

6728

6728

FORM 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
<del>Topographic</del> Hydrographic	Sheet No. <del>H-6674</del>
U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES	
APR 27 1942	
Acc. No. _____	
State MAINE	
LOCALITY CASCO BAY	
<del>Broad Cove, Cousin's River, Presump-</del> <del>scot River, Hussey Sound, Mussel-</del> <del>Cove, Chandler Cove.</del>	
193.42	
CHIEF OF PARTY Fred. L. Peacock	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. H6728

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. 1001

REGISTER NO.

H6728

State MAINE

General locality CASCO BAY

Locality ~~Broad Cove, Cousins River, Presumpscot River, to~~  
Hussey Sound, ~~Mussey Cove, Chandler Cove~~

Scale 1-10,000 Date of survey May 7 - Oct. 10, 1941

Vessel Ship OCEANOGRAPHER

Chief of Party Fred. L. Peacock

Surveyed by Ship's Officers

Protracted by A. B. Brownell

Soundings penciled by A. B. Brownell, R. Carr and C. H. Bishop

Soundings in ~~fathoms~~ feet and ~~1/10 fathoms~~

Plane of reference M. L. W.

Subdivision of wire dragged areas by ~~Lieut. F. B. Gossett, 1941~~  
~~Field Sheets W.D. 1001 and 1001 b~~

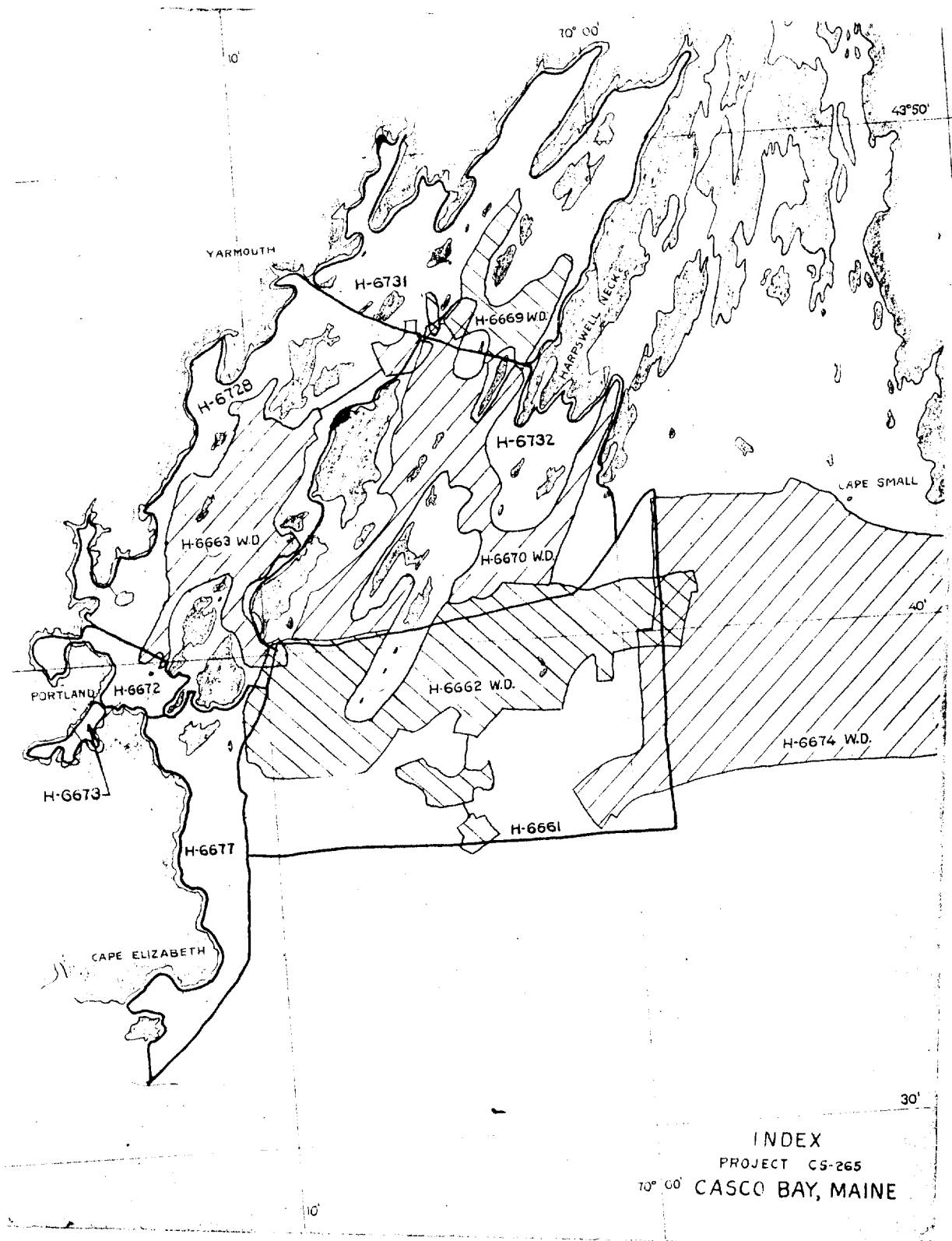
Inked by

Verified by

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

H6728

HYDROGRAPHIC SHEET NO. ~~H-6674~~

(Field H - 1001)

Scale : 1,10,000

Project No. CS-265  
U.S.C. & G.S. OCEANOGRAPHER

Portland, Me.  
Fred. L. Peacock, Chief of Party.

INSTRUCTIONS:

This survey was executed under authority of Director's Instructions for Project No. CS-265, dated May 7, 1941. ✓

LOCALITY:

This survey covers the area of Broad Cove, Cousins River, Presumpscot River, Hussey Sound, Mussel Cove and Chandler Cove. ✓

CONTROL AND SIGNALS:

Triangulation and control previously established furnished the primary control. Natural objects, banners, flags, and tripods established by the 1941 topographic parties furnished additional control for this survey. ✓

SURVEY METHODS:

The usual visual control method of three-point fixes was used throughout this survey. The submarine Signal Co. 808 - A type Depth Recorder was used. Fixes were obtained between one and two minute intervals. The 15 Q and 15 U type Chart Fathograms were used. Soundings were scaled to the nearest half-foot every 7 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 were used. ✓

The fish of the 808-A fathometer was rigged by means of two by four (2x4) 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, which was the initial used 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, engineer, coxswain, recorder and depth recorder, <sup>tender</sup> whose sole duty was to see that the depth recorder ran correctly and to record all the ✓



numbers for fixes, pertinent notes and notes on irregularities that might happen to the machine. Later on in the season when three hydrographic parties were in the field, the man in charge, took the right angle and plotted. Angles were taken close by the "fish" in order to correlate the correct positions for recorded depths.

An attempt was made in the field to read and record the soundings from the fathograms. The character of the bottom was so rough, and due to the fact that the depth scales were constantly changing, the attempt was discarded as errors were frequent and the fathometer man couldn't tend the machine properly. 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 lines were run in a northeasterly, southwesterly, and in a northerly and southerly direction, with a maximum spacing of one hundred meters. In close development, and especially around prominent points and around islands, fifty to twenty-five meter lines, or even closer spacing was used.

#### DANGERS AND SHOALS:

A wreck baring 9 ft. at M.L.W., at latitude 43 40.13' and longitude 70 13.15' is an obstruction which is dangerous to navigation, especially for small craft.

All shoal areas with the least depths over same have been penciled on the smooth sheet or on the attached overlay. The most important shoals are listed as follows: *notations checked with sheet and records, and overlay destroyed.*

Shoal at latitude 43 46.08' and longitude 70 05.26' covered by 6 1/2 ft. at M.L.W.

At latitude 43 45.86' and longitude 70 05.58' shoal covered by 15 1/2 ft. at M.L.W.

At latitude 43 45.49' and longitude 70 09.50' shoal covered by 12 1/2 ft. at M.L.W.

At latitude 43 44.92' and longitude 70 07.90' a shoal covered by 13 ft. at M.L.W.

At latitude 43 43.89' and longitude 70 09.53' a shoal covered by 1 foot at M.L.W. I believe this is the shoal where a U.S. Navy Destroyer grounded during the summer of 1941. *Reef uncovers at low water*

At latitude 43 43.39' and longitude 70 09.25' a shoal covered by 19 ft. at M.L.W. *18 ft from H-6663 (1941) WD*

At latitude 43 43.78' and longitude 70 09.90' a shoal covered by 11 ft. at M.L.W. *10 ft from H-6663 (1941) WD*



At latitude 43 43.91' and longitude 70 10.61' a shoal covered by 4 ft. at M.L.W.

At latitude 43 42.29' and longitude 70 09.50' a shoal covered by 23 ft. at M.L.W., and 465 meters west of this area is a shoal covered by 20 ft. at M.L.W., and 22 ft 200 meters SW.

18ft  
H-6663(1944)WD

At latitude 43 42.16' and longitude 70 10.52' a shoal covered by 36 1/2 ft. at M.L.W.

Other shoal areas will be taken up under the paragraph "Comparison with Previous Surveys".

#### CHANNELS:

The only channels developed were the river channels leading up to Back Cove, Presumpscot River, Cousins and Royal Rivers.

#### ANCHORAGES:

Large vessels can enter through Hussey Sound and select an anchorage under the lee of some of the many islands where suitable depths and good holding ground can be found in most places. This area has been wire dragged, but vessels should proceed with caution on account of the shoal areas.

Smaller vessels can enter the above anchorage between the northwest end of Chebeag Bar and Little John Island and through the south entrance to Chandler Cove, just northeast of the north end of Long Island. Chandler Cove is a good anchorage for small craft, 5 to 11 fathoms, muddy bottom, for any wind, except southeast, when a heavy swell makes into the Cove.

Broad Cove is a shallow cove in the northwesterly part of Casco Bay, and is a good anchorage for small craft in the middle of the cove, southwest of Prince Point, in 15 to 17 feet of water, muddy bottom. It is open to the southward and eastward.

#### GEOGRAPHIC NAMES:

No recommendation is made for the changing of geographic names as shown on U.S.C. & G.S. Charts 325, 315 and 201, or as shown on the topographic and graphic control surveys covering this area during the 1941 season.

#### JUNCTIONS WITH CONTEMPORARY AND PREVIOUS SURVEYS:

This survey forms a junction with hydrographic survey (1941) H - 6672 on the southwest corner, with survey (1941) H - 6677 on the south and south-east corner, with survey (1941) H - 6670 at the south entrance to Hussey Sound, the east side of Chandler Cove and on a line extending from Chebeag. Also joins H-6661 (1941) at east entrance to Hussey Sound.

Point to Upper Green Island, and with Survey (1941) H-6669 extending on a line north westward to Fogg Point. <sup>6731</sup>

A satisfactory junction was made with the U.S. Engineers at the mouth of the Royal River, and therefore the present survey was not extended up that river. *Blueprint #31540 (1938)*

It is believed that few discrepancies occur which are greater than one or two feet at the most with these junctions.

#### COMPARISON WITH PREVIOUS SURVEYS:

A comparison was made with the U.S.C. & G.S. Chart No. 201, corrected to Aug. 19, 1941, and the following discrepancies are noted: *included advance information on present surveys*

This survey obtained 6 1/2 ft. on the Green Island Ledge Shoal as against 6 ft. as shown on the above chart.  $\phi 43^{\circ}46.08' \lambda 70^{\circ}05.25'$

Northeast of Chebeag Point a 15 1/2 ft. was found just northeast of buoy No. S-3 instead of the original 19 ft. shoal, and a rock covered 1 ft. at M.L.W. was found instead of 3 ft. <sup>450 meters</sup> just southwest of the same buoy.  $\phi 43^{\circ}45.8' \lambda 70^{\circ}05.6'$

Just <sup>West</sup> southeast of Chebeag Bar a 13 ft. shoal was found instead of the 14 ft. original one.  $\phi 43^{\circ}44.9' \lambda 70^{\circ}07.9'$

At latitude 43 45.78' and longitude 70 09.11' a sunken rock as shown on Chart No. 201 were found with a least depth of 2 ft. at M.L.W. Just southwest of this area is another sunken rock with a least depth of 2 ft. at M.L.W.

A 17 ft. shoal was found on the original 12 ft. shoal just northeast of the northeast tip of Sturdivant Island. <sup>H-6663 (1941) WD</sup> However, further development should be made here. *cleared by 10 ft on H-6663 (1941) WD*  $\phi 43^{\circ}44.9' \lambda 70^{\circ}10.4'$  <sub>45.09</sub>

A 19 ft. shoal was found on the original 18 ft. shoal just west of Indian Island Point. <sup>H-6663 (1941) WD</sup>  $\phi 43^{\circ}43.3' \lambda 70^{\circ}08.5'$

A 4 ft. shoal was found instead of 7 ft. near buoy S 18, just southwest of Basket Island.  $\phi 43^{\circ}43.9' \lambda 70^{\circ}10.6'$

A 11 ft. shoal was found instead of 12 ft. at the Firing Range Marker Buoy just south of Basket Island. <sup>10 ft on H-6663 (1941) WD</sup>  $\phi 43^{\circ}43.8' \lambda 70^{\circ}09.9'$

A depth of 3 1/2 ft. at M.L.W. was found on Underwood Ledge.  $\phi 43^{\circ}44.0' \lambda 70^{\circ}11.8'$

A depth of 1 1/2 ft. at M.L.W. was found on York Ledge. <sup>\* (2) plotted</sup>  $\phi 43^{\circ}43.53' \lambda 70^{\circ}12.28'$

A 3 ft. shoal was found instead of the 5 ft. one as originally shown just southwest of buoy C 7. However, on account of kelp this sounding could be 6 ft. instead of 3 ft. (See fathogram and record.)  $\phi 43^{\circ}43.3' \lambda 70^{\circ}12.5'$  <sub>4 1/2 ft plotted from hand lead investigation</sub>

On Jones Ledge a 4 ft. shoal was found just southwest of the original 2 ft. shoal. *Two 6 ft sdgs. are the offshore danger*  $\phi 43^{\circ}43.0' \lambda 70^{\circ}11.9'$

H-6663(1941)W.D.

A 17 ft. shoal was found near the 12 ft. shoal just southwest of the above area.  $\phi 43^{\circ}42.9' \lambda 70^{\circ}12.0'$

A 3 1/2 ft. shoal was found instead of 2 ft. on the Lower Clapboard Ledge Shoal.  $\frac{3}{2}$  plotted. See Review "Chart 201 Part (2)"  $\phi 43^{\circ}42.75' \lambda 70^{\circ}12.0'$

A 20 ft. shoal was found on the original 19 ft. shoal due south of the lower end of Clapboard Island.  $\phi 43^{\circ}42.4' \lambda 70^{\circ}11.8'$  advance information present survey

A 16 ~~17~~ ft. shoal was found on the 9 foot area just N.N.E. of Cow Island Ledge. (See paragraph on wire drag groundings.) H-6663(1941)W.D.  $\phi 43^{\circ}42.2' \lambda 70^{\circ}11.3'$

A 36 ~~14~~ ft. shoal was found on the original 33 ft. shoal 0.7 miles east of Cow Island Ledge.  $\phi 43^{\circ}42.3' \lambda 70^{\circ}10.0'$  advance information present survey

A 20 ft. shoal was found on the original 18 foot area, 0.6 mile west of Channel Rocks.  $\phi 43^{\circ}42.3' \lambda 70^{\circ}09.8'$  H-6663(1941)W.D.

Of the 9 ft., 14 ft. and 9 ft. shoal areas around Channel Rocks, a 11 1/2 ft. pinnacle rock fell on the most southerly 9 ft. shoal. By reading the peak on the fathogram a 9 1/2 ft. sounding, or even less, could be obtained. However, it appears as though 2 or more feet of kelp was on top of this pinnacle rock. (See paragraph on wire drag groundings.) The 14 ft. and 9 ft. original soundings fall on 22 ft. and 20 ft. respectively.  $\phi 43^{\circ}42.3' \lambda 70^{\circ}09.0'$  See Review "H-820" para. (3)

A 21 ft. shoal was found on the 17 ft. shoal just northwest of the northerly tip of Cow Island. 19 ft (191) from H-6663(1941)W.D., cleared by 19 ft.  $\phi 43^{\circ}41.7' \lambda 70^{\circ}11.2'$

A 17 ft. shoal was found on the 19 ft. shoal just northeast of buoy C 11. shoal point with gradual slope to 60 ft curve fully developed.  $\phi 43^{\circ}41.5' \lambda 70^{\circ}10.2'$

A 5 ft. shoal was found just southwest of the 15 ft. shoal northwest of the northerly tip of Basket Island.  $\phi 43^{\circ}44.2' \lambda 70^{\circ}10.1'$

A 6 ~~14~~ ft. shoal was found on the original 7 ft. sounding at buoy S 6, and just southwest of this area is a 2 1/2 ft. shoal.  $\phi 43^{\circ}41.4' \lambda 70^{\circ}12.0'$

No indication was found of the 5 ft. shoal just southeast of Halfway Rock. discredited in Review

A 5 ft. shoal was found near buoy S 4 instead of 8 ft., southeast of Halfway Rock. However, 7 ft. probably would be more correct. (See fathogram and note in record book.) 6 ft from hand lead investigation.  $\phi 43^{\circ}40.8' \lambda 70^{\circ}12.8'$

No indication was found of the 18 ft. shoal 0.2 of a mile southeast of The Brothers. discredited in Review.  $\phi 43^{\circ}41.9' \lambda 70^{\circ}12.6'$

The 6 ft. shoal just northeast of the light on the pier of Little Diamond Island was verified in the field. The position is a little further east of the original. 6 ft plotted.  $\phi 43^{\circ}40.1' \lambda 70^{\circ}12.1'$

Just southwest of the above area, a 5 1/2 ft. shoal was found, although soundings are not certain on the fathogram.

A least depth of 24 ~~14~~ ft. was found on Soldier Ledge against 25 ft. on the chart.  $\phi 43^{\circ}40.4' \lambda 70^{\circ}10.6'$

Discrepancies

In latitude 43 46.26' and longitude 70 09.08', positions 180-181 ff (blue), the 9  $1\frac{1}{2}$  ft. sounding probably is a cone sounding. (See record and fathogram.) *could be boulder; retained*

In latitude 43 45.82' and longitude 70 09.56', a 9 ft. sounding was changed to 13 ft. (See pos. 172-173 ~~ff~~ (blue) and fathogram.) *Stray on fathogram investigated and disproved on 11 day (blue)*

In latitude 43 44.23' and longitude 70 10.13', a 9 ft. sound-<sup>11 plotted</sup> ing probably should be a 12 ft. sounding, and a 5 ft. sounding<sup>5 plotted</sup> probably should be a 7 ft. sounding. (See positions 142-143 x (blue) and 135-136 x (blue) respectively, and fathograms.) Apparently was reading top of kelp.

A 29 ft. shoal 0.3 mile east of the above needs further developing. A few more splits should be run just east of Basket Island Lower ledge Beacon to determine better development of depth curves. *Cleared by 22 ft wire drag. No additional work recommended.*

The 24 ft. shoal (positions 186-187 gg (blue)) just southwest of Sturdivant Island Ledge and buoy N-16 should be further developed. A 29 ft. sounding falls on <sup>side of</sup> a 33 ft. sounding here. A little displacement of the line 32-33 (red) ~~could~~ cause this, and if moved a little southeast the soundings would agree.  $\phi 43^{\circ}43.8' \lambda 70^{\circ}11.5'$  *The point in 30 ft curve south from 24 ft sounding covered by 21 ft drag. No additional work recommended*

In latitude 43 42.25' and longitude 70 09.63' two soundings of 32 ft. and 22  $1\frac{1}{2}$  ft. should be questioned on the fathograms of pos. 174 - 175 g (red) and 119 - 120 g (red) respectively. Shoal of 37  $1\frac{1}{2}$  ft. (pos. 17-18 jj (blue) at latitude 43 42.64' and longitude 70 11.07' should be further developed. *Substantiated by 38 ft on H-6663 (1941) ND, cleared by 36 ft; no additional work recommended.*

0.65 of a mile and 0.75 of a mile S.S.E. of the above a 51 ft. and a 48 ft. shoal area should also be further developed. *These soundings not located.*

Just east of Cow Island (pos. 23-24 b (blue)) soundings are doubtful (see fathogram and record).  $\phi 43^{\circ}41.5' \lambda 70^{\circ}10.9'$  *Position replotted and soundings agree*

In latitude 43 41.97' and longitude 70 12.10', a 24 ft. shoal should be further developed. *22 ft from H-6663 (1941) ND, cleared by 19 ft. Additional investigation by C.D. Meany in 1942, cleared by 21 ft wire drag. No add'l work recommended.*

In latitude 43 40.67' and longitude 70 10.50', a 50 ft. shoal should be further developed, and 0.85 mile south of the above a 72 ft. bank should be further developed. *40 ft, C.D. Meany 1942 cleared by 43 ft - no danger - no additional work recommended*

The deepest area on this survey was just southwest of Soldier Ledge, where 120 ft. depth was obtained.  $\phi 43^{\circ}40.3' \lambda 70^{\circ}10.7'$

All bottom characteristic soundings were taken by means of a hand lead on purple letter days, and were not used to check machine soundings, as the hand lead used was never checked for error, and it was observed that these soundings were in a number of instances two fathoms different from the machine soundings, due to erroneous readings by inexperienced leadsmen, wrong objects for fixes, or a combination of both.

In most instances the hand lead soundings were observed to be deeper, <sup>some very</sup> due no doubt to the hand lead sinking in the mud and not taking vertical casts. See Review "Sounding Records" par(3)

The following discrepancy between this survey and topographic survey No. T-6846 is listed herewith: The piling just southwest of signal "Rail" south of latitude 43 40' shows a discrepancy of 9 1/2 ft. in height of piling. *Height not inked on T-6846 - two piles instead of one*

Between this survey and topographic survey No. T-6844, a 1/2 ft. discrepancy in the height of a rock just northwest of signal "Pot"; a one foot discrepancy in the height of a rock between signals "Gull" and "US E"; a one foot discrepancy in the height of a rock just south of signal "Tern"; ~~a one foot discrepancy in the height of piling just north of signal "Tern"~~; a 1 1/2 ft. discrepancy in height of rock northwest of signal "Try"; a 1 ft. discrepancy in height of rock 0.13 miles west of signal "Tan"; a 1 1/2 ft. discrepancy in height of rock 0.17 miles S.S.W. of signal "Tan", and a 1 ft. discrepancy in height of rock just northwest of signal "Non". <sup>hydro value plotted</sup>

#### MISCELLANEOUS:

This survey was prosecuted by the ship's officers. ✓

For a discussion of methods see descriptive report H-6672. ✓

All fathograms were re-scaled, but corrections, alterations and additions were not re-checked in this office. ✓

Bottom characteristics were taken separately 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 hand lead, averaging about 5 or 6 to the square mile. <sup>ample in general</sup> ✓

All soundings were plotted to feet, except on critical shoal areas and in determining the M.L.W. line where soundings were plotted to 1/2 feet. *1/2 ft dropped where unessential.* ✓

The abstract of temperatures and salinities, and data pertinent to bar checks, salinity and temperature and phase curves, are enclosed in a separate report. ✓

All reference to high and low water line which have been indexed in each record book, were not checked against the penciled M.H.W. line which were taken from available bromides, except in cases where the M.H.W. line was inked in from 1941 topographic and graphic surveys. As the shoreline covering this area will later be delineated by the Washington Office from aerial pictures recently taken of this area, it was deemed not advisable to endeavor to correct the old shoreline. ✓

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



Soundings in parenthesis signify doubtful or interpreted soundings. Change of gain was not corrected for, although Lt. Hoskinson's experiment proved that a change of a few points/ <sup>in sensitivity</sup> caused an appreciable change in depth of the soundings. An attempt was made at the beginning of the season to keep a record of this change in gain. However, no record was kept during the latter part of the season, so it was thought best not to endeavor to correct for the recorded gain notes, as the other soundings would not be correlated with these.

Signal "Ware<sup>f</sup>" at latitude ~~43~~ 39.39' and longitude 70 <sup>09.97</sup> was not inked on topographic survey T-684<sub>6</sub>. *noted.*

Respectfully submitted,

*Henry O. Fortin*  
Henry O. Fortin,  
Lieutenant, C&GS.

April 23, 1942.  
Norfolk Processing Office,

Respectfully forwarded.

*H. C. Warwick*  
H.C. Warwick,  
Lt. Comdr., C&GS.

TIDAL DATA

H6728

HYDROGRAPHIC SURVEY NO. ~~H-664~~ (FIELD NO. 1001)

Standard gage located at Portland, Maine, was used throughout this survey.

Latitude 43 39.58 N

Longitude 70 14.73 W

Mean low water is 8.6 feet above 0 of the tide staff.

Highest tide observed 10.4 feet Sept. 25, 1941, at 14:24 o'clock.

Lowest tide observed plus 1.6 feet May 14, 1941, at 07:10 o'clock.

All tide, bar checks, S . & T., time and phase reducers were entered to 0.2 feet as per instructions from the Washington office.

STATISTICS

SHEET FIELD NO. 1001  
1941

H6728

<u>DATE</u>	<u>VOLUME</u>	<u>DAY</u> <u>LETTER</u>	<u>STAT. MI.</u>	<u>NO. SDGS.</u>	<u>POSITIONS</u>	<u>BOAT</u>
<u>MAY</u>						
7	1	a (RED)	18.7	1381	165	81
8	1 & 2	b	14.7	1010	136	"
9	3	c	22.4	1319	144	"
12	4	d	11.4	631	61	"
13	2	e	34.5	1936	193	"
14	3	f	10.5	627	75	"
15	3 & 4	g	39.2	1826	189	"
16	5	h	40.3	2045	196	"
19	6	j	38.0	1965	184	"
20	6 & 7	k	36.6	1977	196	"
21	7 & 8	l	35.3	1932	184	"
22	8 & 9	m	31.2	1657	167	"
23	9 & 10	n	27.7	1616	179	"
26	10	p	34.5	1787	191	"
27	10 & 11	q	23.0	1301	178	"
<u>JUNE</u>						
4	11	r	11.3	691	77	"
6	11	s	2.3	161	21	"
7	11 & 12	t	6.5	419	57	"
11	12	u	25.0	1630	192	"
12	12 & 13	v	27.7	1988	232	"
16	14	w	20.7	1382	133	"
17	14	x	15.1	815	85	"
21	15	y	10.7	520	55	"
<u>JULY</u>						
5	15	z	4.2	238	26	"
21	16	aa	4.4	114*	114	"
28	16	bb		8	8	"
<u>Sept.</u>						
25	16	cc	13.1	1076	82	"
26	17	dd	9.4	914	103	"
<u>JUNE</u>						
13	18	a (BLUE)	4.6	351	38	82
18	18	b	9.0	734	89	"
19	18 & 19	c	11.0	876	111	"
20	19	d	10.0	681	99	"
23	19	e	8.0	498	58	"
24	19 & 20	f	13.0	770	133	"
25	20	g	20.5	1436	134	"
26	20 & 21	h	21.0	1335	147	"
27	21	j	15.1	1037	95	"
28	21 & 22	k	10.6	608	66	"

continued on Page 2.

SHEET FIELD NO. 1001

DATE	VOLUME	DAY LETTER	STAT. MI.	NO SDGS.	POSITIONS	BOAT
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\*H.L. and Bottom Characteristics  
AREA IN SQ. STAT. MI.--29.0

## TIDE NOTE FOR HYDROGRAPHIC SHEET

April 30, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in  
39 volumes of sounding records for

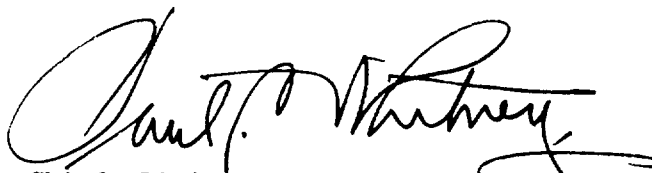
HYDROGRAPHIC SHEET 6728

Locality Casco Bay, Maine (Western Part)

Chief of Party: Fred L. Peacock in 1941.  
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. **H6728**

Name on Survey

	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	
<u>Broad Cove</u>									1
<u>Chandler Cove</u>									2
<u>Cousins River</u>									3
<u>Hussey Sound</u>									4
<u>Mussel Cove</u>									5
<u>Presumpscot River</u>									6
<u>Cousins Island</u>									7
<u>Littlejohn Island</u>									8
<u>Great Chebeag Island</u>									9
<u>Long Island</u>									10
<u>Great Diamond Island</u>									11
<u>Peak Island</u>									12
<u>Mackworth Island</u>									13
<u>Royal River</u>									14
<u>Fogg Point</u>									15
<u>Casco Bay</u>									16
									17
									18
<u>Portland</u>									19
									20
									21
									22
									23
									24
									25
									26
									27

Names incorporated in the  
by L. Heck on 3/15/43

## Remarks

## Decisions

1		437 701
2		437 701
3		437701
4		436701
5		437702
6		436702
7		437701
8		"
9	Pending with U.S.G.B, with respect to Chebeague, leave space to add 2 letters if Board approves longer form.	"
10		436701
11		" U.S.G.B.
12		436701
13		436702 U.S.G.B
14		437701 U.S.G.-B
15		437701
16	For title only	436700 U.S.G.-B
17		
18		
19	Location of tide staff	
20		
21		
22		
23		
24		
25		
26		
27		

# Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6728**

## Records accompanying survey:

Boat sheets <sup>TWO</sup>....; sounding vols. <sup>(39)</sup>...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls <sup>(65)</sup>....;  
 special reports, etc. 1 Record of Temperatures & Salinities in a Cahier  
 .....

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

Number of positions on sheet	9,260.
Number of positions checked	444.
Number of positions revised	10.
Number of soundings recorded	75,290.
Number of soundings revised (refers to depth only)	24.
Number of soundings erroneously spaced	96.
Number of signals erroneously plotted or transferred	0.
Topographic details	Time 25.
Junctions	Time 12½
Verification of soundings from graphic record	Time 0.

Verification by *G.F. Jordan*.....Total time 46!.. Date 11/23/42....

Review by *G.F. Jordan*..... Time 102.. Date 11/23/42....



DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6728

Field No. 1001

Maine, Casco Bay, Cousin River to Hussey Sound

Surveyed May - October 1941; Scale 1:10,000

Instructions dated May 7, 1941

Soundings:

808-A Fathometer

Leadline

Control:

Three-point Fix on Shore Signals

Chief of Party - Fred L. Peacock

Surveyed by - Ship's Officers

Protracted by - A. B. Brownell

Soundings plotted by - A. B. Brownell; R. Carr; C. H. Bishop

Verified and inked by - G. F. Jordan

Reviewed by - G. F. Jordan

Inspected by - H. R. Edmonston

1. Shoreline and Signals

Triangulation stations are from previously established control.

The other control, with the exception of one hydrographic signal, is from topographic surveys on the present project and is as follows:

T-6843a (graphic control)	T-6844
T-6848           "       "	T-6845a&b
T-6850           "       "	T-6846
	T-6849b

The shoreline south of Lat.  $43^{\circ}41.6'$ , originally from the plane table surveys, has been made to agree with the air photo compilations which cover the entire area of the present survey. These topographic surveys are as follows:

T-6843a	*T-5957 (air photo compilation)
T-6844	T-5958
T-6845a	T-5959
T-6846	T-5961
T-6849b	T-5962

\*This survey has not been received in the office, and the shoreline completing Presumpscot River has not been applied.

2. Sounding Line Crossings

In general, the sounding line crossings are very good. A few exceptions were noted where there were 2-ft. disagreements and, in the absence of satisfactory adjustments the obvious erroneous depths were rejected. In the area at the northerly entrance to Diamond I. Roads, west of Peak Island, a general disagreement of 1 to 2 feet, due to incorrectly reduced depths on two days, has been disposed of and is discussed under paragraph (14).

3. Depth Curves

The depth curves are satisfactory in all important areas. Additional development to more fully develop the depth curves in the channels north of Cousin Island and in the approaches to Presumpscot River is not needed, as the U. S. Engineers covered these areas on a large scale.

4. Junctions with Contemporary Surveys

The junctions with contemporary surveys are satisfactory. Comparison was not made with H-6732 (1941), which is in the process of verification.

5. Comparison with Prior Surveys

With the exception of H-3033 (1909) all the prior surveys in this area were made more than 80 years ago. The general agreement is satisfactory, but shoaling is apparent in a few small areas. One area has deeper depths and is discussed under a succeeding paragraph. Most of the disagreements are evident on the prior surveys themselves, as they result from a line of soundings shoaler than adjacent or cross lines, or contemporary overlapping surveys. H-404 (1852) is particularly unreliable, where shoal soundings are too far offshore, due to the plotting of soundings with equal intervals as they approach or depart from shore. It is believed that an unrecorded unequal spacing should have been applied.

H-820 (1862) 1:20,000

This survey covers the northern fringe of the present survey.

(1) A 10-ft. shoal sounding charted on 201 and 315 at Lat. 43°46.83'; Long. 70°07.04' from the

prior survey falls on the end of an undeveloped 12-ft. spit on the present survey and is carried forward.

(2) All the soundings on the prior survey in the shoal area south and southwest of Great Moshier Island at Lat.  $43^{\circ}46.5'$ ; Long.  $70^{\circ}06.5'$  are shoaler than the present survey and should be disregarded, particularly the 8-ft. sounding charted on 201 and 315 at the edge of the 21-ft. channel.

(3) A special development on this prior survey at Lat.  $43^{\circ}42.4'$ ; Long.  $70^{\circ}09.0'$  falls outside the limits of the main body of the survey and within the limits of H-754 (1861). A line on H-754 has a 14-ft. shoal sounding which agrees with the location of a 9-ft. sounding transferred to the present survey from H-6663 (1941) W.D., whereas the development on H-820 shows a 9-ft. sounding 120 meters north in 23 feet on the present survey. This area was developed exceedingly close on the present survey, with no indication of the northerly 9-ft. depth charted on 201 and 315. The fact that H-754 and the present survey agree as to the location of the shoal discredits the control for the special development on H-820. It is recommended that the northerly 9-ft. sounding from the prior survey be disregarded.

H-754 (1861)

This prior survey is the principal source of charted soundings within the area of the present survey. The majority of soundings that are in disagreement with the present survey are from lines whose soundings are shoaler than the adjacent or cross lines or soundings of overlapping contemporary surveys, and for that reason they should be disregarded. For convenience and brevity, this type of disagreement is listed in tabulated form.

Lat.	Long.	Prior Depth	Present Depth	Charted
43°41.6'	70°11.9'	22	26	325, 201
43°41.7'	70°11.5'	28	38	325, 201, 315
43°41.75'	70°11.6'	28	32	325
43°41.8'	70°11.7'	28	31	325, 201
43°41.9'	70°12.7'	18	22	325, 201, 315
43°41.93'	70°12.7'	18-17 shoal	20	325, 201, 315
43°45.66'	70°05.57'	28	42	201, 315
43°44.7'	70°09.75'	28	30	201, 315
43°43.0'	70°12.65'	14	20	201, 315
43°43.57'	70°11.65'	28	38	201, 315
43°43.25'	70°10.25'	40	42	201
43°43.32'	70°09.75'	40	43	201, 315
43°42.7'	70°10.45'	40	53	201, 315
43°42.5'	70°10.2'	49	62	201, 315
43°42.32'	70°10.0'	55	63	325
43°42.08'	70°09.65'	31	48	325, 201, 315
43°41.9'	70°09.9'	46	50	201
43°43.2'	70°11.1'	25	50	201, 315
43°42.1'	70°11.15'	40	48	325, 201, 315
43°42.0'	70°11.0'	40	65	325, 201
43°42.7'	70°10.2'	46	56	201

(2) At Lat. 43°39.9'; Long. 70°10.5' a 32-ft. shoal sounding on line, noted as a rock in the records of the prior survey, falls in 60 feet on the present survey and was cleared by 33-1/2 foot wire drag on H-6663 (1941). It is considered that the line of soundings is in its correct azimuth, but the sounding may have been slightly closer to shore. Depths comparable to the present survey precede and follow the shoal sounding. It is to be noted that a shoal point makes out from shore here and that there is a 100-meter gap between 25-ft. and 41-ft. shoal soundings on adjacent lines. The 32-ft. sounding has been carried forward 40 meters inshore from its plotted position at the edge of the wire drag strip and at the outside edge of the irregular slope from shore. This sounding is charted on 325 and although it was charted beginning with the 1908 issues of 315, it has been omitted since the new engraving of that chart in 1921.

(3) A 37-ft. sounding from the prior survey charted on 325, 201 and 315 at Lat. 43°42.33';

Long.  $70^{\circ}11.55'$  falls in 48 feet on the present survey. A 43-ft. sounding 200 meters west (charted on 325) falls in 50 feet. As all of the prior soundings in this immediate area are shoaler than the present survey, the above charted soundings should be disregarded.

(4) A 51-ft. sounding from the prior survey charted on 201 at Lat.  $43^{\circ}42.74'$ ; Long.  $70^{\circ}08.25'$  falls in 60 feet on the present survey. In as much as all of the prior depths in the small area of the 60-ft. curve are shoaler than the present survey, the 51 should be disregarded.

(5) Two soundings of 27 and 28 feet from the prior survey, charted on 201 and 315 at Lat.  $43^{\circ}42.45'$ ; Long.  $70^{\circ}09.4'$ , fall in 40 feet on the present survey. As all the prior depths in this small area are 10 to 15 feet shoaler than on the present survey, these two charted soundings should be disregarded.

(6) A 46-ft. sounding from the prior survey, charted on 201 at Lat.  $43^{\circ}42.85'$ ; Long.  $70^{\circ}09.85'$ , falls in 53 feet on the present survey. This is one of two identical consecutive shoal soundings believed misread 1 fathom. The present survey is adequate, and the 46-ft. sounding should be disregarded.

(7) An 11-ft. sounding from the prior survey, charted on 201 and 315 at Lat.  $43^{\circ}46.25'$ ; Long.  $70^{\circ}07.0'$ , falls in 14-ft. depths on the present survey. The present survey is considered adequate, and the 11-ft. sounding should be disregarded.

H-602 (1856)

A 10-ft. sounding from the prior survey, charted on 201 and 315 at Lat.  $43^{\circ}44.05'$ ; Long.  $70^{\circ}08.4'$ , falls in 21 feet on the present survey. This sounding is on a gradual slope and is believed to be erroneously spaced. It is also in disagreement with the prior overlapping survey H-754 (1861) and should be disregarded.

H-726 (1859)

A 58-ft. sounding from the prior survey, charted on 325 and 201 at Lat.  $43^{\circ}40.3'$ ; Long.  $70^{\circ}09.6'$ ,

falls in 70 feet on the present survey. This sounding is an unreduced 11fm., between 14 and 15 fathoms, on line. There are no indications of shoaling on the present closely developed survey. An examination of the fathograms for three lines crossing this area shows a slight trough at the toe of the slope on the north side of the pass. This tends to substantiate the belief that 16fm. was misread as 11fm. The 58-ft. sounding should be disregarded.

H-404 (1852)

(1) Soundings of 5, 13, and 39 feet, from a line on the prior survey, charted on 325 (13-ft. sounding only on 201 and 315) at Lat.  $43^{\circ}41.0'$ ; Long.  $70^{\circ}10.5'$ , fall in 18 to 80-foot depths. Undoubtedly these shoal soundings are too far offshore, as the position controlling them is considered erroneous. As five fathometer lines on the present survey cross this charted spit, its existence is considered adequately disproved.

(2) A 36-ft. sounding from the prior survey, charted on 325 and 201 at Lat.  $43^{\circ}41.8'$ ; Long.  $70^{\circ}11.0'$ , falls in 50 feet on the present survey. All the adjacent soundings are shoaler than the present survey. The 36 feet was cleared by a 34-ft. wire drag and should be disregarded.

(3) A 75-ft. sounding from the prior survey, charted on 325, 201 and 315 at Lat.  $43^{\circ}40.75'$ ; Long.  $70^{\circ}10.65'$ , falls in 95 feet on the present survey. This sounding is from a line heading into shore and it is considered that unequal sounding intervals should have been recorded for these soundings, which would place the shoaler soundings on the shore slope. This type of disagreement is prevalent on the prior survey, as already revealed during the review of H-6677 (1941).

(4) A 5-ft. shoal point from the prior survey, charted on 325, 201 and 315 at Lat.  $43^{\circ}40.85'$ ; Long.  $70^{\circ}13.5'$ , falls in 11 feet on the present survey. The position of the 5-ft. sounding is questioned for the same reason mentioned above. As the present survey is adequate, the 5-ft. sounding should be disregarded.

(5) A 21-ft. sounding from the prior survey, charted on 325, 201 and 315 at Lat.  $43^{\circ}39.4'$ ; Long.  $70^{\circ}10.5'$ , falls in 40 feet on the present survey. East of this position on the same prior line are two charted shoal soundings 51 feet and 69 feet, which fall in deeper water on the present survey. All these soundings are shoaler than adjacent soundings and the present survey and should be disregarded.

(6) A 27-ft. sounding, charted on 325 at Lat.  $43^{\circ}39.55'$ ; Long.  $70^{\circ}10.35'$ , which falls in 44 feet on the present survey, could not be verified from any source. However, two shoal soundings of 29 feet, N.E. and S.W. of the charted 27ft., have been carried forward from H-404. Adjacent prior soundings are in agreement with present depths, and shoal soundings are to be noted at this point on lines on the present survey. The southwesterly 29ft. follows 38ft. and precedes 37ft. on the prior line in the direction of the shoal soundings on the present survey.

#### T-755 (1855)

A high water islet from the prior survey charted on 201 and 315 at Lat.  $43^{\circ}42.93'$ ; Long.  $70^{\circ}08.47'$  was not located on present hydrographic or topographic surveys. An examination of air photos shows general agreement with the prior survey in the delineation of features in this area, but the existence of grass obscures the exact detail. The islet is carried forward as a rock awash.

*Disregard.  
Superseded by  
detail on  
H-6728 (1943) Ad. Wk.  
G.F.J.  
8/23/43*

H-614 (1856), H-788 (1862) and H-3033 (1909) cover

small areas of the present survey without disagreements.

#### 6. Comparison with Wire Drag Surveys

H-6663 (1941) W.D. covers the deeper areas of the present survey with good agreement. Small overlaps are made with junctional surveys H-6670 (1941) W.D. and H-6662 (1941) W.D. Necessary soundings and eight groundings have been transferred to the present survey. A comparison has also been made with H-6782 (1942) W.D. and is discussed in detail in the review of that survey.



7. Comparison with Chart 325 (latest print of 7-17-42)  
     201 (\*print of 5-12-42)  
     315 (latest print of 6-3-42)

\*The latest print of chart 201, dated 8-10-42, is a recompilation based on the unverified and unreviewed present surveys and will not be considered in this review.

The charted depths within the area of the present survey are from the 80-year old surveys, augmented by soundings and detail from chart letters and unverified critical depths from the present survey. U. S. Engineer surveys of the Royal and Presumpscot Rivers and their approaches furnish additional hydrographic data.

#### Chart 325

- (1) A 33-ft. shoal charted at Lat.  $43^{\circ}42.15'$ ; Long.  $70^{\circ}10.55'$  is from chart letter 309 (1941), a preliminary report on the present survey; 36 feet is the final smooth sheet value. *36 removed*
- (2) A 10-ft. shoal, charted at Lat.  $43^{\circ}41.4'$ ; Long.  $70^{\circ}10.2'$ , falls in depths of 19 feet near a point on the 12-ft. curve on the present survey. Ten and one-half feet is first found on the 1908 charts, but no authority could be found for it. The present survey adequately develops this shoal point. The charted 10 feet is believed out of position and should be disregarded.
- (3) A 72-ft. sounding charted since 1908 at Lat.  $43^{\circ}40.64'$ ; Long.  $70^{\circ}10.65'$  falls in 102 feet on the present survey. No authority was found for this sounding; it should be disregarded.
- (4) A 12-ft. sounding, charted at Lat.  $43^{\circ}42.4'$ ; Long.  $70^{\circ}11.2'$ , is from chart letter 297 (1941) a preliminary report on the present survey. The 12-ft. depth falls 80 meters east of the shoalest depths on the present survey and the 9ft. transferred from H-6663 (1941) W.D. It is believed that the bearing in the chart letter is erroneous, as it places the position outside the 30-ft. curve on the boat sheet. The 12ft. should be disregarded.

#### Chart 201

- (1) A 37-ft. sounding charted at Lat.  $43^{\circ}42.35'$ ; Long.  $70^{\circ}11.95'$  falls in 45 feet on the present



survey. No authority was found for 37 feet, which is believed to be 8-1/4fm. from H-754 (1861) misread as 6-1/4fm. The 37ft. should be disregarded.

(2) A 2-ft. shoal charted at Lat. 43°42.8'; Long. 70°12.1' falls in 30 feet, 100 meters N.W. of a new 3-1/2-ft. rock on the present survey. No authority was found for the 2-ft. sounding first found on the 1908 charts and, as it is considered to be an erroneous position of the present adequately developed 3-1/2-ft. rock, it should be disregarded.

(3) A 25-ft. sounding charted at Lat. 43°43.4'; Long. 70°12.2' falls in 30 feet on the present survey. No authority was found for this sounding, originating on the May 1941 drawing, along with numerous other soundings from the present surveys. The 25ft. should be disregarded.

(4) A rock awash charted at Lat. 43°44.0'; Long. 70°11.8' falls on a rock covered with 3-1/2ft. on the present survey. H-754 (1861) shows a sunken rock symbol and two consecutive soundings of 3-1/2 feet. The earlier 315 charts show 4ft. in this position, but at the time of the new engraving in 1921 a rock awash was charted. As the present survey adequately develops this rock the charted rock awash should be disregarded.

(5) The northerly rocks of Upper Basket Ledge at Lat. 43°44.4'; Long. 70°09.5' are charted 30 meters north of their position on H-754 (1861) and the present survey. The present survey shows no rock northeast of the beacon.

(6) A 19-ft. sounding charted at Lat. 43°44.65'; Long. 70°09.0' falls in 22 feet on the present survey. No authority was found for this sounding which first appears on the first print of chart 201 in 1941. It is believed 3-3/4 fathoms on H-754 (1861) was misread as 3-1/4 fathoms as the 3/4 fraction is inked very small. The 19ft. should be disregarded.

(7) A 22-ft. sounding at Lat. 43°42.42'; Long. 70°11.77' is charted 75 meters north of its position on H-754 (1861) and actually falls on the 22-ft. shoal on the present survey.

(8) The 2-ft. shoal charted at Lat.  $43^{\circ}43.1'$ ; Long.  $70^{\circ}11.9'$  is from chart letter 317 (1941), which is advance information from the present survey. The verified smooth sheet shows 6 feet as the least depth at this position but has 4 feet closer to shore. The shoal is adequately developed, and the 2ft. should be disregarded.

The following soundings are considered to be incorrectly converted from fathoms on the prior surveys to feet on the present charts:

Lat.	Long.								
$43^{\circ}$	$70^{\circ}$								
42.3'	12.2'	4-3/4 fm.	charted	23 ft.	instead of	28 ft.			
41.9'	11.5'	7-3/4 fm.	"	42 "	"	"	46 "		
43.05'	10.25'	7-1/2 "	"	43 "	"	"	45 "		
43.7'	10.6'	6-3/4 "	"	37 "	"	"	40 "		
44.35'	09.40'	4-3/4 "	"	25 "	"	"	28 "		
44.70'	08.54'	3-3/4 "	"	19 "	"	"	22 "		
46.1'	06.3'	4-3/4 "	"	25 "	"	"	29 "		

#### 8. Controlling Depths

There are no dredged channels charted within the area of this survey. However, there are dredged anchorages at the southern limits of the survey, and the U. S. Engineer blueprints indicate proposed operations in the approaches to the Presumpscot and Royal Rivers.

#### 9. Aids to Navigation

The floating aids to navigation have been compared with the August 10, 1942, print of chart 201 and the agreement is adequate, except as noted below:

(1) The red spar buoy No. 6 marking the 18-ft. shoal at Lat.  $43^{\circ}42.3'$ ;  $70^{\circ}09.82'$  was located north of the shoal on the present survey, whereas the correctly charted location is west of the shoal.

(2) The number of the red spar buoy at Sandy Point Ledges at Lat.  $43^{\circ}46.0'$ ; Long.  $70^{\circ}09.4'$  has been changed from 14 to 20.

(3) The horizontal striped nun buoy at Soldier Ledge at Lat.  $43^{\circ}40.3'$ ; Long.  $70^{\circ}10.5'$  has been changed to a lighted bell buoy FL W.

(4) The black spar buoy No. 1 marking the shoal east of Peak Island at Lat.  $43^{\circ}39.75'$ ; Long.  $70^{\circ}10.23'$  has been moved easterly and also changed to a lighted gong buoy FL G.

(5) In addition, reflectors have been added to many buoys.

(6) An obstruction spar buoy has been placed since the present survey at the 36-ft. shoal at Lat.  $43^{\circ}42.15'$ ; Long.  $70^{\circ}10.55'$ , according to C.G.N.to M. No. 12, 1942.

#### Recommendations

(7) It is recommended that the black can buoy No. 7 at Lat.  $43^{\circ}43.28'$ ; Long.  $70^{\circ}12.35'$  be moved 100 meters S.W. into 18ft., to more closely mark the 4-1/2ft. Prince Pt. Ledge.

(8) It is recommended that Brant Ledge black spar buoy No. 1 at Lat.  $43^{\circ}42.95'$ ; Long.  $70^{\circ}12.70'$  be moved easterly into 18 feet to mark the now developed 11-ft. shoal point making out from the ledges.

(9) It is recommended that Mariners Ledge black can buoy No. 9, west of Long Island, at Lat.  $43^{\circ}41.77'$ ; Long.  $70^{\circ}09.67'$  be moved northerly to mark the now developed outside limits of its feature.

(10) It is recommended that Ponce Ledge black can buoy No. 11, at Lat.  $43^{\circ}41.42'$ ; Long.  $70^{\circ}10.25'$ , be moved northerly into 30 feet to mark the now developed outer limits of the ledge.

#### 10. Condition of Survey

This survey, as indicated on the smooth sheet, represents exceedingly well developed hydrography. In addition, it is to be noted that numerous shoal indications on the fathograms were investigated and either developed or adequately disproved.

##### (a) Sounding Records

(1) The processing and completion of the smooth sheet would have been expedited if the positions of the beginning and ending of all lines by latitude and longitude had been recorded by the

field party. Compass headings or general direction are also helpful in locating lines in closely developed hydrography.

(2) Check angles were not obtained for detached positions on rocks and shoals.

(b) The descriptive report is comprehensive and satisfactory.

(c) The smooth sheet plotting was very good. The processing and charting of the information on this survey would have been expedited had the area been divided into two separate surveys.

11. Compliance with Instructions for the Project

Satisfactory.

12. Additional Work

The following additional work is recommended:

(a) The 10-ft. shoal sounding at Lat.  $43^{\circ}46.64'$ ; Long.  $70^{\circ}07.1'$  and the 10-ft. shoal spit 400 meters north should be developed.

(b) The 18-ft. shoal sounding at Lat.  $43^{\circ}42.41'$ ; Long.  $70^{\circ}08.6'$ , together with the 35-ft. sounding southwest on the adjacent line, and the 29-ft. sounding 60 meters northeast are undeveloped and project into the narrowest part of Chebeag Narrows. Development of the point in the 30-ft. curve, 300 meters S.W., is also advisable. *Developed on H-6728(1943) Ad. WK.*

(c) Development of the 9-ft. shoal west of Little Chebeag Island at Lat.  $43^{\circ}42.7'$ ; Long.  $70^{\circ}09.5'$  might be considered. *6' L.D. on H-6728(1943) Ad. WK.*

(d) The 10-ft. shoal sounding at Lat.  $43^{\circ}44.2'$ ; Long.  $70^{\circ}08.1'$  should be developed.

(e) The 32-ft. shoal sounding carried forward from H-754 (1861) at Lat.  $43^{\circ}39.9'$ ; Long.  $70^{\circ}10.5'$  should be investigated and the development carried inshore from this point. *Disproved on H-6728(1943) Ad. WK. G.F.J. 8/23/43*

13. Dangers

A 4-ft. uncharted shoal sounding at Lat.  $43^{\circ}46.88'$ ;

Long. 70°08.16', in mid-channel, appears on the fathogram to be a definite rock formation. U. S. Engineer surveys in 1932, blueprint No. 25749, shows 1.7, 2.9 and 3.4 feet in 12-ft. depths on lines across this position. It has been recommended that "1-1/2 RK" be charted at this position.

14. Adjustments of 808 Recording Fathometer

Certain minor disagreements in crosslines and adjacent lines were found to be due to deeper soundings on "f" day (blue), between Peak and the Diamond Islands. The same condition was observed on the preceding "e" day, but the discrepancies are negligible.

The bar check at the beginning and end of both days showed good agreement, yet there was a 4-6% plus correction on "f" day and 3-4% on "e" day applied to the scaled soundings because of slow fathometer speed. This added correction created a disagreement of 1 to 1-1/2 feet in crosslines and adjacent lines of other days.

Whereas the bar checks on the above days were in agreement, other days had 3-5% bar check corrections with negligible time corrections.

It is considered that the speed of the fathometer was adjusted to give agreement in the bar check and that with this agreement at the beginning and end of the day no time correction should have been applied. The reduced soundings have been adjusted accordingly and the disagreements disposed of.

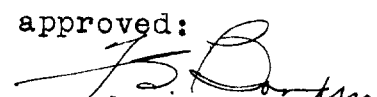
15. Superseded Surveys

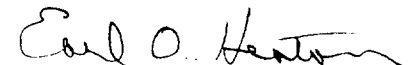
H-404 (1853) in part  
H-602 (1856)  
H-614 (1856)  
H-726 (1859) in part


H-754 (1861) in part  
H-788 (1862) " "  
H-820 (1862) " "  
H-3033(1909) " "

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of  
Coastal Surveys

Applied to Chart Comp. (new) 201 April 27, 1942. T.E.M.

Checked, after review, against printed copy (cor. proof 325 5/3/43)  
May 5 1943 T.E.M.

CHART 325 (Extension of Limits) — Applied 1-12-68 GRT

6728

Additional work

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. .... Office No. 6728

LOCALITY

State Maine

General locality Coast of Maine

Locality Casco Bay

1943

CHIEF OF PARTY

L. P. Raynor, H. & G. E.

LIBRARY & ARCHIVES

DATE JUL 31 1943

00  
02  
02  
03  
Additional work

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6728

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. \_\_\_\_\_

REGISTER NO. 6728 Additional work

State Maine

General locality Coast of Maine

Locality Casco Bay

Scale 1:10 000 Date of survey June 30, July 2, 1943

Vessel Launches 82 and 79

Chief of Party L. P. Raynor

Surveyed by Clifton J. Wagner and William F. Deane

Protracted by \_\_\_\_\_

Soundings penciled by \_\_\_\_\_

Soundings in ~~fathoms~~ feet \_\_\_\_\_

Plane of reference M L W

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by Leroy King Aug 21, 1943

Verified by \_\_\_\_\_

Instructions dated April 2, April 30, 1943

Remarks: Additional work only



DESCRIPTIVE REPORT

to accompany

ADDITIONAL WORK, SHEET 6728PROJECT CS-265U.S.C. & G.S.S. LYDONIAL. P. RAYNOR, COMMANDING

AUTHORITY: The Director's Instructions dated April 2, 1943 and April 30, 1943.

GENERAL: Numbers refer to numbered paragraphs in Instructions of April 30, 1943.

1. The 9-foot sounding was covered by drift sounding and six soundings were recorded. Each recorded sounding was the shoalest obtained in the particular spot. A least depth of 15 feet on position 9a was obtained in the area. Kelp was visible under water but none was observed on the surface. Lat. 43° 42.7'  
Long. 70° 09.5'

2. Additional lines were run in the area, with a sounding of 17 feet obtained. Lat. 43° 42.41'  
Long. 70° 08.6'

Numbers refer to numbered paragraphs in Instructions of April 2, 1943.

1. The first paragraph of the above instructions requests additional work at Lat. 43° 39.9', Long. 70° 10.5' in order to develop a 32-foot sounding. A system of lines was run on ranges to develop the area and then the launch was drifted over the spot while the fathometer was kept operating continuously to obtain shoal depths. No depths shoaler than those obtained on the regular lines were found. The handlead was not used. Further information relative to this area is contained in a letter to the Director dated July 27, 1943. *(use of hand lead prohibited)*

The second paragraph under the same number refers to a small island east of Little Chebeag Island. From the Launch 82 on June 30, 1943, at near low tide, there did not appear to be an island in this vicinity. The sand spit connecting Little and Big Chebeag Islands was bare, and was estimated to be covered by only a foot of water at mean high water. There was no spot noted that projected above the general level of the spit, though there did appear to be a small grass patch on the spit, but this was at a point lower than the general level. Lat. 43° 42.93'  
Long. 70° 08.47'  
Amended by  
attached  
letter of  
Aug. 14, 1943

2. This area was visited by Launch 82 on June 30, 1943 and no dolphin was found in the area. Lat. 43° 42.25'  
Long. 70° 09.6'

*Review of H-6782 (1942) W.D., page 5, par (b)*

Additional work

Bar check curves will be forwarded with the records. *received* ✓

Respectfully submitted,

*Clifton J. Wagner*  
Clifton J. Wagner,  
Lieut., C. & G.S.

*William F. Deane*  
William F. Deane,  
Lieut., C. & G.S.

Forwarded:

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



POST-OFFICE ADDRESS:

Box 448, Portland, Me. 6

TELEGRAPH ADDRESS:

KTR

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Ship LYDONIA

August 14, 1943

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

From: Commanding Officer  
Ship LYDONIA

Subject: Sheet H 6728, Additional information

Reference: Instructions dated April 2, 1943  
22/MEK 1995 LY 4, second paragraph

The area in which the small island is shown on the chart was visited on August 9, 1943, and no point was found that should be charted as an island. It is recommended that the island be deleted from the chart.

The following fix was obtained on a flat top rock, in about the place the island was charted:

"A" (Tripod) 144° 12'

"B" (Face)

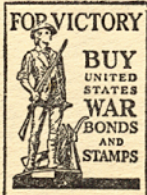
"C" (An) 26° 54'

"B"- "D" (Jope) 57° 54'.

The fix may be plotted on sheet H 6728, as "A" is chimney of house, "B" is south end of pier, "C" is pole at north end of pier, and "D" is tripod on small island. See sketch enclosed.

This rock was bare about 7 feet at 13:23 E.W.T. August 9, 1943, and is bare 9 feet at MLW, according to Portland, Maine, Predicted Tides. The rock extends north 15 meters and west 10 meters from the fix. This rock should be charted as awash at high tide.

Some rocks awash were noted to the north of the spit and outside the water line at the time and ledges noted to the south of the spit.



Rock awash at H.W. plotted  
at Lat. 43°42.97' Long. 70°08.46'

on T 5959



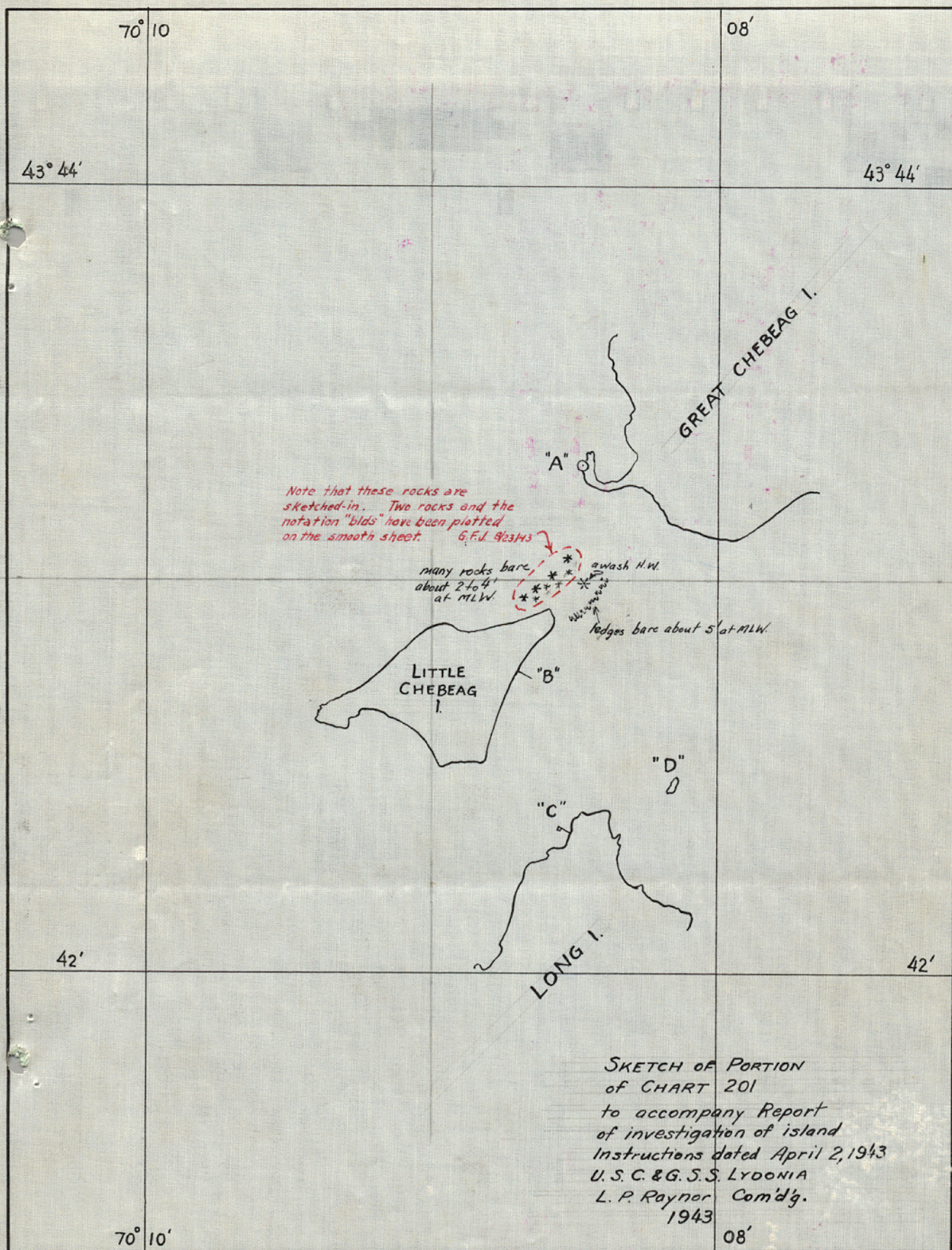
A sketch of part of chart 201 is enclosed with the above rocks and ledges sketched thereon. Mr. Jenkins, of Lt. Comdr. Gallen's party, running levels across the spit on August 9, 1943, informed us that topography of the area was to be started soon. It is suggested that this party might locate these features.

*L. P. Raynor*

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

Enclosure





H-6728 (1943) Ad.Wk.



H-6728 (1943) Ad. Wk.



©



C

H-6728(1943) Ad. Wk.

 $43^{\circ} 42'$  $70^{\circ} 09'$



RAC  
HRE

## TIDE NOTE FOR HYDROGRAPHIC SHEET

August 10, 1943

~~Division of Hydrography and Topography:~~

Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6728 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: Soundings were inked in on boat sheet by field party after reduction by predicted tides. Tide reducers from Portland observations have been entered in sounding volumes by the Div. of T.&C.

*C K Green*  
Chief, Division of Tides and Currents.

# GEOGRAPHIC NAMES

Survey No. **HC 728**

Additional work

GEOGRAPHIC NAMES										
Survey No. <b>HC 728</b>										
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
Casco Bay										2
										3
										4
										5
										6
										7
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										M 234

H6728

Additional work

Remarks

Decisions

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Surveys Section (Chart Division)

H6728

HYDROGRAPHIC SURVEY NO. Additional work

Records accompanying survey:

Boat sheets ..2.; sounding vols. 2...; wire drag vols. .0...;  
bomb vols. ..0...; graphic recorder rolls 1. Cahier (2 graphs)  
special reports, etc. ....0.....  
.....

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

Number of positions on sheet	.66..
Number of positions checked	..5..
Number of positions revised	...0.
Number of soundings recorded	.348.
Number of soundings revised (refers to depth only)	..0..
Number of soundings erroneously spaced	..0..
Number of signals erroneously plotted or transferred	..0..
Topographic details	Time .....
Junctions	Time .....
Verification of soundings from graphic record	Time .....

Verification by... *Lewy King*... Total time .15 hrs. Date *Aug. 21, 1943*

Review by ... *G.F. Jordan*... Time .6 hrs Date *Aug. 23, 1943*



# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

No. H  
No. T

**H6728**

*Additional work*

received July 31, 1943  
registered  
verified August 2, 1943  
reviewed July 21, 1943  
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			
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83			
88			
90			

RETURN TO

82	R.W.Knox
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*✓ RWC*



DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6728 AD. Wk.

Field No. 1001

Maine, Casco Bay, Cousin River to Hussey Sound  
Surveyed June - August 1943, Scale 1:10,000  
Instructions dated April 2 and April 30, 1943

Soundings:

Hand lead  
808 Fathometer

Control:

Three-point fix on shore signals

Chief of Party - L. P. Raynor  
Surveyed by - C. J. Wagner; W. J. Deane  
Protracted by - L. King  
Soundings plotted and inked by - L. King  
Verified by - G. F. Jordan  
Reviewed by - G. F. Jordan  
Inspected by - H. R. Edmonston, August 24, 1943

1. Purpose and Extent of Survey

This survey satisfactorily completes the more important additional work recommended in the review of H-6728 (1941), paragraphs 12(b), (c), and (e), and disposes of the prior islet noted under paragraph T-755 (1855) on page 7 of that review.

In addition, the questionable dolphin noted on page 5, par. (b), in the review of the contemporary wire drag survey 6782 (1942) is disposed of.

2. Result of Survey

- (a) The 32-ft. prior shoal sounding charted on the latest prints of 325, 3201 and 201 at Lat.  $43^{\circ}39.9'$ , Long.  $70^{\circ}10.5'$  is adequately disproved by development on the present survey and should be disregarded.
- (b) Lesser depths were obtained on shoals in the narrows in the vicinity of Lat.  $43^{\circ}42.4'$ , Long.  $70^{\circ}08.7'$ .
- (c) A least depth of 6 feet was obtained on the 9-ft. shoal charted at Lat.  $43^{\circ}42.7'$ , Long.  $70^{\circ}09.5'$  on the latest prints of 325, 3201 and 201.

- (d) The rock awash charted on 3201 and 201 (islet on 315) at Lat.  $43^{\circ}42.93'$ , Long.  $70^{\circ}08.47'$  is superseded by rock and ledge detail from investigation on the present survey. The rock awash at H. W. confirms the existence of the prior islet or rock awash but was located by a position with check angle 100 meters north of the prior rock. Two other rocks awash at position of abrupt minus soundings and the notation "boulders," have been plotted instead of the generalized rocky area indicated on the tracing accompanying the descriptive report.
- (e) The dolphin charted from H-6782 (1942) W.D. at Lat.  $43^{\circ}42.25'$ , Long.  $70^{\circ}09.6'$  on charts 325, 3201, 201 and 315 was probably a temporary installation, as it was not found on the present survey. It is recommended that this dolphin be disregarded.

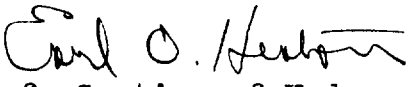
3. Condition of Survey


The sounding records and descriptive report are complete in all detail.

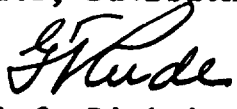
Due to the congestion of soundings on the smooth sheet, the additional work has been plotted on tracings accompanying the descriptive report. The important soundings and detail have been transferred to the smooth sheet.

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Section of Hydrography

  
Chief, Division of Charts

  
Chief, Division of  
Coastal Surveys



applied to Chart 325 (after review) 10/19/43 - JTW  
" " " 3201 " 10/19/43 - JTW  
" " " 201 " 11/2/43 - JTW