire Drag Surveys

H-6670 (1941) W.D. covers the area of the present survey, with its junctional surveys H-6669 (1941) W.D. on the north, H-6663 (1941) W.D. on the west and H-6661 (1941) W.D. on the south. The agreement is satisfactory with the exception of three groundings discussed in the review of H-6670.

7. Comparison with Chart 3201 (New chart of 2- 6-43)  
201 (Drawing of 2-11-43)

At the present writing the latest issue of 201 is being held for printing so the print of October 28, 1942, with the corrections from the drawing dated February 11, 1943, was used in the comparison. As the above charts were compiled from the present unverified surveys, before review, it is considered unnecessary to include in this review the numerous corrections and revisions requisite as a result of completing the smooth sheet. These corrections, including the most important ones noted below, have been shown on copies of charts 3201 and 201 which have been filed with the Nautical Charts Branch.

a. Hydrography

- (1) The 10-ft. sounding charted at Lat.  $43^{\circ}43.25'$ , Long.  $70^{\circ}06.4'$  should be corrected to 13 ft. The original scaling of this sounding on the fathogram had been corrected twice because of doubtful interpretation of the depth of kelp. Numerous wire drag strips were later run on H-6670 to cut the kelp off this ledge. Two wire drag strips definitely hung at 16 feet and a 13-ft. strip cleared. A leadline sounding of 13-1/2 feet was obtained.

- (2) The islet and rock awash charted at Lat. 43°42.5', Long. 70°06.7' should be superseded by the ledge and rock awash at H.W. transferred to the present survey from T-5960. The charted islet is from T-755 (1855) and the charted rock awash is undoubtedly from the present unverified survey.
- (3) The 1-1/2-ft. sounding charted at <sup>Lat.</sup> 43°42.2', Long. 70°05.42' falls on a 12-ft. sounding in a congested area on the present survey. It is believed that the penciled 12 may have been read 1-1/2 before verification and inking. The 6-ft. shoal at this location is also discussed in par. 5d(11).
- (4) The western rock awash charted at Lat. 43°45.8', Long. 70°03.85' has been charted 40 meters west of its position on H-754. Prior and present surveys agree on a single rock at the easterly location.

b. Controlling Depths

No dredged channels are charted within the area of this survey.

c. Aids to Navigation

*Mr Passmore decided not to make changes recommended because of lapse of time since Oct. 1941 - JTW. 6/9/43*

- (1) Hope Island nun buoy "2" is charted 130 meters northwest of its position on the present survey at Lat. 43°41.96', Long. 70°07.42'. Both positions fall within the 30-ft. curve. A more satisfactory position would be in 45-ft. depths, as given in the Light List.
- (2) Black spar buoy "3" at Lat. 43°42.87', Long. 70°02.46' was located 100 meters north of its more satisfactorily charted position.
- (3) Johns Rock nun buoy "4" is considered to be charted in an erroneous position, in 20 to 25-ft. depths. The position on the present survey at Lat. 43°40.63', Long. 70°07.40', 140 meters south, corresponds to the 39-ft. depth given in the Light List.

- (4) Thrumcap Ledge black spar buoy "7" is more satisfactorily placed on the present survey at Lat. 43°44.20', Long. 70°01.84', 100 meters northeast of its charted position.
- (5) The black can buoy No. 7 at Lat. 43°42.55', Long. 70°08.07' has been discontinued according to H. O. Notice to Mariners No. 25, 1942.
- (6) Recommendations

It is recommended that Uncle Jacks Ledge black spar buoy "1", charted at Lat. 43°45.3', Long. 70°05.85' be moved 100 meters east into 30 feet to mark the new undeveloped 13-ft. shoal. The Light List places this buoy in 15 feet.

8. Condition of Survey

This is a very satisfactory survey. The area has been exceedingly well developed. The attention to detail was excellent, including the sounding records, descriptive report and field plotting. However, it is to be noted that although the records of the prior surveys, the fathograms on the present survey and the descriptive report of H-6670 (1941) W.D. refer to the existence of kelp growth near shore ledges and on shoals, there is insufficient information for plotting this minor detail.

It would have been desirable to have divided the area of the present survey into two separate surveys, which would have expedited the plotting, verification and charting. Excessive and more severe handling of the smooth sheet would also have been avoided. This survey sheet is being reproduced by photolithography, in two sheets, to insure preservation of the hydrographic detail.

9. Compliance with Instructions

Satisfactory.

10. Additional Field Work Recommended

	Lat. 43°	Long. 70°		H-6732 (1943) Ad. Wk. 9/6/43- G.F.d.
(a)	42.7'	06.9'	least depth on 10-ft. shoal in buoyed passage	12ft least depth 10ft on kelp.
(b)	42.5'	07.2'	develop 7- and 12-ft. shoals	7ft on H-754 (1941) superseded by 7ft (1943) 11ft obtained on 12ft shoal.

Lat. 43° Long. 70°


- (c) 42.4' 07.86' further investigation with <sup>Disregard 4 ft.</sup> wire drag on rock noted in <sup>" ft. least depth</sup> par. 5d(8)
- (d) 42.1' 05.1' development of the saddle pass between Bates and Crotch Islands, including prior 11-ft. sounding <sup>prior 11 ft (H-754) superseded by two 12 ft sdgs.</sup>
- (e) 45.6' 00.0' 1-1/2 to 17-ft. prior shoal soundings <sup>superseded by similar depths on H-6609, 1943 work.</sup>
- (f) 44.4' 04.85' develop 25-ft. prior sounding <sup>Disregard 25 ft on H-754 (1861)</sup>
- (g) 43.68' 01.37' additional buoyed channel lines <sup>accomplished</sup>
- (h) 41.8' 04.7' develop 13-ft. shoal
- (i) The development of the 13-ft. shoal at Lat. 43°45.3', Long. 70°05.67' would have been desirable.

This additional work, with the exception of par. (i), is authorized in a letter of instruction, dated April 30, 1942. The irregular shoal area centered at Lat. 43°41.5', Long. 70°00.6' is included in the proposed wire drag surveys for the 1943 season.

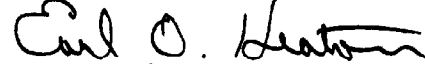
11. Superseded Surveys


H-664 (1857-58) in part	H- 820 (1862-1902) in part
H-726 (1859) " "	H- 839 (1863) " "
H-754 (1861-1902) " "	H-2655 (1903)

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of Coastal Surveys

Applied to new chart comp. 201 May 16, 1942. HEM.

Applied to chart 3201 after review June 9, 1943 - JFW  
" " " 201 " " Nov 1, 1943 - JFW

CHT 325 (Extension of Limits) - Applied 1-15-68 GRT

6732

Additional work

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC

Field No. 6732 ..... Office No. H6732

LOCALITY

State ..... Maine

General locality ..... Coast of Maine

Locality ..... Casco Bay

194 3

CHIEF OF PARTY

L. P. Raynor, Lieut. Comdr., C&GS

LIBRARY & ARCHIVES

DATE .....

6732  
ADDITIONAL WORK



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 6732  
Additional work

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. ----- Additional work

REGISTER NO. 6732 H6732

State ----- Maine -----

General locality ----- Coast of Maine -----

Locality ----- Casco Bay -----

Scale 1 : 10,000 Date of survey ----- July -----, 19 43

Vessel ----- U.S.C. & G.S.S. LYDONIA -----

Chief of Party ----- L. P. Raynor -----

Surveyed by ----- William F. Deane -----

Protracted by ----- R. J. Christman -----

Soundings penciled by ----- " " -----

Soundings in ~~sections~~ feet -----

Plane of reference ----- M. L. W. -----

Subdivision of wire dragged areas by -----

Inked by ----- Leroy King Sept 3, 1943 -----

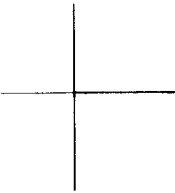
Verified by ----- " " " " -----

Instructions dated ----- Director's letter April 30 -----, 19 43

Remarks: ----- This is additional work only. -----

△ CON

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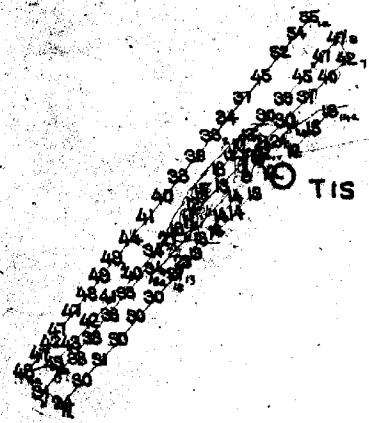
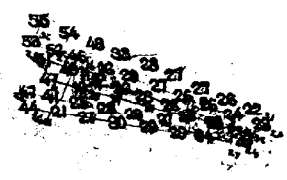
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JIL ⊙

43° 43'  
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BID



*7.5 least sq. fit*



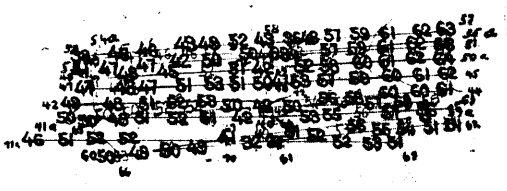
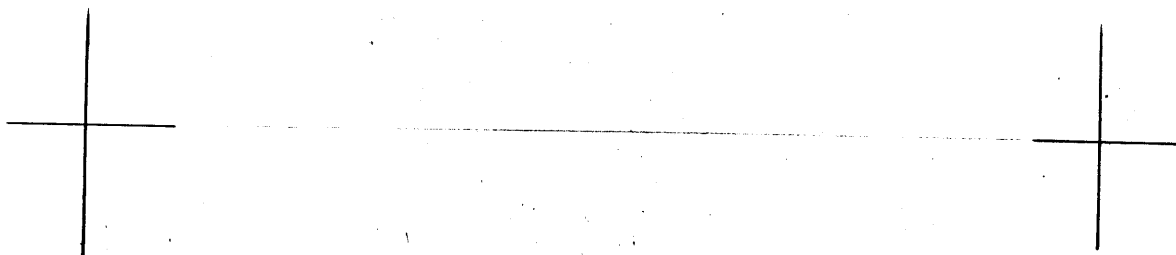
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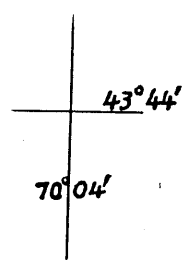
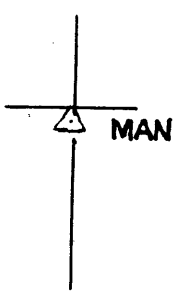
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H-6732 ADD'L WK. 1943



Boat  Boat  
ON ORIGINAL DOCUMENT

OLD 



H-6732 H-6732 Add 1943  
ADD L WK. 1943

MUG



COW



CROTCH, 1933



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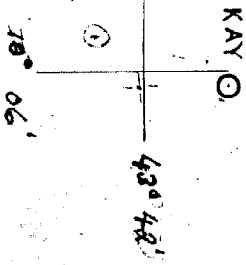
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H-6732 ADD'L WK. 1943

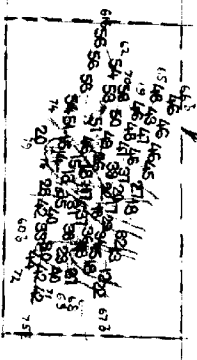
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53<sup>th</sup> 109 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



CROTCH



Supervised by Add'l WK on 8<sup>th</sup> day Sept 20, 1943

△ COW

H-6732 ADD'L WK. 1943

H6732  
Additional work

DESCRIPTIVE REPORT

to accompany

Hydrographic Sheet No. 6732 (Reg.)

Additional Work

Casco Bay, Maine

Project CS-265 1943

Ship LYDONIA

L. P. Raynor, Commanding

AUTHORITY:

This additional work was executed in compliance with the Director's Letter, dated April 30, 1943. Reference 22/MEK, 1995 LY 4.

SCOPE:

This work consists of additional surveys in several areas on Sheet No. 6732. For reasons of clarity, some of the lines were plotted on Sheet No. 6670, the wire drag sheet for the same area.

GENERAL:

At Lat. 43° 42.4', Long. 70° 07.86' an investigation was made to find depths of 4½, 5½, and 9 feet shown on previous surveys. It was not possible to wire drag this area because of the presence of a Navy anchorage barrier. This party found a depth of 11 feet, the same as that obtained in 1941. A system of lines was run on ranges to develop the area and then a marker buoy was planted on the shoalest spot to facilitate drift soundings. The launch was allowed to drift over the area for about 20 minutes while handlead and fathometer soundings were taken. It was possible to see objects to a depth of 9 feet but nothing was seen of the 4½ foot spot which should have been visible since there was only 2 feet of tide. No kelp was present.

11 ft accepted as least depth

At Lat. 43° 42.5', Long. 70° 07.2' a 7 foot sounding on Sheet H-754 was not found but a sounding of 9 feet was found on or near the 10 foot sounding of the 1941 survey. A sounding of 12 feet was obtained on the same spot as a 12 foot sounding of the 1941 survey. A regular development system of sounding lines was run on ranges over the area then a marker buoy was planted for reference in drift soundings. Drift soundings with handlead and fathometer were taken for about 20 minutes. No kelp was present.

Present sounding reduces to 7 ft. confirming depth

H6732  
Additional work

GENERAL: (Cont'd.)

At Lat. 43° 42.7', Long. 70° 06.9', in order to develop a previous sounding of 10 feet, lines of development were run at an angle to the regular system of lines. The desired shoal depths were not obtained on these lines so the fathometer was used in conjunction with the leadline on drift soundings. A marker buoy was used for reference. Approximately 40 minutes were spent in drifting about the buoy. A least depth of 12 feet was obtained on the previously located 10 foot sounding. It is believed that the 10 foot spot exists but this party was unable to locate it. The bottom is very irregular in this vicinity.

12 ft accepted as least depth.  
10 ft considered on top of kelp.

At Lat. 43° 44.4', Long. 70° 04.85', development lines were run on ranges at an angle to the regular system of lines. The charted 25 foot spot was not found on this examination so drift soundings with handlead were taken in conjunction with the fathometer in the vicinity of the charted shoal area. The least depth obtainable at the charted location of the 25 foot spot was 42 feet.

Disregard prior 25 soundings on H-754(166)

The pass between Bates and Crotch Islands was developed and an investigation was made of an 11 foot spot and a 5 foot spot found on a previous survey. A sounding of 4 feet was obtained on the regular system of lines about 100 meters southwest of the charted 5 foot spot. Near the 11 foot spot was found a depth of 13 feet. Drift soundings were taken over both areas but shoaler depths than those obtained by the fathometer were not found.

At Lat. 43° 41.8', Long. 70° 04.7' a charted sounding of 13 feet was developed. This party ran a regular system of development lines and then planted a marker buoy for reference. The least depth obtained by drift soundings was 13 feet although approximately 30 minutes was spent over the area. It is recommended that the 13 foot sounding be retained because it is quite possible that, due to the irregular bottom, this sounding exists.

This work does not agree with original hydrography. Further investigation on Sept 20, 1943 supersedes this additional work on this shoal. 13 ft least depth.

Additional sounding lines were run in the channel at Lat. 43° 43.68', Long. 70° 01.37'.

The work mentioned in paragraph 10 of your letter of April 30, 1943 was accomplished by the party of Lieut. Comdr. Henry J. Healy.  
(Ref: Par. 10(e) in Review H-6732(1941))

Respectfully submitted,  
*William F. Deane*  
William F. Deane,  
Lieutenant, C&GS

Approved and Forwarded:

*L. P. Raynor*  
L. P. Raynor, Lieut. Comdr.,  
Commanding Ship LYDONIA



Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6732** Additional work .....

Records accompanying survey:

Boat sheets <sup>6732</sup> and <sup>2</sup> 6670, sounding vols. 1....; wire drag vols. 0....;  
 bomb vols. 0....; graphic recorder rolls <sup>4</sup> 1....;  
 special reports, etc. None.....  
 .....

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

Number of positions on sheet	..221..
Number of positions checked	..12..
Number of positions revised	..9..
Number of soundings recorded	..1300..
Number of soundings revised (refers to depth only)	..1..
Number of soundings erroneously spaced	..5..
Number of signals erroneously plotted or transferred	.....
Topographic details	Time ..9..
Junctions	Time ..2..
Verification of soundings from graphic record	Time .....

Verification by *Lewis King* ..... Total time  $\frac{50}{20}$  hrs. Date *Sep. 3, 43*  
*G.F. Jordan*  
 Review by *G.F. Jordan* ..... Time  $\frac{3}{4}$  Date *Oct. 30, 1943*

821

RUN

821-AB

April 28, 1943

Memo. to Chief, Division of Coastal Surveys

Subject: Advance information on the review of H-6732 (1941) before approval.

- |     | Lat.  | Long.  |  |
|-----|-------|--------|--|
|     | 43°   | 70°    |  |
| (a) | 42.7' | 06.9'  | least depth on 10-ft. shoal in buoyed passage  |
| (b) | 42.5' | 07.2'  | develop 7 and 12-ft. shoals  |
| (c) | 42.4' | 07.86' | further investigation on rock with wire drag (See Review par. 5d(8))                             |
| (d) | 42.1' | 05.1'  | development of the saddle pass between Bates and Crotch Islands, including prior 11-ft. sounding |

The development of the following shoals would have been desirable to complete the present basic survey.

- (e) 45.3' 05.67' detached 13-ft. shoal
- (f) 45.6' 00.00' 1-1/2-ft. to 17-ft. prior shoal soundings
- (g) 44.4' 04.85' least depth within 30-ft. curve
- (h) 43.68' 01.37' additional buoyed channel lines
- (i) 41.8' 04.7' 13-ft. shoal

The irregular shoal area centered at Lat. 43°41.5'; 70°00.6' is included in the proposed wire drag surveys for the 1943 season.

*J. Borden*  
Chief, Division of Charts

**H6752**  
Additional work

	Remarks	Decisions
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GEOGRAPHIC NAMES

Survey No.

10732

Additional work

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	
Maine									1
Ca sco Bay									2
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200  
File

## TIDE NOTE FOR HYDROGRAPHIC SHEET

August 21, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in  
1 volumes of sounding records for

HYDROGRAPHIC SHEET 6732 Add. Wk.

Locality Casco Bay, Maine

Chief of Party: L. P. Raynor in 1943  
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 ft.

Condition of records satisfactory except as noted below:

NOTE: Predicted tides for Portland, Maine were used for  
reducing the soundings plotted on the boat sheets.  
Tide reducers from Portland observations have been  
entered in sounding volumes by the Div. of T.&C.



Chief, Division of Tides and Currents.

POST-OFFICE ADDRESS: 50 Church Street, New York 7, N. Y.  
TELEGRAPH ADDRESS:  
EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Ship LYDONIA

October 26, 1943

To: The Director  
U. S. Coast and Geodetic Survey  
Washington, D. C.

Through: Commanding Officer  
Ship LYDONIA

From: Lieutenant C. J. Wagner

Subject: Additional work on Hydrographic Sheet 6732

Reference: 22/MEK 1995 LY 4, Sept. 2, 1943

On September 20, 1943, the area was visited and additional soundings taken. Before hydrography was started  $\Delta$  station Brown Cow 1933 was visited and sextant angles taken to check  $\odot$  Mug. This proved to be highest and largest of four humps on long rock. The angles are in front of Sounding Record.

Additional lines were run over the area and then a buoy was planted near the shoal. The area was sounded over with a hand-line while drifting and circling and a least depth of 14 feet obtained as reduced by predicted tides of Portland, Maine. This day's work covers the area in question, and it is recommended that the hydrography accomplished in this area on July 1, 1943 by Lieutenant Deane be rejected. Although the 13-foot sounding was not verified, it is recommended that it be retained in position as shown on the original survey.

While drifting over spot a shoal with least depth of 15 feet was obtained about 100 yards southwest of the 13-foot shoal.



Approved and Forwarded:

*L. P. Raynor*  
L. P. Raynor, Lieut. Comdr. C&GS  
Commanding Ship LYDONIA

*Clifton J. Wagner*  
Clifton J. Wagner  
Lieutenant, C&GS

*Original 13 ft shoal verified and developed by this investigation, which supersedes the additional work on this sheet in July 1943.*

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6732 AD.WK.

Field No. 1002

Maine, Casco Bay, Broad Sound and Vicinity  
Surveyed July 1943; Scale 1:10,000  
Instructions dated April 30 and September 2, 1943

Soundings:

Control:

Hand lead  
808 Fathometer

Three-point fix on shore signals

Chief of Party - L. P. Raynor  
Surveyed by - W. F. Deane, C. J. Wagner  
Protracted by - R. J. Christman  
Soundings plotted by - R. J. Christman  
Verified and inked by - L. King, G. F. Jordan  
Reviewed by - G. F. Jordan  
Inspected by - H. R. Edmonston, October 30, 1943

1. Purpose and Extent of Survey

This survey covers the development of shoals which were recommended for additional work in the review of H-6732 (1941).

2. Results of Survey

This development completes the basic survey of the area within the limits of H-6732. The results of the present survey are summarized in the following paragraphs:

- a. The 10-ft. shoal on the 1941 work, charted on 201 at Lat.  $43^{\circ}42.7'$ , Long.  $70^{\circ}06.9'$  was thoroughly developed. It is recommended that the 10-ft. sounding be disregarded, as 12 feet is the least depth on the present investigation. The graph for the 10-ft. sounding shows a solid thin pinnacle, whereas the graph on the present survey shows the separation between ledge and kelp. The 10-ft. value is now considered to have been on top of kelp.
- b. The 7-ft. sounding from H-754 (1861), charted on 201 and 315 (10 ft. on chart 3201) at Lat.  $43^{\circ}42.5'$ , Long.  $70^{\circ}07.2'$ , was confirmed and is

now superseded by 7-ft. soundings on the present survey. A least depth of 11 feet was obtained on the undeveloped 12-ft. shoal 100 meters south-west, charted on 201 and 3201.

- c. It is recommended that the 4-ft. sounding from H-754 (1861), charted on 201, 315, and 3201 at Lat.  $43^{\circ}42.4'$ , Long.  $70^{\circ}07.87'$ , be disregarded. A least depth of 11 feet from drift sounding confirms the 11-ft. depth on the 1941 work. Although the party was not able to use wire drag, it is considered the 1941 and 1943 investigations disprove the shoaler depths on the prior survey.
- d. The development of the saddle pass between Bates and Crotch Islands substantiates a 11-ft. shoal on H-754 (1861), charted on 201 and 315 at Lat.  $43^{\circ}42.1'$ , Long.  $70^{\circ}05.3'$  and a 5-ft. shoal on the same survey charted 300 meters west on 315. The prior 11-ft. sounding is superseded by two 12-ft. soundings. The prior 5-ft. sounding is superseded by a 3-ft. sounding 30 meters south.  
  
A 40-meter spacing of lines at Lat.  $43^{\circ}42.10'$ , Long.  $70^{\circ}05.13'$  leaves in doubt the limiting channel depth between the two 11-ft. shoals, the real purpose of development in the pass.
- e. A 25-ft. uncharted sounding from H-754 (1861), at Lat.  $43^{\circ}44.4'$ , Long.  $70^{\circ}04.85'$ , was adequately disproved. A least depth of 42 feet was found at this position.
- f. Additional development was made in the channel area at Lat.  $43^{\circ}43.7'$ , Long.  $70^{\circ}01.4'$ .
- g. The additional development in the 13-ft. shoal area at Lat.  $43^{\circ}41.8'$ , Long.  $70^{\circ}04.7'$  did not agree with the original hydrography. Further investigation and development on Sept. 20, 1943, by Lieut. C. J. Wagner, agrees with the original hydrography. The additional work on this shoal accomplished in July is therefore superseded by the September investigation.

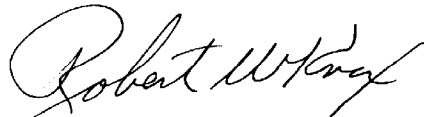
3. Condition of Survey

The sounding records and descriptive report are complete in all detail. The critical shoals were thoroughly developed by drifting with both fathometer and hand lead.

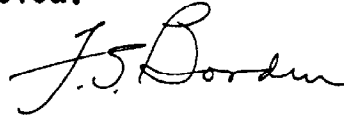


Due to the congestion of soundings on the smooth sheet, the additional work was plotted on tracings which are now included in the descriptive report. Critical soundings and all other soundings for which there was space have been transferred to the smooth sheet.

Examined and approved:



Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of  
Coastal Surveys

Applied to Chart 201 after review - 11/1/43 - J.W.  
Part. applied to chart 1204 after review 3/8/46 Sam