

6731

6731

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ **Hydrographic** | **HC 731**
Sheet No. 1003 (Field)
Reg. No. ~~667~~

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 25 1942

Acc. No. _____

State MAINE

LOCALITY

CASCO BAY

MIDDLE BAY AND VICINITY

1941

CHIEF OF PARTY

H. C. Warwick

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6731

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. 1003

REGISTER NO. ~~H-6669~~ H6731

State MAINE

General locality CASCO BAY

Locality ~~Staple Cove & Middle Bay Cove~~
~~Maquoit Bay, Mars Point Bay and Middle Bay and Vicinity~~

Scale 1:10,000 Date of survey Aug. 8 - Sept. 20, 19 41

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

Chief of Party Fred L. Peacock

Surveyed by Ship's Officers

Protracted by H. S. Andros - H. J. Bozzo

Soundings penciled by H. S. Andros

Soundings in ~~yards~~ feet and ~~1/2~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by Lt. Gossett (1941-Field Sheet No. 1003)

Inked by C. E. Dennis 7/7/42

Verified by " " "

Instructions dated May 7, 19 41

Remarks:

DESCRIPTIVE REPORT

TO ACCOMPANY

HC731

HYDROGRAPHIC SURVEY NO. ~~#666~~ (Field No. 1003)

SCALE 1:10,000

PROJECT NO. CS-265

PORTLAND, MAINE

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

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 to the north and east of Lane, Little Mosier, Great Mosier, French and Little Whaleboat Islands, including Middle Bay, Middle Bay Cove, Maquoit Bay, and Staple Cove with their numerous bights, islands and inlets.

SURVEY METHODS:

The usual visual control method of three-point fixes was used throughout this survey. The Submarine Signal Company 808A type Depth Recorder was used. Fixes were obtained between one and two minute intervals. The 15Q and 15U type Chart Fathograms were used. Soundings were scaled to the nearest half foot on every 7½ seconds on the 15U type fathogram, and every 9.4 seconds on the 15Q type. The depths were of such a nature that only the foot scale of the fathograms were used. The fish of the 808A Depth Recorder was rigged by means of two by four braces and a 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.

The party consisted of an officer, who was in charge, and who took right angle and plotted, an officer for left angleman, an engineer, coxswain, recorder and depth recorder tender, whose sole duty was to see that the depth recorder functioned properly, to record all the numbers of fixes, pertinent matters and irregularities in the machine. 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 and southwesterly direction with a maximum spacing of one-hundred meters. In close development twenty-five or even closer spacing was used.

In developing shoal areas the launch was allowed to drift over the shoalest point. During this time continuous soundings were being taken by means of the depth recorder and checked by means of the hand lead. The least depth soundings only, were recorded. Care was taken to run sufficient splits around prominent points, islands and reefs.

DANGERS AND SHOALS:

No new obstruction which would be dangerous to navigators was found on this survey.

All shoal areas, ledges and reefs, are marked on the smooth sheet or on the attached overlay.

Special attention is called to the 9½ foot shoal at Latitude 43° 48' 40" Longitude 70° 01' 22"; the 6 foot shoal at Latitude 43° 48' 35" Longitude 70° 06' 14"; 4³ foot shoal at Latitude, 43° 48' 45", Longitude, 70° 06' 39"; 15½ foot shoal at Latitude 43° 47' 80", Longitude 70° 05' 32"; Sunken rock with least depth of 1½ feet at Latitude 43° 47' 45", Longitude 70° 05' 46"; the three foot questionable sounding at Goose Ledge (See Wire Drag Groundings); 32½ foot shoal at Latitude, 43° 46' 88", Longitude 70° 01' 92"; 35 foot shoal at 43° 47' 38", Longitude 70° 01' 80"; and the 16 foot, 20 foot, 14½ foot and 17½ foot shoals in the vicinity of Latitude 43° 47' 60" Longitude 70° 01' 40".

CHANNELS:

No new channels were developed on this survey. Sufficient soundings were taken to outline the channels at the mouths of small streams and rivers.

ANCHORAGES:

Maquoit Bay, Mare Point Bay, and Middle Bay can afford good anchorage for small and medium sized craft in depths from 10 to 27 feet, muddy bottom, well protected from any wind, except from the southwest.

Good anchorage for small and medium sized craft can be had in depths ranging from 10 to 25 feet, mud and sand bottom, protected from all winds just off South Freeport.

The areas one mile northeast and 0.5 of a mile east of French Island, and the southern end of Middle Bay at Latitude 43° 47' 2" affords good anchorage for large vessels except in heavy southwest gales, in depths ranging from 30 to 45 feet, muddy bottom.

GEOGRAPHIC NAMES:

The geographic names remain the same as set down on U.S.C. & G.S. Charts Nos. 315, 201 and as listed in the descriptive reports of the Graphic Control Surveys of 1941 covering this area. Attention is called to the letter of March 16, 1942 sent through the Norfolk Processing Office which listed the discrepancies of Geographic Names on Charts Nos. 201, 315 and 325.

JUNCTION WITH CONTEMPORARY AND PREVIOUS SURVEYS:

This survey forms junctions with hydrographic survey (1941) H-6674 from Fogg Point southeastward to Upper Green Island hence it forms a junction with hydrographic survey (1941) H-6670 in the proximity of

6728
6732

LK
8/11/42

Latitude $43^{\circ}46'$ eastward to Harpswell Neck. It is believed that few discrepancies occur which are greater than one or two feet at the most.

COMPARISON WITH PREVIOUS SURVEYS:

A comparison with U.S.C. & G.S. Chart Nos. 201 and 315 was made and the following differences noted:

At Latitude $43^{\circ}48'19.0$, Longitude $70^{\circ}00'10.5$ a $1\frac{1}{2}$ foot shoal was found instead of 1 foot, and 0.18 miles southwest of the above, a 14 foot shoal was found instead of 13 feet. *plotted 1 ft. Present survey depth retained.*

At Buoy S-10 a 10 foot shoal was found instead of 9 feet and 0.1 of a mile southwest of the above, a $13\frac{1}{2}$ foot shoal was found instead of 13 feet. *Present survey depth retained*

No indication was found of the 30 foot shoal 0.3 of a mile southwest of buoy S-12. *Appears to have washed & deeper*

Northeast of Black Rock a 4 foot shoal was found instead of 9 feet. *Present survey depth retained*

At Latitude $43^{\circ}48'41$, Longitude $70^{\circ}01'20$ a $9\frac{1}{2}$ foot shoal was found instead of a 14 foot shoal. *Present survey depth retained*

A $3\frac{3}{4}$ foot sounding indicating the existence of the rock at Latitude $43^{\circ}48'00$, Longitude $70^{\circ}04'75$ was obtained. More splits should be run here. *Near Rock shown on T-5962 Additional work not necessary*

On the charted 17 foot shoal 0.12 miles eastnortheast of Crab Island a $15\frac{1}{2}$ foot shoal was found. *Present survey depth retained*

No indication of the 18 foot shoals 0.2 of a mile southeast of Little Bustins Island and Bustins Ledge were found. *18 ft shoals fall in or near shoal areas of 18 & 19 ft*

A 15 foot shoal was found on the 14 foot area 0.2 of a mile south of Little Bustins Island. *Present survey depth retained*

A sunken rock covered one foot at M.L.W. was found at Crab Island Ledge. *shown as rock awash*

The only indication of Mosier Ledge (10 foot) was a $22\frac{1}{2}$ foot sounding at buoy No. S-2A which is a little south of the shoal as shown on Chart No. 201. Further development is recommended here. *older survey sdgs from H. 620 (1862) were carried forward*

An $18\frac{1}{2}$ foot shoal was found on the 17 foot area just east of French Island. *Present survey depth retained*

A $20\frac{1}{2}$ foot shoal was found on the 30 foot area at Latitude $43^{\circ}46'65$, Longitude $70^{\circ}03'30$. *Present survey depths retained*

On Goose Ledge a 3 foot shoal was found, however this sounding is questioned as the wire drag survey gives depth of 18 feet on this area. However, just northeast of the 3 foot shoal is a $4\frac{1}{2}$ foot sounding which agrees with the wire drag (See discussion under wire drag groundings). *Split in W.D. survey here. Sdg at buoy. Omit sdg - see Plot 15 ft.*

On the 22 foot, 25 foot, 22 foot, 30 foot and 28 foot shoals between Grassy Ledge and Shelter Island, 16 foot, $20\frac{1}{2}$ foot, 14 foot, $17\frac{1}{2}$ foot and 16 foot shoals were found respectively. *Present survey depths retained*

15

DISCREPANCIES:

In general the soundings agreed very well. Crossings only varied by a foot or two at the most.

Differences of over three feet are listed below:

In Vol. No. 1 Page 72 is a note concerning a $23\frac{1}{2}$ foot sounding. This has been interpreted as a stray and has not been plotted on the smooth sheet. *SEE C.E.D.*

Numerous strays can be found on the bathograms of this sheet

At Latitude $43^{\circ}46'85''$, Longitude $70^{\circ}02'14''$, cross lines, 7-81 (purple) and 188-189 (purple) differ by three feet. The depth recorder was running too slow on the 7-81 line causing shoaler recording. ✓
ok shoaler sdgs plotted. Corr. was made for speed C.E.D.

At Latitude $43^{\circ}47'60''$ and Longitude $70^{\circ}03'15''$ cross lines 52-53 a day (blue) and 117-118 p (purple) differ by 3 feet. This discrepancy is no doubt due to the change in gain and the speed of the depth recorder. ✓ ok shoaler sdgs plotted C.E.D.

At Latitude $43^{\circ}47'7''$ and Longitude $70^{\circ}00'2''$ cross lines 72-73 (purple) and 192-193u (purple) differ by 5 feet. Speed of the recorder was slow on 192-193 u line causing soundings to read shoaler. sdgs from 72-73 plotted ok C.E.D.

At Latitude $43^{\circ}48'89''$, Longitude $70^{\circ}02'50''$ a $5\frac{1}{2}$ foot sounding was plotted on the smooth sheet. However the very tip of the fathogram was read which probably was kelp. A $7\frac{1}{2}$ foot sounding would be better. ✓ 5 ft. plotted C.E.D. appears ok.

WIRE DRAG GROUNDINGS:

At Latitude $43^{\circ}46.85$, Longitude $70^{\circ}01.92$ the effective depth of 32 feet to which the drag was set hung up temporarily 40 meters south-east of a $32\frac{1}{2}$ foot sounding. grounding of 32 ft plotted

At Latitude $43^{\circ}46'56''$, Longitude $70^{\circ}02'181''$ an 18 foot wire drag sounding falls on a 3 foot hand lead sounding. However on the original record of 1-1 day (purple) there is a question as to whether the sounding was 2.3 feet or 2 fathoms 3 feet. The 2.3 foot sounding was plotted on the smooth sheet. Plot 15 ft. 2.3 is evidently result of sloppy recording. J.A.M.

At Latitude $43^{\circ}46'64''$ Longitude $70^{\circ}03'30''$ a 20 foot (W.D.) sounding falls just northwest of a $20\frac{1}{2}$ foot sounding, and two 25 foot (W.D.) soundings fall just northwest of a $25\frac{1}{2}$ foot sounding 0.1 of a mile northwest of a 20 foot shoal. In this same vicinity a 26 foot (W.D.) sounding falls on a 36 foot sounding and a $27\frac{1}{2}$ foot (W.D.) sounding falls on a $32\frac{1}{2}$ foot sounding. 20' W.D. plotted
25' W.D. not plotted hydro. adequate
26' W.D. in error in position.
27' W.D. plotted bottom irregular

Where the depth recorder soundings were of less depth than the wire drag soundings no comment is made.

At Latitude $43^{\circ}46.11$, Longitude $70^{\circ}02.55$ an effective depth of 34 feet to which the drag was set temporarily hung up just south of a $35\frac{1}{2}$ foot machine sounding. Grounding omitted G.F.I.
2. Depth - definite grounding

At Latitude $43^{\circ}47'28''$, Longitude $70^{\circ}03'68''$ a 14 foot wire drag sounding falls on a 25 foot machine sounding and an 18 foot sounding (W.D.) just south of the above, falls on a 28 foot machine sounding. W.D. sdgs retained

No comment is necessary on the above except that the shoalest soundings either of the wire drag or machine should be accepted unless notes in the original records state otherwise. As the original records of the wire drag soundings are not available at this office, examination of these records for large discrepancies in soundings between the machine and wire drag could not be made. W.D. records examined and soundings retained G.F.I.

MISCELLANEOUS:

This survey was executed by the ship's officers.

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

All fathograms were recaled, but corrections, alterations and additions were not rechecked 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.

All soundings were plotted to feet, except of critical shoal areas and in determining the M.L.W. line where soundings were plotted to 1/2 feet.

The abstract of temperatures and salinities, and data pertinent to bar checks, salinity, 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 was 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 ~~air~~^{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 Lieutenant Hoskinson's experiment proved that a change of a few points in sensitivity caused appreciable change in depths 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 the recorded gain notes, as other soundings would not be correlated with these.

In volume No. 1 Page 63, there is a note concerning boulder area which should be noted when the H.W.L. is transferred from the ~~air~~^{aerial} photographs. CED.

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,
Officer in Charge.

STATISTICS

SHEET FIELD NO. 1003

H6731

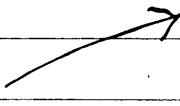
1941

<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>
AUGUST						
7	1	a(PURPLE)	23.6	1219	125	75
8	1	b	17.3	1007	96	"
11	2	c	5.1	366	34	"
12	2 & 3	d	36.6	1911	186	"
13	3	e	33.0	1909	194	"
14	4	f	42.4	2190	210	"
15	5	g	30.5	1506	140	"
18	5 & 6	h	12.0	751	90	"
19	6	j	5.9	480	47	"
20	6	k	20.5	1308	149	"
27	7	l	21.5	1506	145	"
28	7	m	6.0	391	61	"
29	7	n	- -	92	92	"
SEPTEMBER						
2	8	p	11.0	1239	126	"
4	8 & 9	q	22.4	1606	150	"
5	9	r	20.9	1623	132	"
10	10	s	.5	68	28	"
11	10	t	6.5	626	58	"
12	10 & 11	u	33.3	2219	201	"
15	11	v	2.6	288	28	"
16	11 & 12	w	13.0	1251	135	"
17	12	x	4.9	596	38	"
AUGUST						
15	13	a(BLUE)	40.0	2002	178	82
18	13	b	5.2	288	30	"
21	14	c	12.3	615	65	"
22	14	d	19.9	981	119	"
25	14 & 15	e	10.2	633	58	"
26	15	f	23.7	1289	138	"
27	15 & 16	g	34.4	1842	195	"
28	16 & 17	h	33.3	2273	195	"
29	17 & 18	j	19.9	1554	176	"
SEPTEMBER						
4	18 & 19	k	40.5	2451	208	"
5	19 & 20	l	24.8	1738	178	"
11	20 & 21	m	24.9	1817	231 ³	"
12	21 & 22	n	39.5	2673	222	"
16	22	p	28.2	1729	169	"
17	23 & 24	q	35.8	2467	230	"
18	24	r	26.4	1871	198	"
19	24 & 25	s	17.2	1212	150	"
20	26	a (RED)	4.4	547	39	81
TOTALS			810.1	52,134	5,266	

AREA IN SQUARE STATUTE MILES-28.3

Remarks

Decisions

	Remarks	Decisions
1	Pending with U.S.G.B. apply Harraseeket R. pending its decision	438701
2	Pending with U.S.G.B. as to whether Mare or Mere.	438700
3		438700
4		438700
5	For title	436700 U.S.G.B
6	Location of tide staff.	
7		438699
8		"
9		"
10		437700
11		"
12		"
13		x
14		"
15		"
16		438700
17		437700
18		"
19		438700
20		438700
21	See line 2, above 	437700 U.S.G.B
22		" "
23		"
24		"
25		"
26		"
27		"

GEOGRAPHIC NAMES
 Survey No. **H6731**

#1

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

Name on Survey	A	B	C	D	E	F	G	H	K
<u>Freeport River</u>									1
<u>Mare Point Bay</u>									2
<u>Maquoit Bay</u>									3
<u>Middle Bay</u>									4
<u>Casco Bay</u>									5
<u>Portland</u>									6
<u>Middle Bay Cove</u>									7
<u>White I.</u>									8
<u>Wilson cove</u>									9
<u>Harpwell Neck</u>									10
<u>Curtis Cove</u>									11
<u>Little Whaleboat I</u>									12
<u>Whaleboat I</u>									13
<u>Goose Ledge</u>									14
<u>Lower Goose I</u>									15
<u>Upper Goose I</u>									16
<u>Grassy Ledge</u>									17
<u>Shelter I.</u>									18
<u>Birch I</u>									19
<u>Mare Point Neck</u>									20
<u>Bustins I.</u>									21
<u>Little Bustins I</u>									22
<u>Bustins Ledge</u>									23
<u>Great Moshier I.</u>									24
<u>Little " I.</u>									25
<u>Moshier Ledge</u>									26
<u>French I.</u>									27

Remarks

Decisions

	Remarks	Decisions
1		437 700
2		437 701
3		438 701
4		438 700
5		"
6		"
7		"
8		"
9		437 700
10		"
11		
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23		
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26		
27		

GEOGRAPHIC NAMES

Survey No. H 6731.

2

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	

<u>Upper Green Is.</u>									1
<u>Lanes I.</u>									2
<u>Staple Cove</u>									3
<u>South Freeport</u>									4
<u>Wolf Neck</u>									5
<u>Bartol I.</u>									6
<u>Little River</u>									7
<u>Flying Pt.</u>									8
<u>Crab I.</u>									9
<u>Crab Island Ledge</u>									10
									11
									12
									13
									14
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									16
									17
									18
									19
									20
									21
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									24
									25
									26
									27

Names underlined in red approved by L. Heck on 8/14/42

Have listed all names used in descriptive report, or otherwise needed for identification. Any other names within area on latest prints 201, 315 are approved; if their application is desired.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6731**

Records accompanying survey:

Boat sheets two...; sounding vols. (26)...; wire drag vols.;
 bomb vols.; graphic recorder rolls (37)...;
 special reports, etc. 1. Cahier containing Record of Temperatures & ...
 Salinities Bar Check Computations & Reducers.
 . 1. overlay tracing.....

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

Number of positions on sheet	5,266..
Number of positions checked	.343..
Number of positions revised	.16..
Number of soundings recorded	52,134..
Number of soundings revised (refers to depth only)	.144..
Number of soundings erroneously spaced	.31..
Number of signals erroneously plotted or transferred	.0..
Topographic details	Time .50 ^{hr} ..
Junctions	Time .0..
Verification of soundings from graphic record	Time 275 ³ / ₄ ..

Verification by *C. E. Dennis*..... Total time 325³/₄ hr Date *7/7/42*..

Review by *R. A. Carpenter*..... Time 78¹/₂ hr Date *7/28/42*..

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H **H6731**
~~No. H~~

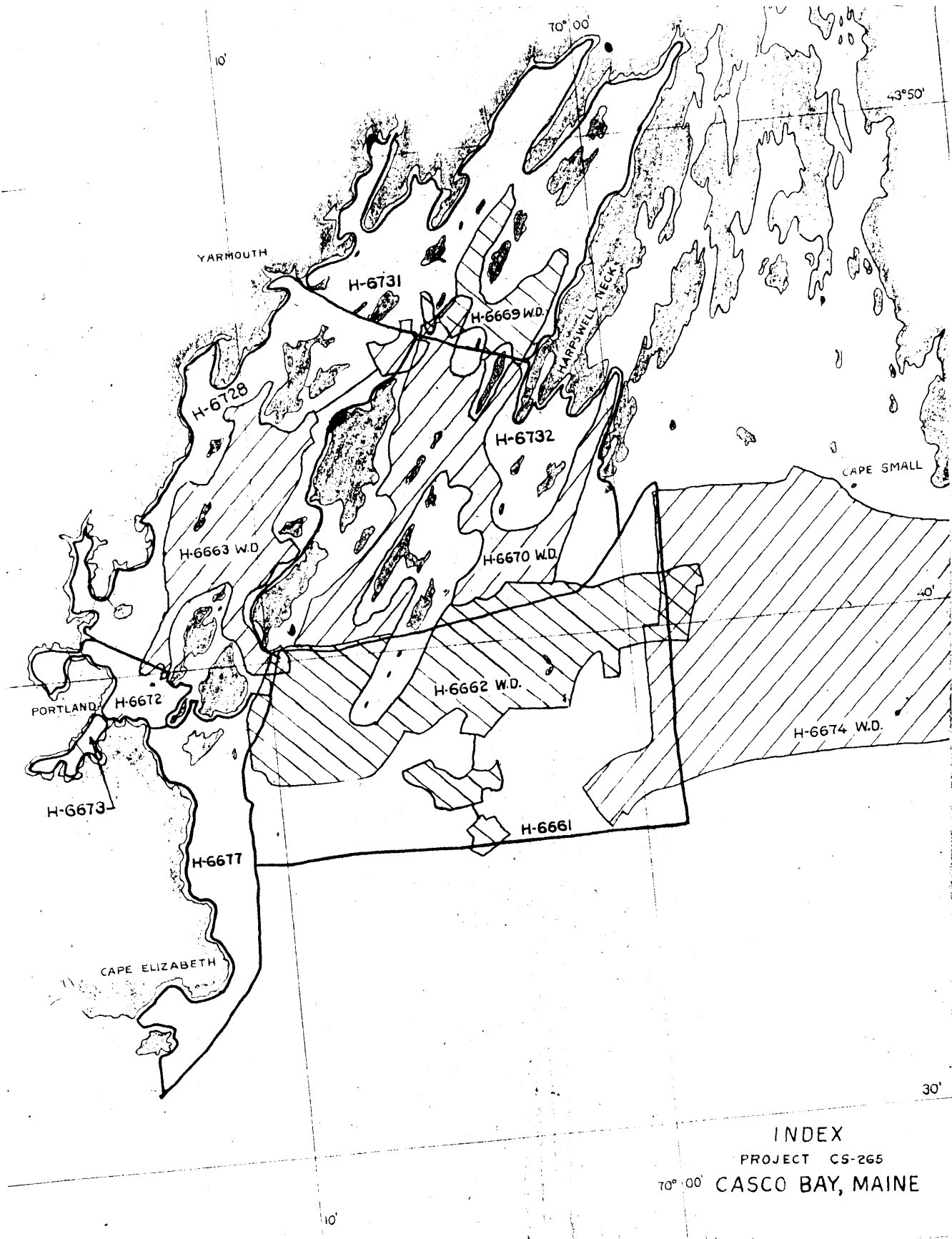
received April 27, 1942
 registered April 28, 1942
 verified
 reviewed
 approved

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 2		
88			
90			

RETURN TO

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



INDEX
PROJECT CS-265
70° 00' CASCO BAY, MAINE

200
HPL

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
26 volumes of sounding records for

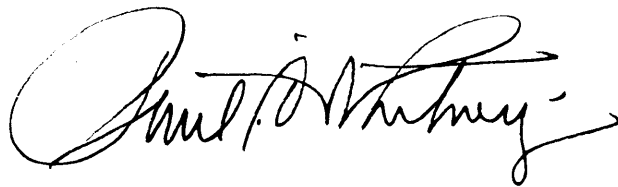
HYDROGRAPHIC SHEET 6731

Locality Middle Bay and Vicinity, Casco Bay, Maine.

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.

DIVISION OF CHARTS

Surveys Section

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6731
Field No. 1003

Maine, Casco Bay, Middle Bay and Vicinity
Surveyed in Aug.-Sept. 1941. Scale 1:10,000
Instructions dated May 7, 1941

Soundings:

Depth Recorder 808A

Control:

Visual fixes on shore signals

Chief of Party - Fred. L. Peacock
Surveyed by - Ship's officers
Protracted by - H. S. Andros, H. J. Bozzo
Soundings plotted by - H. S. Andros
Verified and inked by - C. E. Dennis
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The shoreline and signals originate with topographic maps T-5962, T-5963, T-5964 and graphic control sheets T-6850, T-6848b, T-6845b and T-6843b of 1941. Topographic map T-5968 (1941) covering the north end of Middle Bay has not been received in the office and consequently the shoreline in this area is incomplete.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

The junction with H-6732 (1941) and H-6728 (1941) on the south will be considered in the review of those surveys.

5. Comparison with Prior Surveys

H-754 (1861), 1:20,000; H-820 (1862), 1:20,000;
H-840 (1863), 1:10,000; H-1008 (1869), 1:10,000

These surveys cover the entire area of the present survey. In the area to the north of lat. 43° 48.0', and east of long. 70° 04.0', covered by H-840 and H-1008, changes in the bottom cause depth differences amounting

to 2 - 6 feet. The water over the flats in lat. $43^{\circ} 50.8'$, long. $70^{\circ} 01.55'$ has deepened from a depth of 1 ft. to a depth of 6 ft. In lat. $43^{\circ} 50.6'$, long. $70^{\circ} 01.55'$ the depth has shoaled 6 ft. in 18 ft. of water. The agreement in depth with H-754 and H-820 is fairly good, generally being within 1 fm. though occasionally differing by about 2 fm.

The following differences in depth between the earlier surveys and the present survey are individually treated:

- a. The 30 ft. sounding charted in lat. $43^{\circ} 48.9'$, long. $69^{\circ} 59.6'$ from H-840 falls in a depth of 34 ft. The present survey depths are adequate for charting purposes. The 30 ft. sounding should be disregarded.
- b. The 30 ft. sounding charted in lat. $43^{\circ} 48.5'$, long. $70^{\circ} 00.15'$ from H-840 falls in depths of 34-35 ft. The original sounding occurs on a change in the tidal reducer and could be plotted as 31. The sounding should be disregarded.
- c. The 37 ft. soundings charted in lat. $43^{\circ} 48.45'$, long. $70^{\circ} 01.37'$ and lat. $43^{\circ} 48.67'$, long. $70^{\circ} 01.42'$ from H-840 fall in depths of 39-41 ft. The present survey shows a slight deepening in this area and the soundings were not retained. There are present depths of 37 ft. about 50 m. from the charted soundings.
- d. The 34 ft. sounding charted in lat. $43^{\circ} 46.92'$, long. $70^{\circ} 02.0'$ from H-820 falls in a depth of 56 ft. The sounding falls about 100 m. from similar depths on the present survey and was cleared to an effective depth of 42 ft. by the wire drag. The sounding should be disregarded.
- e. Soundings of 43 and 42 ft. charted in lat. $43^{\circ} 46.7'$, long. $70^{\circ} 02.25'$ and lat. $43^{\circ} 46.57'$, long. $70^{\circ} 02.45'$ from H-820 fall in depths of 64 and 48 ft. respectively. These soundings were cleared to an effective drag depth of 46 ft. and should be disregarded.
- f. The 18 ft. sounding charted in lat. $43^{\circ} 47.48'$, long. $70^{\circ} 04.65'$, from H-820 falls in depths of 20-25 ft. It may be slightly displaced in position in as much as there are present survey depths of 19 ft. within a distance of 50 m. from the charted sounding. The sounding was not carried forward.

- 10 ft. deleted*
- g. The 10 ft. sounding charted in lat. $43^{\circ} 47.35'$, long. $70^{\circ} 05.25'$ from H-820 falls in depths of 29-32 ft. The area has not been completely developed on the present survey and consequently the sounding was carried forward. *Area developed on Add. Wk. 1993 and 10 ft. was verified EHC*
- h. The soundings of 31 and 25 ft. charted in lat. $43^{\circ} 47.75'$, long. $70^{\circ} 05.2'$, and lat. $43^{\circ} 47.70'$, long. $70^{\circ} 05.4'$ from H-820 fall in depths of 35 and 30 ft. respectively. The area has deepened 3-4 ft. since the earlier surveys and therefore the soundings should be disregarded.
- i. The 14 ft. sounding charted in lat. $43^{\circ} 48.49'$, long. $70^{\circ} 01.15'$ from H-840 defines the western limit of a shoal and was carried forward.
- j. The 17 ft. sounding charted in lat. $43^{\circ} 47.8'$, long. $70^{\circ} 05.4'$ from H-820 was plotted incorrectly. When correctly plotted it falls on a shoal with a present least depth of 15 ft.
- k. The 19 ft. sounding charted in lat. $43^{\circ} 48.55'$, long. $70^{\circ} 06.38'$ from H-820 falls in a depth of 30 ft. The sounding falls on the edge of a channel having considerably greater depths and should be disregarded.
- l. The 31 ft. sounding charted in lat. $43^{\circ} 47.05'$, long. $70^{\circ} 03.9'$ from H-820 falls in a depth of 35 ft. It is probably displaced somewhat and should be disregarded.
- m. The 48 ft. sounding charted in lat. $43^{\circ} 47.15'$, long. $70^{\circ} 03.10'$ from H-820 falls in a depth of 57 ft. The sounding may have been read 1 fm. in error since the present as well as the earlier survey shows a deep in this area. The sounding should be disregarded.
- n. The 5 ft. sounding charted in lat. $43^{\circ} 46.15'$, long. $70^{\circ} 01.4'$ from H-820 falls in a depth of 11 ft. The sounding was changed in the record from 1 fm. 5 ft. to 1 fm. and is accompanied by the notation of soft bottom. This change raises some doubt as to its real value. The sounding falls in a relatively unimportant area and was not carried forward.
- o. The uncharted sounding of 31 ft. in lat. $43^{\circ} 47.68'$, long. $70^{\circ} 00.83'$ from H-820 falls in depths of 76 ft. It is probably an erroneous sounding and should be disregarded.

- p. The charted sounding of 33 ft. in lat. $43^{\circ}46.64'$, long. $70^{\circ}04.88'$ from H-820 falls in depths of 43 ft. The sounding, together with several other adjacent soundings from the same line, probably is slightly displaced and should be disregarded.

With the previously mentioned exceptions the present survey is adequate to supersede the earlier surveys in the common area.

6. Comparison with Wire Drag Surveys

Wire drag surveys H-6669 and H-6670 of 1941 cover a considerable portion of the present survey. Conflicts between the effective drag depths and the hydrography are few and unimportant. In some cases the drag has been pulled upon a shoal for a distance of 10-25 m. In lat. $43^{\circ}46.77'$, long. $70^{\circ}01.77'$ the survey depth of 38 ft. was cleared by an effective drag depth of 40 ft. The drag was wrapping a shoal at the time of clearance and possibly may have pulled over the 38 ft. spot without an indication of grounding being noticed.

7. Comparison with chart 201 (latest print date 5-12-42)
315 (latest print date 6-3-42)

a. Hydrography

The charted hydrography within the area of the present survey originates largely with the previously discussed surveys which need no further consideration. The sounding of 17 ft. in lat. $43^{\circ}46.88'$, long. $70^{\circ}04.08'$ originates with blueprint 13452 (1910). Present survey depths verify the sounding and are adequate to supersede it for charting. Other charted soundings originate with chart letters giving advance information from contemporary wire drag surveys.

b. Aids to Navigation

The survey positions of the floating aids to navigation differ from the charted positions by 20 to 120 m. and with the following exceptions satisfactorily mark the features intended.

- (1) The buoy S 2-A in lat. $43^{\circ}47.37'$, long. $70^{\circ}05.30'$ marking the channel between Moshier Ledge and Crag I. Ledge is 120 m. south of its charted position. It fails to correctly mark the location of Moshier Ledge if it is left in its survey position.

Buoy marks southwest tip of ledge as developed on Add. Wk. 1943

- (2) The survey position of buoy S-10 in lat. $43^{\circ} 48.68'$, long. $69^{\circ} 59.8'$ is 120 m. east of its charted position. The buoy marking a deep channel now falls on a 10 ft. shoal which would constitute a danger to vessels passing close to the buoy.

No identifying remarks were recorded concerning buoys in lat. $43^{\circ} 46.58'$, long. $70^{\circ} 02.82'$, lat. $43^{\circ} 48.68'$, long. $69^{\circ} 59.8'$, and lat. $43^{\circ} 49.2'$, long. $69^{\circ} 59.2'$.

8. Condition of Survey

Satisfactory except that identifying notations were not recorded for all buoys.

9. Compliance with Instructions for the Project

Satisfactory except for the development mentioned in the next item.

10. Additional Field Work Recommended



Additional development should be accomplished on Moshier Ledge in lat. $43^{\circ} 47.35'$, long. $70^{\circ} 05.25'$, in the vicinity of the 18 ft. sounding in lat. $43^{\circ} 48.88'$, long. $70^{\circ} 01.40'$, the 9 ft. sounding in lat. $43^{\circ} 48.55'$, long. $70^{\circ} 00.88'$, and the 12 ft. sounding in lat. $43^{\circ} 48.25'$, long. $70^{\circ} 02.25'$.

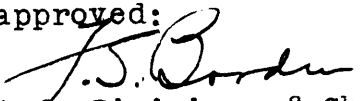

11. Superseded Surveys

H- 754 (1861) in part
H- 820 (1862) "
H- 840 (1863)
H-1008 (1869) "

*Development on all but last mentioned
sdg completed on Add. Wk. 1943*

Examined and approved:


Chief, Surveys Section

Chief, Section of Hydrography


Chief, Division of Charts

Chief, Div. of Coastal Surveys

Applied to new chart comp. 201 May 7, 1942. WEM.

Applied to Reconstructed Ch. 315 (east of 70°) Mar 16, 1943 - JFWalbee

Additional work

6731

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Office No. H-6731

Additional work

LOCALITY

State Maine

General locality Casco Bay

Locality

1943

CHIEF OF PARTY

L. P. Rayner

LIBRARY & ARCHIVES

DATE

Additional work

6731

Additional work

Instructions dated April 2, 1943 22/MEK 1996 LY4

Number refers to numbered paragraph in above instructions

3. Moshier Lodge was covered by drift hand leading and 808 fathometer.

A minimum depth of ^{10 (final reduction)} ~~12~~ feet at M.L.W. (~~Portland-predicted tides~~)

was obtained. At one spot there was a faint trace on graph but as leadman reported what felt like grass on bottom, the darker trace

of rock bottom was taken as the depth, which checked the hand lead by 1/2 foot. While the 10 foot sounding could not be checked,

it is recommended that it be retained if it originated on a Hydrographic Survey of this Bureau. ^{10' checked.}

Item 10 Review 1941 work

Lat. 43° 47.35'
Long 70° 05.25'The 16 foot spot was covered by a system of closely spaced sounding lines and a minimum depth of ^{14 (final reduction)} ~~20~~ feet at M.L.W. was obtained, ~~as reduced by Portland-predicted tides.~~Lat. 43° 48.88'
Long 70° 01.9'

Item 10 Review 1941 work

The nine foot spot was covered by a system of close spaced sounding lines and not verified. Soundings obtained at this time should

be used to fix the fathom curves at this point. However, a sounding of 1' at M.L.W. was obtained on a rock and it is located about

80 meters southwest of @ Jim. This was picked up on sounding lines reduced to 2 feet, but as the peak on the graph was similar to

kelp strays, the area was visited ^{about} on August 9 at low water and the rock was visible with ~~but~~ 2 feet of water over it, ^{at the time.}Lat. 43° 48.55'
Long 70° 00.00'

Item 10 Review of 1941 work

Rock shown as rock awash at M.L.W.

At the time drift lead soundings were taken in the area near the 9 foot sounding referred to, a minimum reduced depth of 10 feet northwest of this 9 foot spot was found.

It is recommended that the soundings taken on June 30 and August 9, 1943 be used for charting.

Respectfully submitted

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

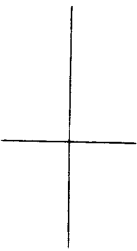
Approved and forwarded:

L. P. Rayner
L. P. Rayner,
Lt. Comdr. C & G S,
Chief of Party

Inspected by: R.H. Carstens 9/13/43

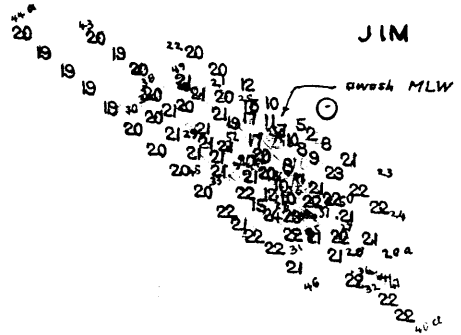
All depths developed were adequately checked or reduced and slight changes were made in the curves.

Reported to Nautical Chart Section 8/14/43
WHL.



NEW

MID

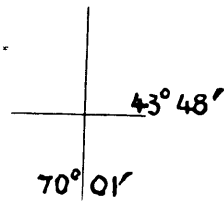


JIM

awash MLW

H-6731 Add. Wk. (1943)

Soundings in purple on smooth sheet



43° 48''

70° 01''

H-6731 Add. Wk. (1943)

Soundings in purple on smooth sheet

LUB \odot

INA \odot

40⁶
38⁹ 39¹¹ 41¹⁵
31 35 37 47^{19a}
27 27 38 38 39
29 32 28 36
28⁴ 10 28 36
26 26 20 23 34
27 26 21 26 38 18
28 21 21 32
28 24 33
13 31
32
32
17

30^{stk M}
1a

43° 47'

70° 05'

Surveys Section (Chart Division)

H6731

ADDITIONAL WORK

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets 2...; sounding vols. ..1.; wire drag vols. ..0.;
 bomb vols. ...⁰...; graphic recorder rolls 1 each
 special reports, etc.

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

Number of positions on sheet		.81..	
Number of positions checked		..9..	
Number of positions revised		..0..	
Number of soundings recorded		.300.	
Number of soundings revised (refers to depth only)		..0..	
Number of soundings erroneously spaced		..3..	
Number of signals erroneously plotted or transferred		..0..	
Topographic details	Time	
Junctions	Time	
Verification of soundings from graphic record	Time	
Verification by... <i>Lewis King</i> ...	Total time	16 hrs	Date <i>Sept. 11, 1943</i>
<i>Inspected</i> Review by ... <i>R.H. Carstens</i> ...	Time	35	Date <i>Sept. 13, 1943</i>

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H673 Additional work

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.

REGISTER No. H-6731 A.Wk.

Field No. _____

State Maine

General locality Casco Bay

Locality Moshier Ledge and other shoals

Scale 1:10000 Date of survey June 1943

Instructions dated April 2, 1943

Vessel Launches 79 & 82 of Lydonia

Chief of party L.D. Baynor

Surveyed by L.D. Baynor

Soundings taken by fathometer, ~~graphic recorder~~ hand lead, ~~etc.~~

Protracted by R.J. Christman

Soundings penciled by R.J. Christman

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~

REMARKS:

H6731

Additional work

Remarks

Decisions

	Remarks	Decisions
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GEOGRAPHIC NAMES
 Survey No. **H6731**
Additional work

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
Maine											1
Casco Bay											2
Moshier Ledge											3
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MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
 PHOTOSTAT OF

No. H **H6731**
 No. T *Additional work*

received August 19, 1943
 registered August 19, 1943
 verified *Sept 11, 1943*
 reviewed
 approved

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

ROUTE		Initial	Attention called to
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RETURN TO

82	R.W.Knox
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RWK

RAC
HRC

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 6731

Locality Moshier Ledge, Casco Bay, Maine

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

Condition of records satisfactory except as noted below:

NOTE: Corrected reducers from Portland observations have been
entered in sounding volume by the Div. of T.&C.



Chief, Division of Tides and Currents.

Applied to Chart 201 after review 12/2/43 - JFW.
Applied to reconstruction of chart 315 after review 12/2/43 - JFW
Part. Applied to chart 1204. March 8, 1946 L.A.M.